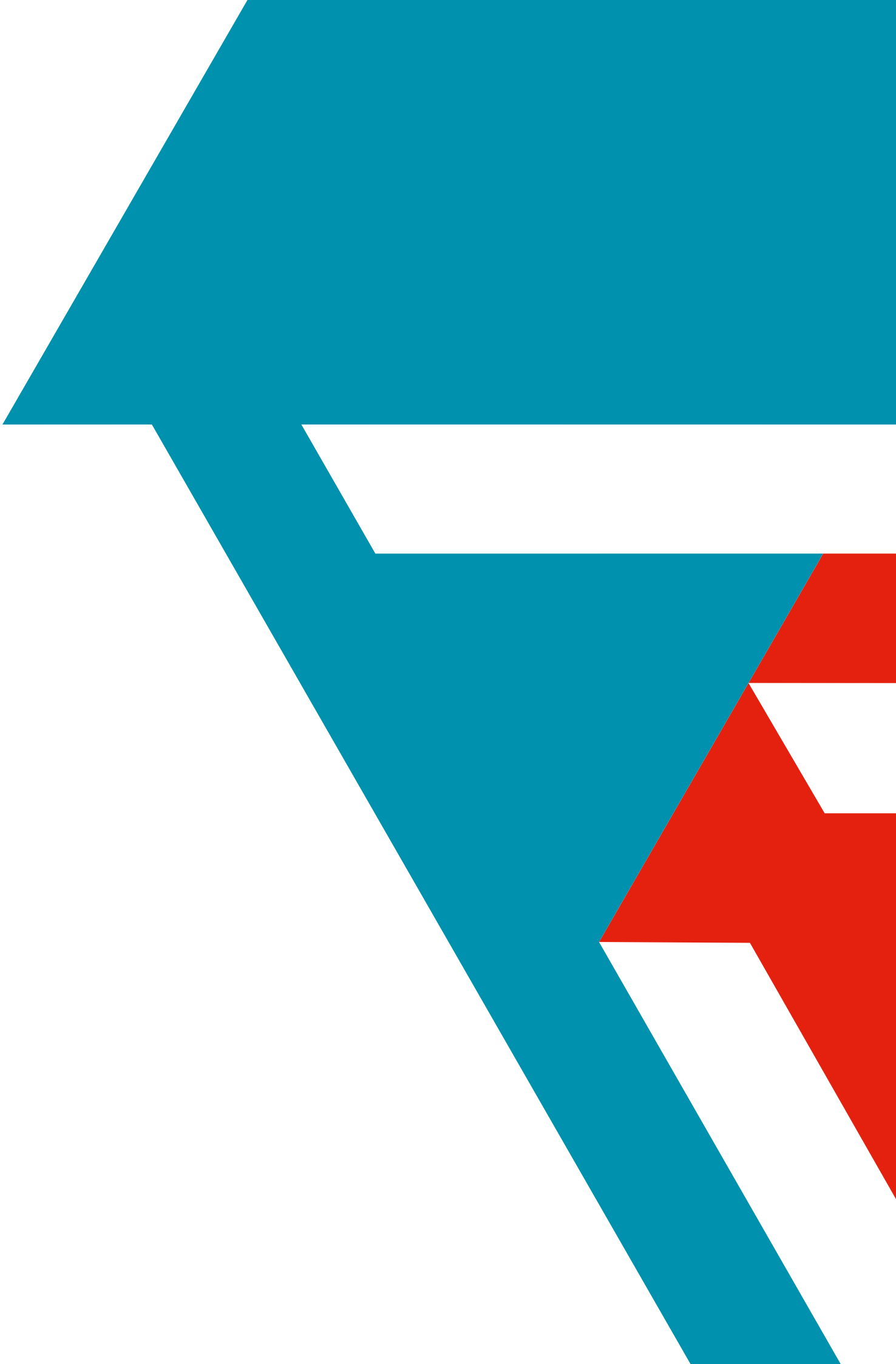




ICT NETWORKS

Scalable solutions for high performance network infrastructures



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DELIVERING EXCELLENCE – EVERY TIME, EVERYWHERE

The “lifeblood” of a modern public or commercial building is the functionality and reliability of the system solutions for communications, building automation, power supply, safety and lifts. This is true of any such construction, irrespective of whether it is an office block, hotel, sports stadium, television studio or a tunnel.

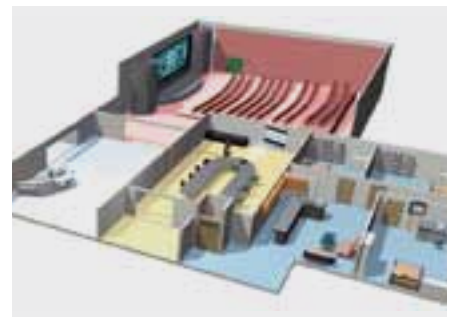
Choose a reliable system partner right from the start: choose Datwyler!



Hotels, hospitals



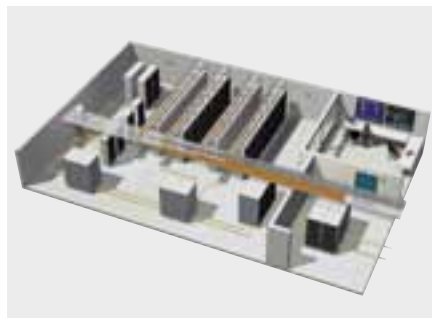
Office blocks



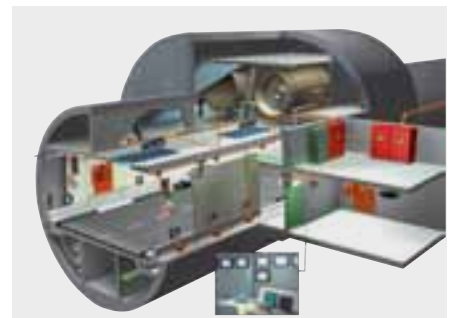
Government buildings, universities



Shopping centres



Data centres



Tunnels



Event arenas



FTTx projects

Datwyler is a leading provider of total solutions for the electrical and communications infrastructure of public and commercial buildings and of data centres as well as for Fibre to the home (FTTH) networks.

Being a solid, reliable company about to celebrate its 100th year of operation, Datwyler leads the way in innovations for applications such as ICT networks, power supply, fire safety, building automation and lifts.

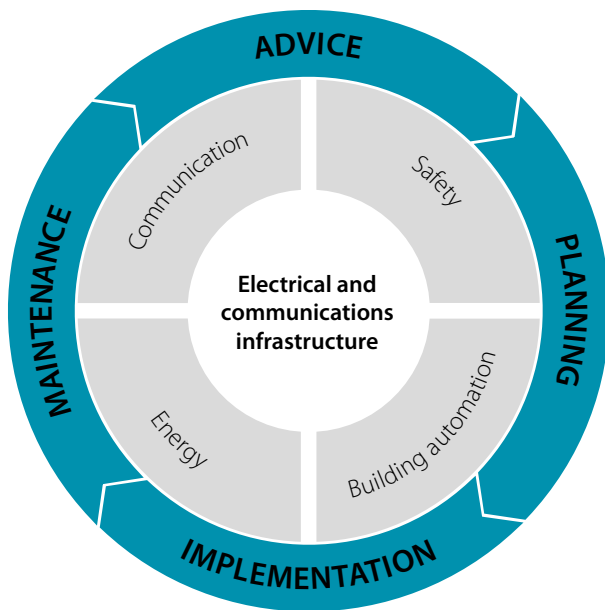
Datwyler is a one-stop source of customised solutions for all your specific applications – with all the necessary test certificates, authorisations and approvals and with long-term warranties.

Datwyler has successfully acted not only as a supplier of innovative products and system solutions but also as the lead or main contractor who, working in close cooperation with local partners, covers the whole value chain: from site surveys, conception and system engineering through installation, logistics and turnkey supply to documentation and system maintenance.

The Datwyler Cabling Solutions division is part of Datwyler Group, an international multi-niche player with some 5000 employees which generates approximately 1000 million Euro in sales revenue.

TURNKEY INSTALLATIONS

Datwyler does not only supply integrated system solutions, but has positioned itself successfully as a turnkey partner: for all manner of purpose-built constructions including multi-site projects, for data centres and for FTTx projects. Our successful processing of turnkey projects derives from our high-level skills in developing and manufacturing the required products and solutions, our comprehensive applications expertise, our international presence and our globally established partner network.



Our international presence and our worldwide, actively managed and certificated partner network have also proved invaluable in the multi-site projects of major clients. National and international companies rely on Datwyler on-the-spot site audits. Using the site surveys as a base, our engineering experts work out customised solutions with uniform standards for all the sites concerned. Our total solutions package is rounded off by the implementation and assurance of regular operations. While operations are running, we provide servicing and maintenance work to optimise your infrastructure solution. These MAC (move, add, change) services increase the performance and working life of your equipment.

High-quality solutions for all your applications

Year on year, Datwyler invests in even better materials and process technologies, production resources and test methods. This is why our system solutions always keep ahead of the current norms and repeatedly set new standards. The important functions which our solutions must deliver in practice demand the highest possible level of safety and reliability. This is why we measure each product against stringent quality standards before it leaves the company.

Of course, all our processes are ISO 9001:2008 / ISO 14001:2004 certified.

Our sustainable solutions provide you with high-level operational reliability coupled with low operating costs. The proof that Datwyler systems can deliver these benefits has been evident for many years in thousands of installations around the world. In addition, we have a particularly keen eye for consistent, intelligent solutions that simplify planning, sourcing and installation and shorten your construction times.

We have the solutions for all your applications, whatever they are – high-speed communications networks, modern energy distribution, monitoring and control services, fire alarm systems or lift cabling. Or you may want to integrate new systems, interconnect and automate existing systems or simply ensure a reliable power supply. All this is possible with our carefully thought out, pre-assembled and prefabricated subsystems.

Just tell us how, when and where

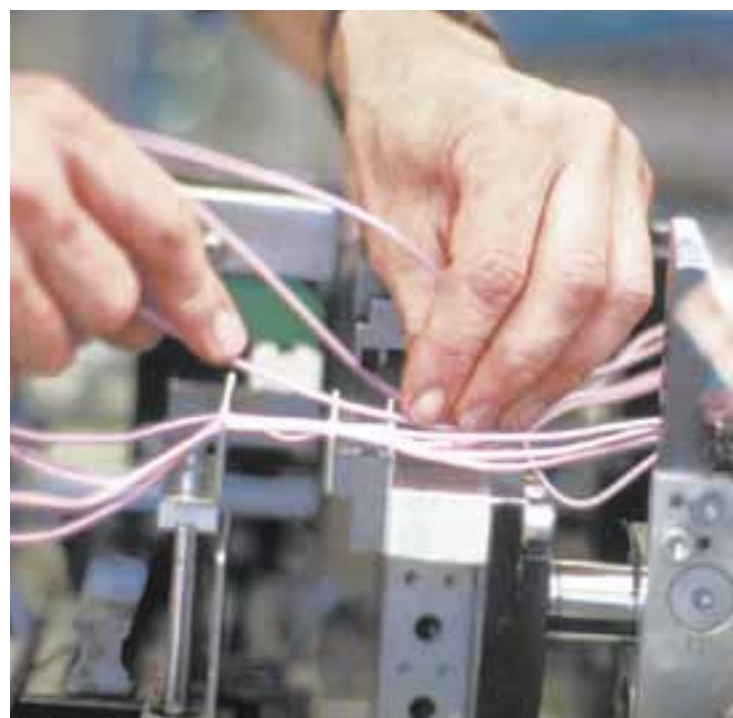
Besides quality and product price, the logistics performance capability of suppliers is a decisive factor in the successful handling of construction projects. This is particularly true of major projects. With its years of experience and high logistics competences, Datwyler can handle even time-critical major projects smoothly and to the complete satisfaction of customers. Just-in-time deliveries at the right place are all in a day's work for us and our partners.



Besides delivering straight to the construction site, we also offer additional logistics services (time slots, pre-fitted and pre-assembled products etc.). Many customers and suppliers have a direct link to our IT system for rapid and flexible order processing. As regards cable pre-assembly, Datwyler also has wide-ranging expertise, the product of decades of experience. In our modern cable cutting centre, the engineering department passes the cutting orders electronically without any media discontinuity straight to the production area. Our efficient order communication system with all our customers is due to years of experience with B2B interfaces.

In many countries Datwyler works in close co-operation with independent distribution partners. Thus, our customers can rely on the consistently high quality standard of all Datwyler products and solutions whilst benefiting from local contacts and logistics services.

We support you in realising your infrastructure project – reliably, capably, complete and with the highest quality!



HIGH-SPEED
communication

ICT NETWORKS





From analogue telephony up to 10/40/100G; from Local Area Network and high-speed data centre cabling to entire carrier and Fibre to the home networks – Datwyler is your preferred partner for top-quality, reliable and future-proof ICT networks in copper and fibre optics. With outstanding products and system solutions, Datwyler set standards for quality, performance and investment protection.



Media convergence in communication is an irreversible trend, and the demand for ever increasing bandwidth continues to boom. IP technology is merging telephone, television and Internet. Multimedia – a magic word just a few years ago – is already reality.

Future-proof thanks to high-quality solutions

With the technical possibilities to constantly increase transfer rates, requirements for cable systems are becoming more demanding. The high-quality solutions of Datwyler exploit the full potential of networks and offer high investment security for the future. The comprehensive product range extends from single cables and components to complete end-to-end systems.

Modular solutions for every application

Datwyler modular solutions are suitable for all sizes and types of networks – from residential cabling to cabling systems for offices or industrial buildings to campus, access, or carrier networks for thousands of users. Telecom providers rely on our experience and know-how, as do banks, insurance companies, universities, hospitals, airports, car manufacturers and industrial companies.

ICT NETWORKS



Leading know-how

As a provider of total solutions for information and telecommunication networks, Datwyler possesses extensive know-how accumulated over decades:

- Almost 100 years of experience in cable production.
- Leading material, production and process know-how in the fabrication of copper and fibre-optic cables and components.
- Solid electro-technical competency.
- Close collaboration with renowned technical universities, international standards committees, and independent testing institutes.
- Broad systems competence.

Diverse applications

In the field of ICT networks Datwyler concentrates on communication infrastructures for public and commercial buildings and for FTTx networks.

Some examples are:

- Office, industrial and exhibition buildings
- Data centres
- Hotels and hospitals
- Stadiums, theatres, concert halls
- Airports and train stations
- FTTx projects of public utility companies and energy supply companies

In these market segments we can also flexibly meet individual customer requirements – up to and including turnkey and multi-site projects – with our cost-effective, modular system solutions and comprehensive services.

Complete system solutions

- Screened and unshielded copper system solutions (categories 3 to 7_A) for the transmission of voice, data, video, CATV, control signals and remote power (power over Ethernet, PoE+).
- Innovative fibre-optic system solutions with singlemode and multimode optical fibres for indoor and outdoor applications, from LAN backbones to FTTH in-house cabling.
- Software solution for building, technology and network management.
- Extensive services ranging from consulting and planning via pre-fabrication, logistics and installation to system maintenance.
- Established worldwide, actively managed and certificated partner network.
- Rigorous training and certification programme to guarantee optimal installation quality of our systems and solutions.
- Long-term warranty covering the entire system.



Yangshan Deepwater Port administration centre, Shanghai

Selected reference projects

Airrail Center	Frankfurt a.M.	Rathbones	London
Party school campus	Hangzhou	Dubai Motor City	Dubai
Kunming Airport	Kunming	Swisscom IT Services	Zollikofen
UBI Banca (1964 branch offices)	Bergamo	UBS central administration, Flurhof	Zurich
Swiss parliament building	Berne	Allianz Arena	Munich
Dexia BIL	Luxembourg	KPMG German headquarters	Berlin

Focus on customer value

Datwyler stands for more than just the fabrication and distribution of products. For your ICT networks we offer future-proof, modular, customised one-source solutions for all your specific applications – as a uniquely attractive overall package, with all the necessary test certificates, authorizations and certificates and with long-term warranties.

The interaction of these elements creates added value. As a customer you benefit from maximum network availability and high investment protection, even with regard to future applications, expansions and changes.



Allianz Arena, Munich

PRODUCT OVERVIEW

Integrated, future-proof cabling solutions for ultimate reliability in voice, data, video and CATV applications

More than just products

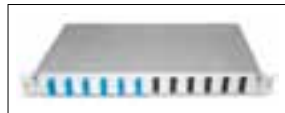
With the complete packages offered by Datwyler you are opting for comprehensive application-neutral and provider-independent system solutions encompassing the communication infrastructure for office and industry environments and for FTTx.

For Datwyler, quality testing and quality management begin during the cable production process. Here relevant electrical and mechanical data are recorded online and automatically compared with the predefined specifications. The performance values of our cables generally exceed current standards and drafts by considerable margin.

Datwyler follows the same procedure for the production of connection components, e.g. data outlets, patch panels and patch cables for copper and fibre optic systems.

Marking of individual components ensures that data measured up to the time of production can be called up at any point in the future. This gives users or investors a high degree of certainty that the products used and manufactured provide the durability demanded by them.

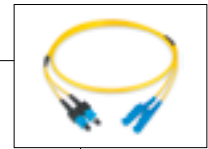




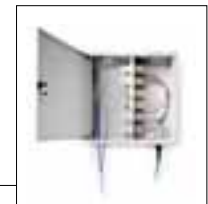
FO patch panel
OV-A



FO data outlets



FO patch cords



FO wall-mounted distribution box
OV-W



FO Indoor cables



FO Universal cables
FO Safety cables

**Copper data cables (solid) /
copper flexible cables**

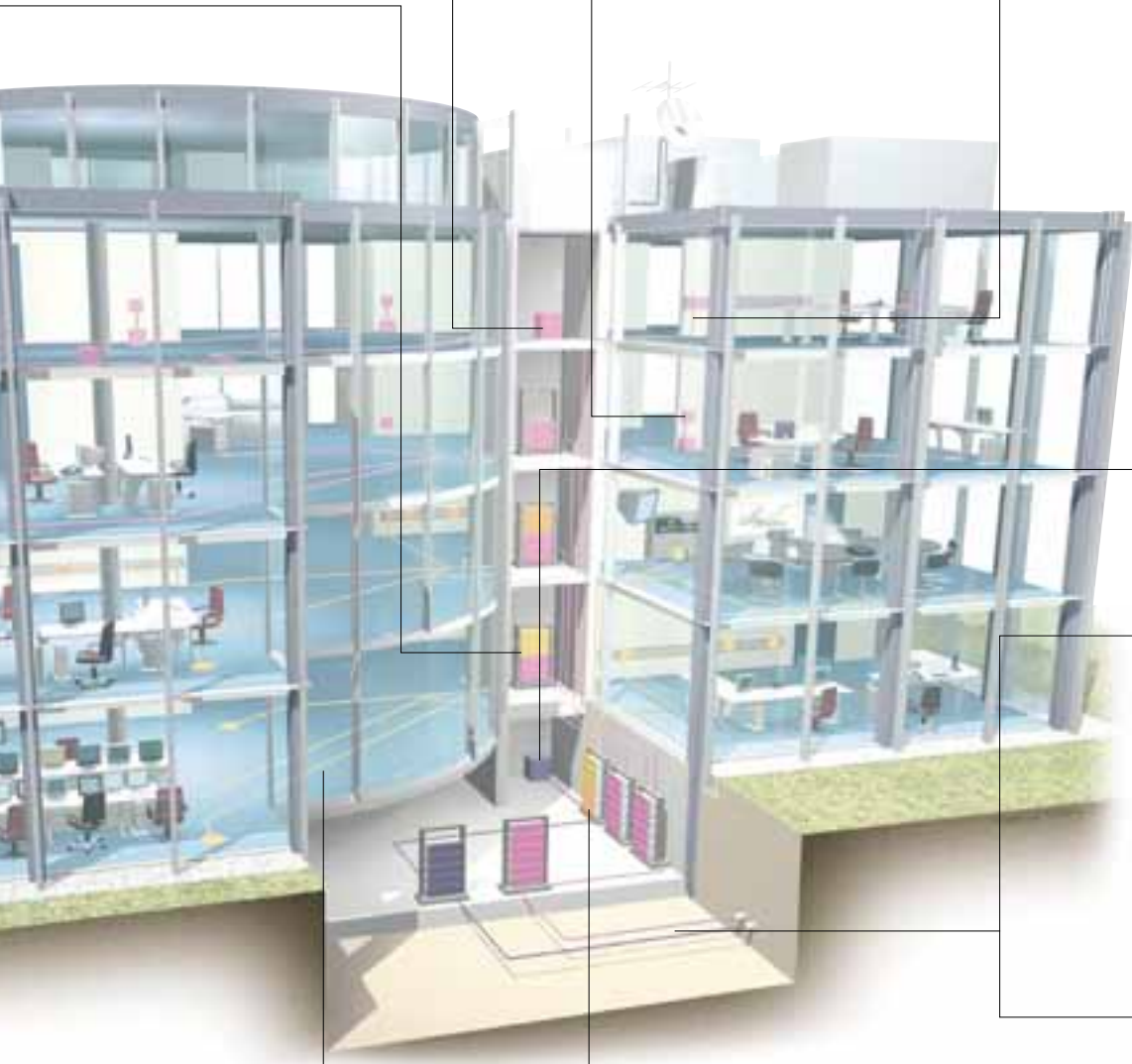


e.g.:
Cat.6 : 7060 4P
Cat.7 : 7080 4P
better than Cat.7 :
7150 4P

Multimedia CAT TV Balun,
active balun up to 862 MHz
for the distribution of CATV signals



Multimedia CAT TV Panel,
active distribution panel up to 862 MHz
for the distribution of CATV signals in LANs



PRODUCT OVERVIEW

COPPER		FIBRE OPTICS	
Cables shielded / unshielded	Connection shielded / unshielded	Cables	Connection
Copper installation / flexible cable 	Copper modules 	Fibre optic indoor cable 	Fibre optic adapters and couplers 
Copper patch cords 	Copper patch panels 	Fibre optic universal and safety cable 	Fibre optic patch panels 
Copper multiple cables (trunks), highly flexible, pre-assembled 	Copper faceplates 	Fibre optic patch and adapter cable 	Fibre optic faceplates 
Copper multiple cable (trunk), highly flexible, pre-assembled 	Floor-box solutions 	Fibre optic multiple cable (trunk) 	Fibre optic wall mounted distribution boxes 
Measurement cables 	Accessories 	Fibre optic multiple cable (trunk) BreakOut 	Fibre optic accessories 

Are you looking for a building, technology and network management software which enables effective planning, management, documentation and control of all objects and processes around your infrastructure? Feel free to ask for details about "Panorama"!

RACK SYSTEMS	DATA CENTRE SOLUTIONS	WIRELESS SOLUTIONS	MULTIMEDIA
Network-/Server racks	FO-DCS and MHD Modular High-Speed and High Density cabling systems	WiFi Powerful Wireless Fidelity	Multimedia and switching
Network rack 	FO-DCS modular subrack 	WiFi Arrays 	CAT TV Panel active distribution panel up to 862 MHz for the distribution of CATV signals 
Server rack 	FO-DCS MTP-LCD plug-in modules 	Transformers 	CAT TV Balun active balun up to 862 MHz for the distribution of CATV signals 
Wall mounted box 	MHD multiple cables (trunks) pre-assembled copper data cables 	Access points 	Network camera 
Minirack 	MHD FO distribution cartridges 	Management system 	Video monitoring system 
IT rack accessories 	MHD multiple cables pre-assembled FO data cables 	WiFi accessories 	Switches 

PRODUCT FEATURES

The following pictograms show the essential features of our products and give an easy reference.

They are allocated to the articles on the data sheets and provide you with a quick overview



**Zero halogen,
non corrosive gases**

Cables are halogen-free and reduce possible damage to health or material to a minimum.

IEC 60754-1 and IEC 60754-2,
EN 50267-2-1, EN 50267-2-2, EN 50267-2-3
VDE 0482-267 part 2-1, 2-2 and 2-3



Flame propagation

Cables use a high performance, flame retardant material that is self extinguishing.

IEC 60332-1-2,
EN 60332-1-2,
VDE 0482-332-1-2



Flame spread

Cables are flame resistant and prevent the propagation of a fire from one location to another

IEC 60332-3-22 to 25 cat. A-D,
EN 60332-3-22 bis 25 cat. A-D,
VDE 0482-332-3-22 to 25 cat. A-D



Smoke density

Cables emit minimum smoke in the event of fire. Exit routes and fire brigade access are not restricted.

IEC 61034-1 and IEC 61034-2,
EN 61034-1 and EN 61034-2,
VDE 0482-1034 part 1 and 2



**Circuit integrity
[FE/PH]**

Cables with circuit integrity guarantee the function of a single cable for a defined duration. (FE is for flame time and influence time)

IEC 60331-1, IEC 60331-2 and part 21,23, 25,
EN 50200 with Annex E, EN 50362,
VDE 0472 part 814, VDE 0482-200,
VDE 0482-362,
BS 8434-2, BS 6387 (cat. C/W/Z)



**System Circuit
integrity
[E30-E90]**

Cables (together with certified fixing systems) guarantee enhanced circuit integrity of the complete electrical cable installation for a defined time. (E30=30 minutes, E60=60 minutes, E90=90 minutes)

DIN 4102 part 12 [E30-E90]
NBN 713.020 (Rf1, Rf1½)



M

modular

Modular design of the connection technique with changeable modules. Providing the possibility of faster maintenance and hassle-free alterations in the event of increased user demand.



EMV

shielded

Fully shielded faceplates/outlets, patch panels and data cables, ensuring the compliance with the EMC guidelines according to EN55022 and uninterrupted operation. The compatibility with other systems in the environment is guaranteed due to the excellent shielding of all cables and components.



**Power over Ethernet
PoE+ (IEEE 802.3at)**

30 W

for copper data cables with AWG 22



**Power over Ethernet
PoE+ (IEEE 802.3af)**

30 W

for copper data cables < AWG 22



**Power over Ethernet
PoE (IEEE 802.3af)**

15 W

for copper data cables

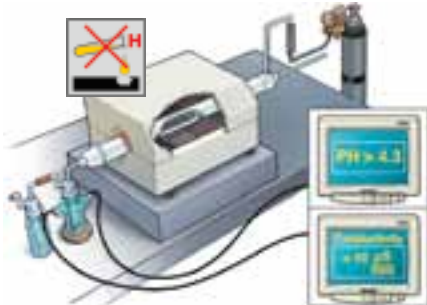


ROHS

Directive
2011/65/EU

of the European Parliament and of the Council of 08. June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment. (revised form)

THE MOST IMPORTANT TEST PROCEDURES AND THEIR FUNCTIONS



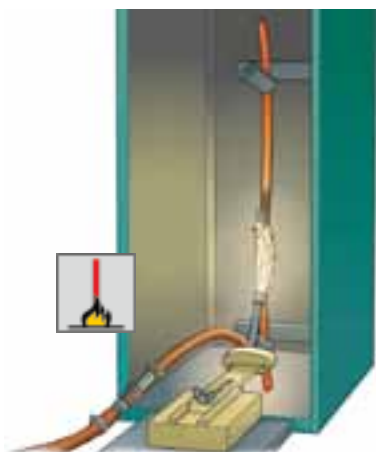
Test on gases evolved during combustion

This test procedure provides information if the insulation material of the cable sheath creates corrosive gases in the event of fire.

Halogen parts or other material in small quantities can be easily identified with this test due to the strong change of pH and conductivity. The conductivity is $< 10\text{mS/mm}$

Standards

- IEC 60754-1 and IEC 60754-2
- EN 50267-2-1, EN 50267-2-2
- EN 50267-2-3
- VDE 0482-267 part 2-1, 2-2 and 2-3



Test for vertical flame propagation (single insulated wire or cable)

This test method tests a cable sample (length: 60 cm) for burning behaviour.

Standards

- IEC 60332-1-2
- EN 60332-1-2
- VDE 0482-332-1-2

The flame must extinguish itself, and the burn damage must not reach the upper end of the cable sample.

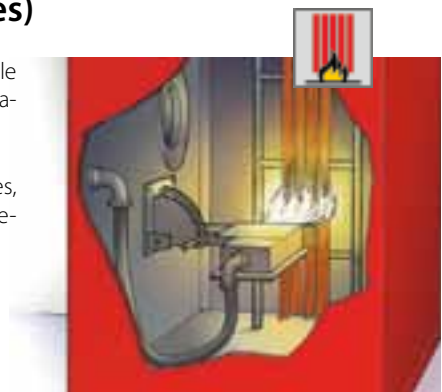
Test for vertical flame spread (bunched wires or cables)

This test method tests a cable bundle (length: 360 cm) with regard to fire propagation.

The flames must extinguish themselves, and burn damage must not exceed a defined height.

Standards

- IEC 60332-3-22 up to 25 Cat. A-D
- EN 60332-3-22 up to 25 Cat. A-D
- VDE 0482-332-3-22 up to 25 Cat. A-D



Measurement of smoke density

This test checks smoke development when burning the cable or the impairment of the visibility by burning cables.

The reduction in light transparency is measured in a standard chamber.

Standards

- IEC 61034-1 and IEC 61034-2
- EN 61034-1 and EN 61034-2
- VDE 0482-1034 part 1 and 2

THE MOST IMPORTANT TEST PROCEDURES AND THEIR FUNCTIONS

Test of circuit integrity (FE/PH)

This test establishes whether a single cable can maintain circuit integrity during and after exposure to a fire for a time period of at least 180 minutes. Cables which fulfil the requirements of this test are marked with "FE180" after their type designation.

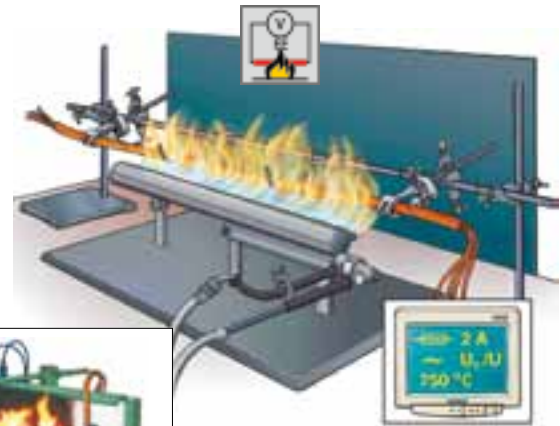
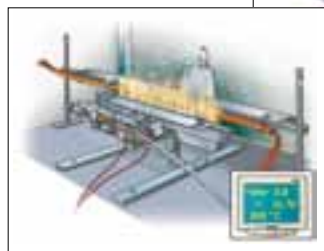
There is no obligation to test the cable for functional integrity beyond the designated period.

Remark:

This test is not equivalent to the test for functional integrity in accordance with DIN 4102-12

Test of circuit integrity (fire and water)

- BS 6387 (cat.W) [650°C, 3A]
- VdS 3423 [>830°C, 3A]
- EN 50200 Annex E [>830°C, 2A]

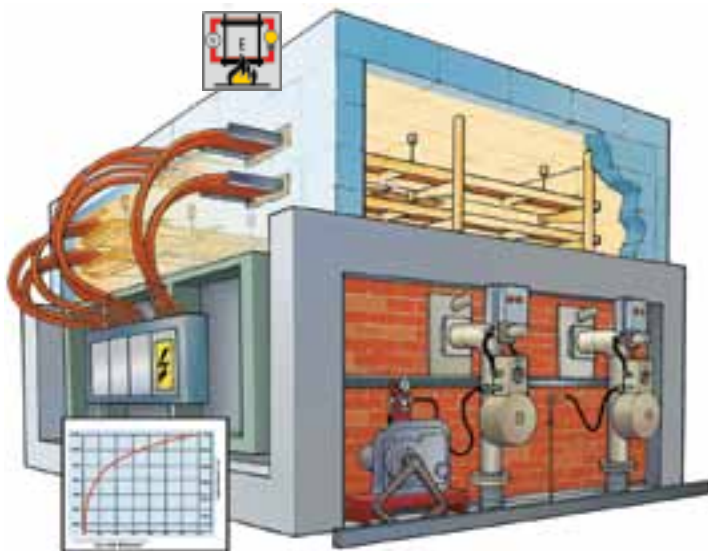


Test of circuit integrity (fire alone)

- IEC 60331-11/-21/-23/-25 [>750°C]
- BS 6387 (cat. C) [950°C]
- VDE 0472-814 [>750°C]

Test of circuit integrity (fire and mechanical shock)

- IEC 60331-1/-2 [>830°C, 2A]
- EN 50200 (PH) [>830°C, 2A]
- EN 50362 [> 830°C, 2A]
- BS 6387 (cat.Z) [950°C, 3A]



Test of system circuit integrity of electrical cable installations

This standard describes the requirements and the actions to achieve the enhanced functional integrity of complete electrical cable installations in the event of fire.

While the circuit integrity (FE/PH) provides only for the test of single cables, the cables here are tested in connection with practical support and fixing systems.

It is important to appreciate that there is no connection between the two standards - circuit integrity (FE/PH) and system circuit integrity (E).

The test is carried out and certified from state recognised institutes.

Standards

- DIN 4102 part 12 (E30-E90)
- NBN 713-020 (Rf1, Rf1 1/2)

Better than the standard!

This test (E30-E90) is the only worldwide standard for guaranteeing functional integrity of the complete electrical cable installation, including the support and fixing components, under normal operating conditions.

THE MOST IMPORTANT TEST PROCEDURES AND THEIR FUNCTIONS



Temperature change and humidity

This test procedure checks the electrical parameters (LF and HF) of a data cable following temperature or humidity changes. Test conditions for the temperature and humidity dependent measurements must simulate the worst conditions.

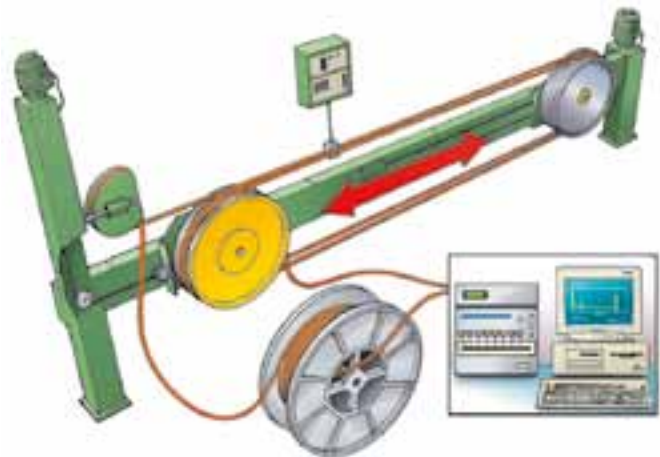
Standard
- IEC 60794-1-2F1

Tensile performance

This test checks the behaviour of the electrical LF and HF parameters as a function of the pulling force of the data cable, such as that occurring during draw-in. This is not a destructive test.

This means that the cable is loaded with the maximum allowable pulling force.

Standard
- IEC 60794-1-2-E1B



Repeated bending

The behaviour of a data cable is determined by bending a cable sample forwards and backwards 180 degrees several times. Afterwards, the cable must still fulfil the electrical LF and HF parameters according to the EN 50173 standard.

Standard
- IEC 60794-1-2-E6

Hammer blow

In order to determine the resistance of a data cable against impacts, a wedge is allowed to fall vertically onto the cable. Afterwards, the cable must still fulfil the electrical LF and HF parameters according to the EN 50173 standard.



THE MOST IMPORTANT TEST PROCEDURES AND THEIR FUNCTIONS



Impact

The fall of a heavy tool, device, stone, etc. onto the cable is simulated here. The weight is allowed to fall vertically onto an intermediate steel piece that transmits the force to the cable sample. No damage to the cable sheath may occur.

Standard

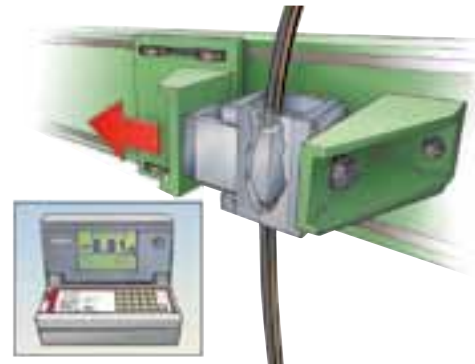
- IEC 60794-1-2-E4

Crush resistance

The purpose of this test is to determine the ability of a data cable to withstand transverse pressure. After that, the electrical LF and HF parameters must still correspond to the EN 50173 standard.

Standard

- IEC 60794-1-2-E3

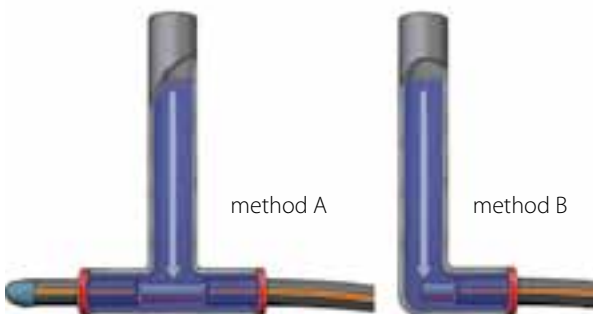


Torsion

During installation, a fibre optic cable must withstand torsion forces in addition to tension, transverse pressure and bending loads. Thus, a cable sample is turned about its own axis. Attenuation deviations are documented during the test. Neither fibre nor sheath materials may be damaged during the test.

Standard

- IEC 60794-1-2-E7



Water penetration

This method checks whether all interstices of a fibre optic outdoor cable are continuously filled with a compound that prevents water from entering the cable. Determining test criteria are the time and the maximum dispersal of the water within the sample. Datwyler uses the more difficult test method B exclusively.

Standard

- IEC 60794-1-2-F5-A/B

ROHS – WEEE – REACH

Statement from Datwyler:

As an environmentally conscious manufacturer and supplier of cabling solutions it is our concern not to use any environmentally harmful substances in our products.

Based on current information, the herein-mentioned guidelines / regulations for banned substances are fully complied with. Exceptions are noted as such on the relevant data sheet.



ROHS

DIRECTIVE 2002/95/EC
OF THE EUROPEAN PARLIAMENT
AND OF THE COUNCIL
of 08. June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment

WEEE

DIRECTIVE 2002/96/EC
OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 4 July 2012 on waste electrical and electronic equipment (revised form)

REACH

REGULATION (EC) No 1907/2006
OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (**REACH**), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 200/21/EC

and

COMMISSION REGULATION (EU) No 143/2011
of 17 February 2011 amending Annex XIV to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals

Product overview and selection guide for copper data cables

Selection criteria

The Datwyler product portfolio consists of many different cable types.



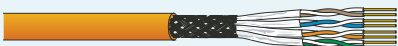


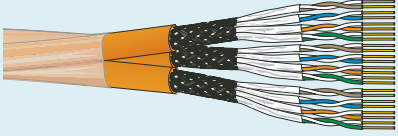











The following overview lists some of the more important criteria which will help you to decide for the cable types that meet your specific requirements.

page	Cable type	Cable design	AWG = American Wire Gauge	Category/Class	Telephone, ISDN	Video signals (RGB): symmetrical transmission	Ethernet 10 BaseT/100 BaseT	Gigabit-Ethernet 1000 BaseT	10 Gigabit-Ethernet	Cable Sharing	Suitable for horizontal cabling	Suitable for backbone and vertical/riser cabling	Suitable for patch and connecting cables	PimF (Pair in metal Foil)	Bundle cable	Stabilizing element (intermediate sheath for mech. stabilization)	PVC cable sheath (FR/PVC)	Halogen free cable sheath (FRNC/LSOH)	Multimedia according to EN 50083-8	Stabilising element (cross)	Suitable for outdoor use	Suitable for industrial applications
shielded																						
26	CU 7150 4P Multimedia / 2x4P F8 Multimedia	S/FTP	22	7 _A /F _A (1000 MHz)	●	●	●	●	●	●	●	●	●	●			●	●				
28	CU 7702 4P / 2x4P F8	S/FTP	22	7 _A /F _A (1000 MHz)	●	●	●	●	●	●	●	●	●	●			●	●				
30	CU 7120 4P / 2x4P F8	S/FTP	23	7 _A /F _A (1000 MHz)	●	●	●	●	●	●	●	●	●	●			●	●				
32	CU 7080 4P / 2x4P F8	S/FTP	23	7/F (600 MHz)	●	●	●	●	●	●	●	●	●	●			●	●				
34	CU 7002 4P / 2x4P F8	S/FTP	23	7/F (600 MHz)	●	●	●	●	●	●	●	●	●	●			●	●				
36	CU 7002 nx4P Breakout Light (BOL)	S/FTP	23	7/F (600 MHz)	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
38	CU 7002 4P Industrial PUR	S/FTP	23	7/F (600 MHz)	●	●	●	●	●	●	●	●	●	●			●	●			●	
40	CU 7002 4P GG-PE	S/FTP	23	7/F (600 MHz)	●	●	●	●	●	●	●	●	●	●			●	●		●		
42	CU 7052 4P / 2x4P F8	F/FTP	23	7/F (600 MHz)	●	●	●	●	●	●	●	●	●	●			●	●				
44	CU 7060 4P / 2x4P F8	S/FTP	23	6 _A /E _A (500 MHz)	●	●	●	●	●	●	●	●	●	●			●	●				
46	CU 6552 4P	F/FTP	23	6 _A /E _A (500 MHz)	●	●	●	●	●	●	●	●	●	●			●	●				
48	CU 6502 4P	U/FTP	23	6 _A /E _A (500 MHz)	●	●	●	●	●	●	●	●	●	●			●	●				
50	CU 6052 4P / 2x4P F8	F/FTP	23	6/E (250 MHz)	●	●	●	●	●	●	●	●	●	●			●	●				
52	CU 6702 4P	SF/UTP	24	6/E (250 MHz)	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
54	CU 6002 4P	U/FTP	23	6/E (250 MHz)	●	●	●	●	●	●	●	●	●	●			●	●				
56	CU 5502 4P	SF/UTP	24	5e/D (100 MHz)	●	●	●	●	●	●	●	●	●	●			●	●				
58	CU 5002 4P	F/UTP	24	5e/D (100 MHz)	●	●	●	●	●	●	●	●	●	●			●	●				
60	CU 7150 4P flex	S/FTP	26	7 _A /F _A (1000 MHz)	●	●	●	●	●	●	●	●	●	●			●	●				
62	CU 7702 4P flex	S/FTP	26	7/F (600 MHz)	●	●	●	●	●	●	●	●	●	●			●	●				
64	CU 7702 4P flex Industrial PUR	S/FTP	26	7/F (600 MHz)	●	●	●	●	●	●	●	●	●	●			●	●			●	
66	CU 1P flex Multimedia	S/FTP	26	7/F (600 MHz)	●	●	●	●	●	●	●	●	●	●			●	●				
68	CU 2P flex Multimedia	S/FTP	26	7/F (600 MHz)	●	●	●	●	●	●	●	●	●	●			●	●				
70	CU 5502 4P flex	S/UTP	26	5e/D (100 MHz)	●	●	●	●	●	●	●	●	●	●			●	●				
unshielded																						
72	CU 662 4P	U/UTP	24	6/E (250 MHz)	●	●	●	●	●	●	●	●	●	●			●	●		●		
74	CU 502 4P	U/UTP	24	5e/D (100 MHz)	●	●	●	●	●	●	●	●	●	●			●	●				
76	CU 602 4P flex	U/UTP	24	6/E (250 MHz)	●	●	●	●	●	●	●	●	●	●			●	●				
Telephone cable																						
78	DATWYLER 25-pair Indoor	U/UTP	24	3/C (16 MHz)	●						●	●					●	●				
80	DATWYLER 50-pair Indoor	U/UTP	24	3/C (16 MHz)	●						●	●					●	●				
82	DATWYLER 100-pair Indoor	U/UTP	24	3/C (16 MHz)	●						●	●					●	●				

COPPER

**At a glance guide:
Copper data cables, by Category**

CATEGORY/CLASS
<p>7_A/F_A (1000 MHz)</p> <hr/> <p>40GBase-T (in the future)</p>
<p>7/F (600 MHz)</p> <hr/>
<p>6_A/E_A (500 MHz)</p> <hr/> <p>10GBase-T</p>
<p>6/E (250 MHz)</p> <hr/>
<p>5e/D (100 MHz)</p> <hr/> <p>1000Base-T / 100Base-T</p>

DATA CABLE shielded
 <p>CU 7150 4P Multimedia / 2x4P F8 Multimedia</p>  <p>CU 7702 4P / 2x4P F8</p>  <p>CU 7120 4P / 2x4P F8</p>
 <p>CU 7080 4P / 2x4P F8</p>  <p>CU 7002 4P / 2x4P F8</p>  <p>CU 7002 nx4P Breakout Light (BOL)</p>  <p>CU 7002 4P Industrial PUR</p>  <p>CU 7002 4P GG-PE</p>  <p>CU 7052 4P / 2x4P F8</p>
 <p>CU 7060 4P / 2x4P F8</p>  <p>CU 6552 4P</p>  <p>CU 6502 4P</p>
 <p>CU 6052 4P / 2x4P F8</p>  <p>CU 6702 4P</p>  <p>CU 6002 4P</p>
 <p>CU 5502 4P</p>  <p>CU 5002 4P</p>

- Copper
- Fibre Optics
- Cabinets & Racks Optics
- Cabinets & Rack Data Centre
- Data Wireless
- Multimedia Wireless
- Multimedia
- General Information

Cables with higher category fulfil all requirements of the categories below.

FLEXIBLE CABLE shielded



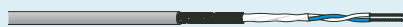
CU 7150 4P flex



CU 7702 4P flex



CU 7702 4P flex Industrial PUR



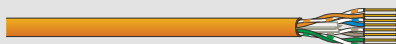
CU 1P flex Multimedia



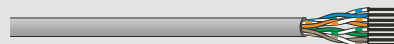
CU 2P flex Multimedia

DATA CABLE unshielded

FLEXIBLE CABLE unshielded



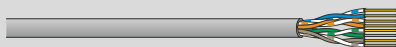
CU 662 4P



CU 602 4P flex
















CU 5502 4P flex



CU 502 4P

At a glance guide:

Copper connecting hardware, by Category

CATEGORY/CLASS	COPPER CONNECTING HARDWARE shielded
<p>7_A/F_A (1000 MHz)</p> <hr/> <p>40GBase-T (in the future)</p>	  <p>Module PS-GG45 7_A Module PS-TERA 4P Cat.7_A</p>
<p>7/F (600 MHz)</p> <hr/>	<p>All Cat.7 components have been optimized for the Cat._A requirements.</p>
<p>6_A/E_A (500 MHz)</p> <hr/> <p>10GBase-T*</p> <p>*) In case of using these modules for 10GBase-T (Class E_A) applications we recommend Cat.7 or Cat.7_A data cables</p>	    <p>Module KS-T Plus 1/8 toolless Cat.6_A (IEC) Module MS-K Plus 1/8 Cat.6_A Module MS-C6_A 1/8 Cat.6_A (IEC) 180° Module MS-C6_A 1/8 Cat.6_A (IEC) 180° - K (Keystone)</p>
<p>6/E_A (500 MHz)</p> <hr/>	   <p>Module KS-T 1/8 toolless Cat.6/E_A Module KS-TS 1/8 toolless slimline Cat.6/E_A Module MS 1/8 Cat.6/E_A</p>
<p>6/E (250 MHz)</p> <hr/>	   <p>Patch panel CSP 24/8 Cat.6 RJ45 Keystone coupler (RJ45-RJ45), 180°, straight RJ45 Feed-trough coupler MS/KS, angled</p>
<p>5e/D (100 MHz)</p> <hr/> <p>1000Base-T / 100Base-T</p>	 <p>Module KS-T 5 1/8 toolless Cat.5e</p>

Please find an up-to-date matrix showing which patch panels and outlets are suitable for the insertion of the respective Datwyler module on our homepage www.datwyler.com.

Subject to technical modification.

Modules with a higher category implements all requirements of the category below.

COPPER CONNECTING HARDWARE unshielded



UP/K Faceplate
CSA Plus 2/8 Cat.6_A

UP/K Faceplate
CSA Plus 1/8 Cat.6_A



Patch panel CSA Plus 24/8 Cat.6_A (IEC)

Please note:

These modules also fulfil all Class E_A Channel requirements when connected to Cat.7 oder Cat.7_A data cables.



RJ45 Feed-trough coupler
MS/KS, straight



Module KU-T 1/8
toolless Cat.6



Module MU 1/8
Cat.6



Patch panel CU 24/8
Cat.6



Patch panel CUP 24/8
Cat.6



Module KU-T 1/8
toolless Cat.5e

Copper

Fibre Optics

Cabinets & Racks

Data Centre

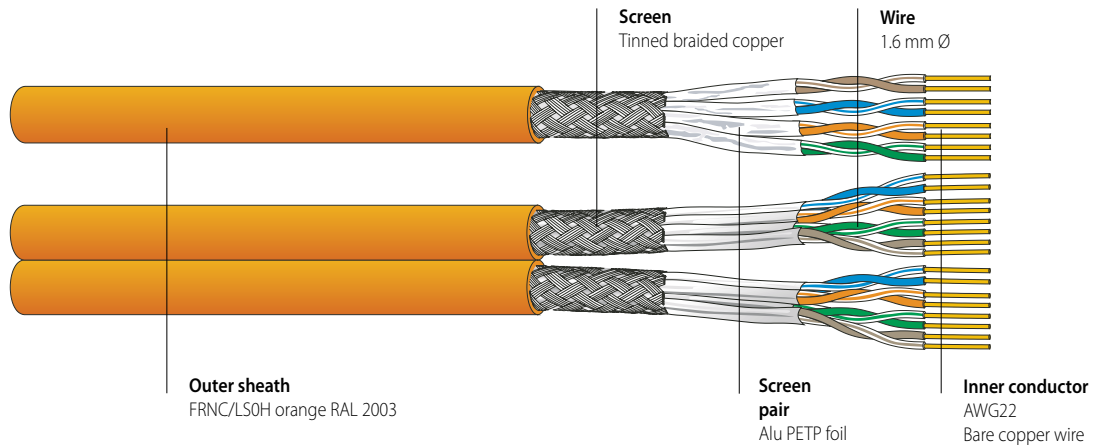
Wireless

Multimedia

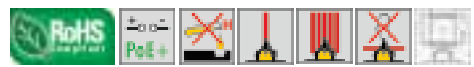
General Information

COPPER DATA CABLES, SHIELDED

Data cable S/FTP Cat.7_A AWG22
 CU 7150 4P Multimedia / 2x4P F8



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality Cat.7_A data cable - exceeds the requirements of ISO/IEC 11801, IEC 61156-5, IEC 61156-7, EN 50173-1 and prEN 50288-9-1.
 Excellent shielding effect due to individually screened pairs and overall copper braid.
 Easy identification of wires thanks to longitudinal colour markings.
 Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.

APPLICATIONS

Data cable for structured premises cabling.
 For the transmission of digital and analogue voice, video and data signals.
 Suitable for all ICT network applications up to class F_A applications (1000 MHz) in accordance with EN 50173-1 and ISO/IEC 11801.
 Optimized for the transmission of broadband signals (such as cable TV) in accordance with IEC 15018.
 Due to the increased wire section eminently suited for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Dimension n x n x mm (AWG)	Sheath	Sheath Ø mm	Weight kg/km	Cu weight kg/km	Fire load kWh/m MJ/m	PU
182925	4 x 2 x 0.64 (AWG22)	FRNC/LSOH ¹⁾	7.8	69.2	40.2	0.18 0.65	1000 m drum
182926	2 x (4 x 2 x 0.64 (AWG22))	FRNC/LSOH ¹⁾	7.8 x 16.4	139.2	80.4	0.36 1.30	500 m drum

¹⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

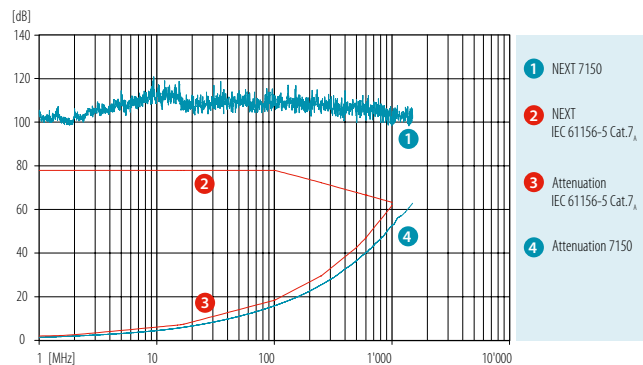
CU 7150 4P 0312/e

ELECTRICAL CHARACTERISTICS

CATEGORY	5e		6	6 _A	7	CATV	7 _A	61156-7			
Frequency [MHz]	1	4	10	100	250	500	600	862	1000	1200	1500
Attenuation [dB/100 m]	1.7	3.2	4.9	16.2	26	38	40	49	54	58	68
NEXT [dB]	103	103	103	103	103	98	96	92	90	85	80
PS NEXT [dB]	100	100	100	100	100	95	93	89	87	82	77
ACR-N [dB]	101	100	98	87	77	60	56	43	36	27	12
PS-ACR-N [dB]	98	97	95	84	74	57	53	40	33	24	9
ACR-F [dB]	110	108	106	94	84	71	66	58	55	46	41
PS-ACR-F [dB]	107	105	103	91	81	68	63	55	52	43	38
Return loss [dB]	26	30	33	33	28	26	25	24	23	23	20

These performance data are typical measured values.

Loop resistance at 20° C: 111 Ω/km
 Mutual capacitance: 41 pF/m
 Impedance at 100 MHz: 100 Ω ± 5 Ω
 Transfer impedance at 1/10/30 MHz: < 5/5/8 mΩ/m
 Coupling attenuation (limit curve of critical state - IEC 61156): ≥ 85 dB
 Near end unbalance att. LCL: > 40dB
 Delay skew: 17 ns/100m
 NVP: 80 %



MECHANICAL CHARACTERISTICS

Bending radius (flat side)
 Tensile strength:
 Crush resistance:
 Impact resistance:
 Temperature range

during draw-in:
 permanently installed:
 during installation:
 in operation:

	CU 7150 4P	CU 7150 2x4P F8
during draw-in:	≥ 64 mm	≥ 64 mm
permanently installed:	≥ 32 mm	≥ 32 mm
	≤ 130 N	≤ 260 N
	≥ 1000 N/10 cm	≥ 1000 N/10 cm
	≥ 10 impacts	≥ 10 impacts
during installation:	0° C to + 50° C	0° C to + 50° C
in operation:	-20° C to + 60° C	-20° C to + 60° C

GENERAL CHARACTERISTICS

Wire colour code

white-blue/blue
 white-orange/orange
 white-green/green
 white-brown/brown
 (with longitudinal stripes)
 in accordance with IEC 60189 and IEC 60708

Imprint

DATWYLER «cable type» «additional text» «batch number» «meter marks»

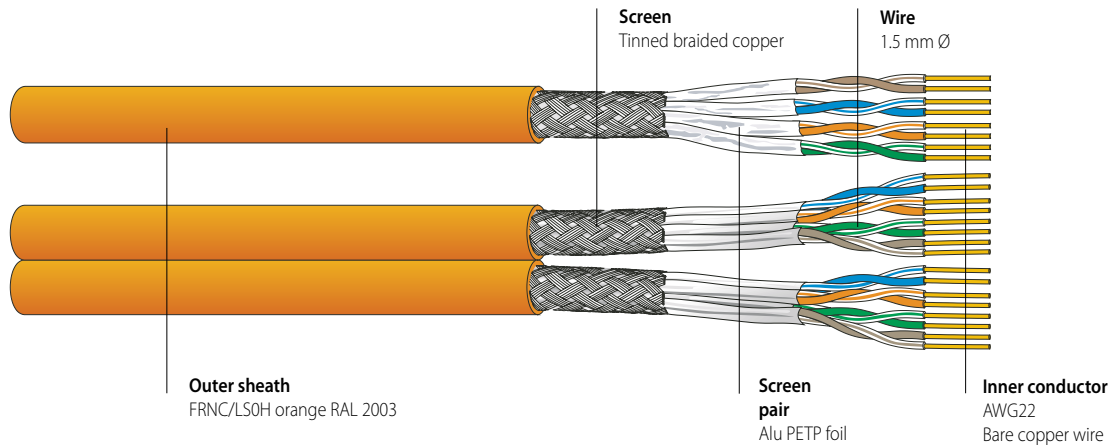
- Zero halogen
- non corrosive gases
- Flame propagation
- Flame spread
- Smoke density
- Power over Ethernet plus
- EMC
- Cat./Class

IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2)
 IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 IEC 60332-3-24, EN 60332-3-24
 IEC 61034-1/-2, EN 61034-1/-2 (VDE 0482-1034-1/-2)
 IEEE 802.3at
 shielded
 better than Cat.7_A / Class F_A

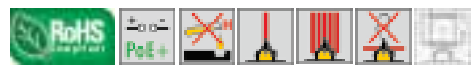
COPPER DATA CABLES, SHIELDED

Data cable S/FTP Cat.7_A AWG22

CU 7702 4P / 2x4P F8



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality Cat.7_A data cable - exceeds the requirements of ISO/IEC 11801, IEC 61156-5, IEC 61156-7, EN 50173-1 and prEN 50288-9-1. Excellent shielding effect due to individually screened pairs and overall copper braid. Easy identification of wires thanks to longitudinal colour markings. Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.

APPLICATIONS

Data cable for structured premises cabling. For the transmission of digital and analogue voice, video and data signals. Suitable for all ICT network applications up to class F_A applications (1000 MHz) in accordance with EN 50173-1 and ISO/IEC 11801 and for the transmission of broadband signals (such as cable TV) in accordance with IEC 15018. Due to the increased wire section eminently suited for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Dimension n x n x mm (AWG)	Sheath	Sheath Ø mm	Weight kg/km	Cu weight kg/km	Fire load		PU
						kWh/m	MJ/m	
177400	4 x 2 x 0.62 (AWG22)	FRNC/LSOH ¹⁾	7.8	65.1	34.9	0.18	0.65	1000 m drum
177390	2 x (4 x 2 x 0.62 (AWG22))	FRNC/LSOH ¹⁾	7.8 x 16.4	131.0	69.8	0.36	1.30	500 m drum

¹⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

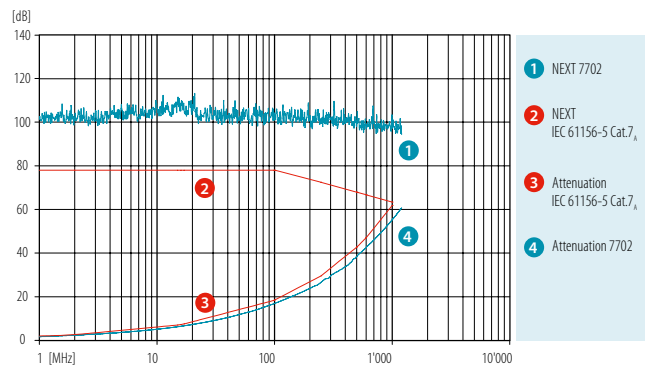
CU 7702 4P/2x4P 0312/e

ELECTRICAL CHARACTERISTICS

CATEGORY			5e	6	6 _A	7	CATV	7 _A		
Frequency [MHz]	1	4	10	100	250	500	600	862	1000	1200
Attenuation [dB/100m]	1.7	3.4	5.3	16.9	27	40	42	53	56	62
NEXT [dB]	103	103	103	103	103	98	96	92	90	85
PS NEXT [dB]	100	100	100	100	100	95	93	89	87	82
ACR-N [dB]	101	100	98	86	76	58	54	39	34	23
PS-ACR-N [dB]	98	97	95	83	73	55	51	36	31	20
ACR-F [dB]	109	107	105	93	83	70	65	57	54	46
PS-ACR-F [dB]	106	104	102	90	80	67	62	54	51	43
Return loss [dB]	26	30	33	33	28	26	25	24	23	21

These performance data are typical measured values.

Loop resistance at 20° C: 116 Ω/km
 Mutual capacitance: 43 pF/m
 Impedance at 100 MHz: 100 Ω ± 5 Ω
 Transfer impedance at 1/10/30 MHz: < 5/5/8 mΩ/m
 Coupling attenuation (limit curve of critical state - IEC 61156): ≥ 85 dB
 Near end unbalance att. LCL: > 40 dB
 Delay skew: 15 ns/100m
 NVP: 76 %



MECHANICAL CHARACTERISTICS

Bending radius (flat side)
 Tensile strength:
 Crush resistance:
 Impact:
 Temperature range

during draw-in:
 permanently installed:
 during installation:
 in operation:

CU 7702 4P

≥ 64 mm
 ≥ 32 mm
 ≤ 120 N
 ≥ 1000 N/10 cm
 ≥ 10 impacts
 0° C to + 50° C
 -20° C to + 60° C

CU 7702 2x4P F8

≥ 64 mm
 ≥ 32 mm
 ≤ 240 N
 ≥ 1000 N/10 cm
 ≥ 10 impacts
 0° C to + 50° C
 -20° C to + 60° C

GENERAL CHARACTERISTICS

Wire colour code

white-blue/blue
 white-orange/orange
 white-green/green
 white-brown/brown
 (with longitudinal stripes)
 in accordance with IEC 60189 and IEC 60708

Imprint

DATWYLER «cable type» «additional text» «batch number» «meter marks»

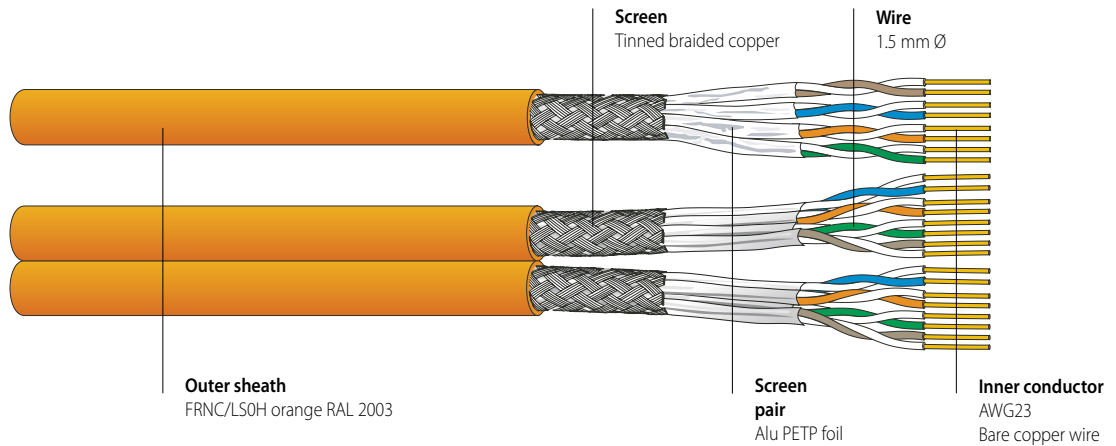
- Zero halogen
- non corrosive gases
- Flame propagation
- Flame spread
- Smoke density
- Power over Ethernet plus
- EMC
- Cat./Class

IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2)
 IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 IEC 60332-3-24, EN 60332-3-24
 IEC 61034-1/-2, EN 61034-1/-2 (VDE 0482-1034-1/-2)
 IEEE 802.3at
 shielded
 better than Cat.7_A / Class F_A

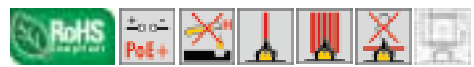
COPPER DATA CABLES, SHIELDED

Data cable S/FTP Cat.7_A AWG23

CU 7120 4P / 2x4P F8



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality Cat.7_A data cable - exceeds the requirements of ISO/IEC 11801, IEC 61156-5, EN 50173-1 and prEN 50288-9-1.
 Excellent shielding effect due to individually screened pairs and overall copper braid.
 Reduced outer diameter.
 Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.

APPLICATIONS

Data cable for structured premises cabling.
 For the transmission of digital and analogue voice, video and data signals.
 Suitable for all ICT network applications up to class F_A applications (1000 MHz) in accordance with EN 50173-1 and ISO/IEC 11801 and for the transmission of broadband signals (such as cable TV) in accordance with IEC 15018.
 Applicable for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Dimension n x n x mm (AWG)	Sheath	Sheath Ø mm	Weight kg/km	Cu weight kg/km	Fire load		PU
						kWh/m	MJ/m	
191466	4 x 2 x 0.59 (AWG23)	FRNC/LSOH ¹⁾	7.6	63.0	32.3	0.18	0.649	1000 m drum
191467	2 x (4 x 2 x 0.59 (AWG23))	FRNC/LSOH ¹⁾	7.6 x 16.0	126.0	64.6	0.36	1.298	500 m drum

¹⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

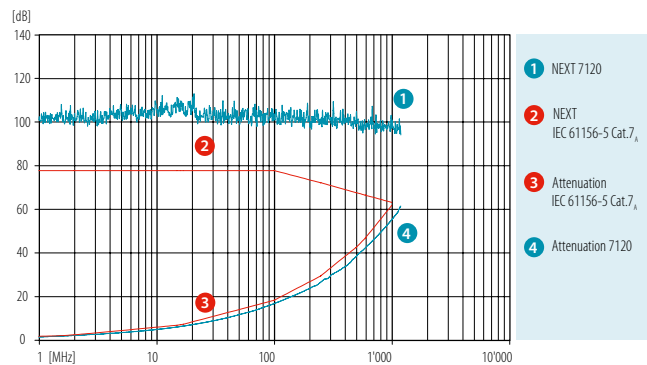
CU 7120 4P 0612/e

ELECTRICAL CHARACTERISTICS

CATEGORY			5e	6	6 _A	7	CATV	7 _A		
Frequency [MHz]	1	4	10	100	250	500	600	862	1000	1200
Attenuation [dB/100m]	1.8	3.5	5.4	17.7	28	41	46	54	57	64
NEXT [dB]	103	103	103	103	103	98	96	92	90	85
PS NEXT [dB]	100	100	100	100	100	95	93	89	87	82
ACR-N [dB]	101	100	98	85	75	57	50	38	33	21
PS-ACR-N [dB]	98	97	95	82	72	54	47	35	30	18
ACR-F [dB]	108	106	104	92	82	69	64	56	53	46
PS-ACR-F [dB]	105	103	101	89	79	66	61	53	50	43
Return loss [dB]	26	30	33	33	28	26	25	24	23	20

These performance data are typical measured values.

Loop resistance at 20° C: 134 Ω/km
 Mutual capacitance: 44 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Transfer impedance at 1/10/30 MHz: < 5/5/8 mΩ/m
 Coupling attenuation (limit curve of critical state - IEC 61156): ≥ 85 dB
 Near end unbalance att. LCL: > 40 dB
 Delay skew: 14 ns/100 m
 NVP: 76 %



MECHANICAL CHARACTERISTICS

Bending radius (flat side)
 Tensile strength:
 Crush resistance:
 Impact resistance:
 Temperature range

during draw-in:
 permanently installed:
 during installation:
 in operation:

	CU 7120 4P	CU 7120 2x4P F8
during draw-in:	≥ 60 mm	≥ 60 mm
permanently installed:	≥ 30 mm	≥ 30 mm
	≤ 110 N	≤ 220 N
	≥ 1000 N/10 cm	≥ 1000 N/10 cm
	≥ 10 impacts	≥ 10 impacts
during installation:	0 °C to +50 °C	0 °C to +50 °C
in operation:	-20 °C to +60 °C	-20 °C to +60 °C

GENERAL CHARACTERISTICS

Wire colour code

white/blue
 white/orange
 white/green
 white/brown
 according to IEC 60189 and IEC 60708

Imprint

DATWYLER «cable type» «additional text» «batch number» «meter marks»

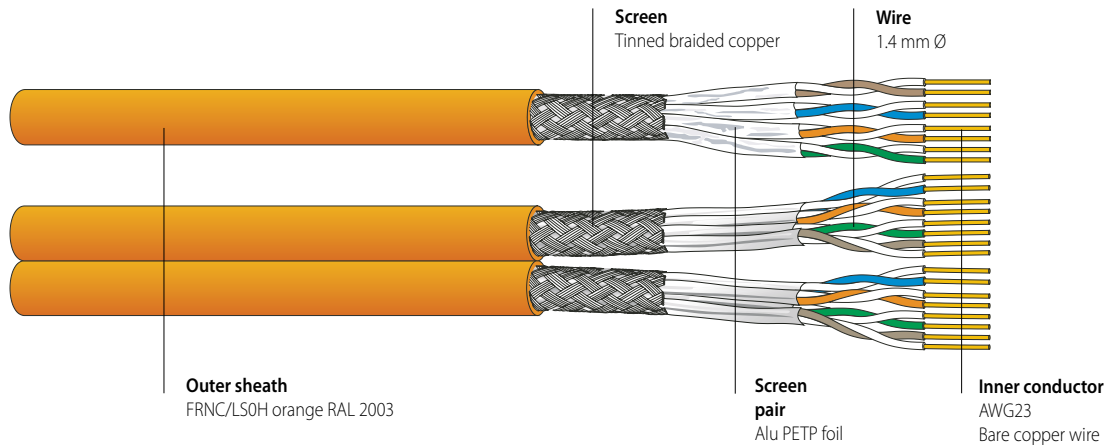
- Zero halogen, non corrosive gases
- Flame propagation
- Flame spread
- Smoke density
- Power over Ethernet plus
- EMC
- Cat./Class

IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2)
 IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 IEC 60332-3-24, EN 60332-3-24
 IEC 61034-1/-2, EN 61034-1/-2 (VDE 0482-1034-1/-2)
 IEEE 802.3at
 shielded
 Cat.7_A / Class F_A

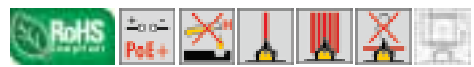
COPPER DATA CABLES, SHIELDED

Data cable S/FTP Cat.7 AWG23

CU 7080 4P / 2x4P F8



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality Cat.7 data cable - exceeds the requirements of ISO/IEC 11801, IEC 61156-5, EN 50173-1 and EN 50288-4-1. Excellent shielding effect due to individually screened pairs and overall copper braid. Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.

APPLICATIONS

Data cable for structured premises cabling. For the transmission of digital and analogue voice, video and data signals. Suitable for all ICT network applications up to class F applications (600 MHz) in accordance with EN 50173-1 and ISO/IEC 11801 and for the transmission of broadband signals (such as cable TV) in accordance with IEC 15018. Applicable for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Dimension n x n x mm (AWG)	Sheath	Sheath Ø mm	Weight kg/km	Cu weight kg/km	Fire load		PU
						kWh/m	MJ/m	
182911	4 x 2 x 0.57 (AWG23)	FRNC/LSOH ¹⁾	7.4	60	31.1	0.16	0.57	1000 m drum
182912	2 x (4 x 2 x 0.57 (AWG23))	FRNC/LSOH ¹⁾	7.4 x 15.6	120	62.2	0.32	1.14	500 m drum

¹⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

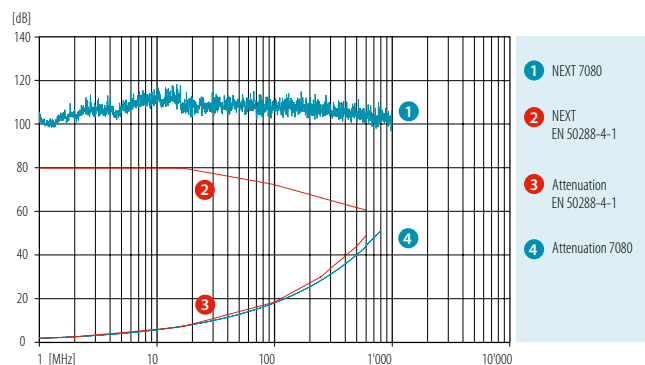
CU 7080 4P/2x4P 0312/e

ELECTRICAL CHARACTERISTICS

CATEGORY	5e		6	6 _A	7					
Frequency [MHz]	1	4	10	100	250	500	600	800	862	1000
Attenuation [dB/100m]	1,9	3,7	5,6	17,9	28	41	46	52	54	57
NEXT [dB]	100	100	100	100	100	92	90	84	83	80
PS NEXT [dB]	97	97	97	97	97	89	87	81	80	77
ACR-N [dB]	98	96	94	82	72	58	44	32	29	23
PS-ACR-N [dB]	95	93	91	79	69	55	41	29	26	20
ACR-F [dB]	98	98	98	78	69	56	45	39	37	33
PS-ACR-F [dB]	95	95	95	75	66	53	42	36	34	30
Return loss [dB]	26	30	33	33	28	26	25	23	22	20

These performance data are typical measured values.

Loop resistance at 20° C: 140 Ω/km
 Mutual capacitance: 42 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Transfer impedance at 1/10/30 MHz: < 6/6/10 mΩ/m
 Coupling attenuation (limit curve of critical state - IEC 61156): ≥ 85 dB
 Near end unbalance att. LCL at 1-600 MHz: > 40 dB
 Delay Skew: 12 ns/100 m
 NVP: 81 %



MECHANICAL CHARACTERISTICS

Bending radius (flat side)
 Tensile strength:
 Crush resistance:
 Impact:
 Temperature range

during draw-in:
 permanently installed:
 during installation:
 in operation:

CU 7080 4P

≥ 60 mm
 ≥ 30 mm
 ≤ 110 N
 ≥ 1000 N/10 cm
 ≥ 10 impacts
 0° C to + 50° C
 -20° C to + 60° C

CU 7080 2x4P F8

≥ 60 mm
 ≥ 30 mm
 ≤ 220 N
 ≥ 1000 N/10 cm
 ≥ 10 impacts
 0° C to + 50° C
 -20° C to + 60° C

GENERAL CHARACTERISTICS

Wire colour code

white/blue
 white/orange
 white/green
 white/brown
 in accordance with IEC 60189 and IEC 60708

Imprint

DATWYLER «cable type» «additional text» «batch number» «meter marks»

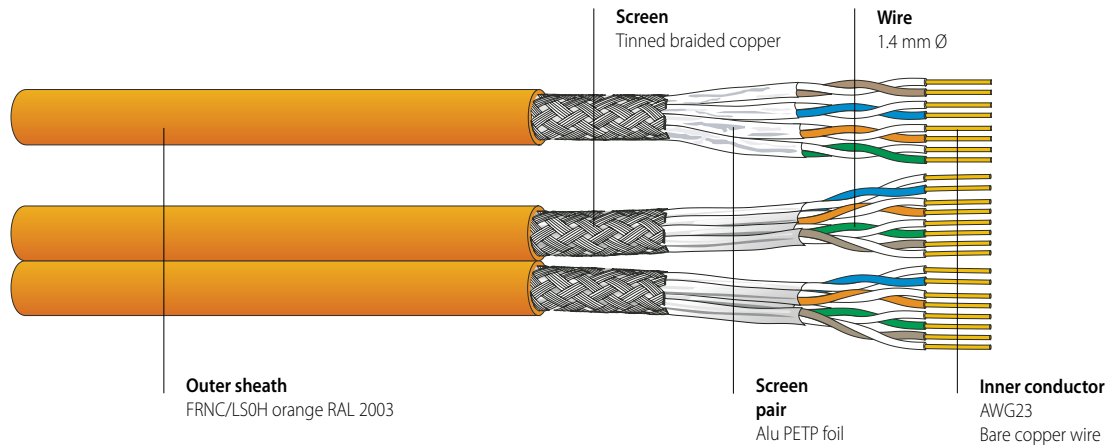
- Zero halogen, non corrosive gases
- Flame propagation
- Flame spread
- Smoke density
- Power over Ethernet plus
- EMC
- Cat./Class

IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2)
 IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 IEC 60332-3-24, EN 60332-3-24
 IEC 61034-1/-2, EN 61034-1/-2 (VDE 0482-1034-1/-2)
 IEEE 802.3at
 shielded
 better than Cat.7 / Class F

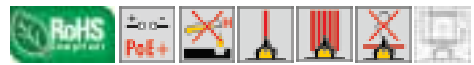
COPPER DATA CABLES, SHIELDED

Data cable S/FTP Cat.7 AWG23

CU 7002 4P / 2x4P F8



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality Cat.7 data cable - exceeds the requirements of ISO/IEC 11801, IEC 61156-5, EN 50173-1 and EN 50288-4-1. Excellent shielding effect due to individually screened pairs and overall copper braid. Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.

APPLICATIONS

Data cable for structured premises cabling. For the transmission of digital and analogue voice, video and data signals. Suitable for all ICT network applications up to class F applications (600 MHz) in accordance with EN 50173-1 and ISO/IEC 11801 and for the transmission of broadband signals (such as cable TV) in accordance with IEC 15018. Applicable for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Dimension n x n x mm (AWG)	Sheath	Sheath Ø mm	Weight kg/km	Cu weight kg/km	Fire load		PU
						kWh/m	MJ/m	
177388	4 x 2 x 0.57 (AWG23)	FRNC/LS0H ¹⁾	7.4	60	31.1	0.16	0.57	1000 m drum
177398	2 x (4 x 2 x 0.57 (AWG23))	FRNC/LS0H ¹⁾	7.4 x 15.6	120	62.2	0.32	1.14	500 m drum

¹⁾ FRNC/LS0H = Flame Retardant Non Corrosive/Low Smoke Zero Halogen

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

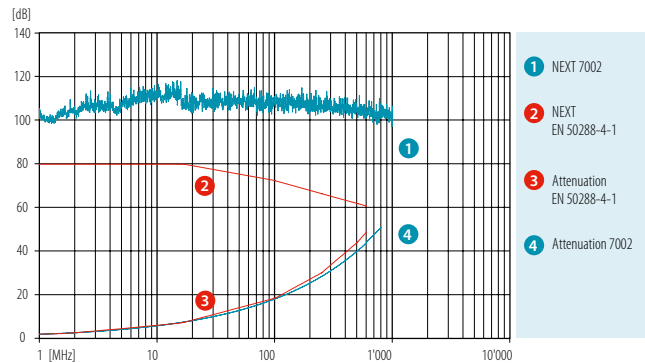
CU 7002 4P/2x4P 0312/e

ELECTRICAL CHARACTERISTICS

CATEGORY	5e		6	6 _A	7					
Frequency [MHz]	1	4	10	100	250	500	600	800	862	1000
Attenuation [dB/100m]	1.9	3.6	5.6	17.9	28	41	46	52	54	57
NEXT [dB]	100	100	100	100	100	92	90	84	83	80
PS NEXT [dB]	97	97	97	97	97	89	87	81	80	77
ACR-N [dB]	98	96	94	82	72	58	44	32	29	23
PS-ACR-N [dB]	95	93	91	79	69	55	41	29	26	20
ACR-F [dB]	98	98	98	78	69	56	45	39	37	33
PS-ACR-F [dB]	95	95	95	75	66	53	42	36	34	30
Return loss [dB]	26	30	33	33	28	26	25	23	22	20

These performance data are typical measured values.

Loop resistance at 20° C: 140 Ω/km
 Mutual capacitance: 42 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Transfer impedance at 1/10/30 MHz: < 6/6/10 mΩ/m
 Coupling attenuation (limit curve of critical state - IEC 61156): ≥ 85 dB
 Near end unbalance att. LCL at 1-600 MHz: > 40 dB
 Delay Skew: 4 ns/100 m
 NVP: 81%



MECHANICAL CHARACTERISTICS

Bending radius (flat side)
 Tensile strength:
 Crush resistance:
 Impact:
 Temperature range

during draw-in:
 permanently installed:
 during installation:
 in operation:

CU 7002 4P

≥ 60 mm
 ≥ 30 mm
 ≤ 110 N
 ≥ 1000 N/10 cm
 ≥ 10 impacts
 0° C to + 50° C
 -20° C to + 60° C

CU 7002 2x4P F8

≥ 60 mm
 ≥ 30 mm
 ≤ 220 N
 ≥ 1000 N/10 cm
 ≥ 10 impacts
 0° C to + 50° C
 -20° C to + 60° C

GENERAL CHARACTERISTICS

Wire colour code

white/blue
 white/orange
 white/green
 white/brown
 in accordance with IEC 60189 and IEC 60708

Imprint

DATWYLER «cable type» «additional text» «batch number» «meter marks»

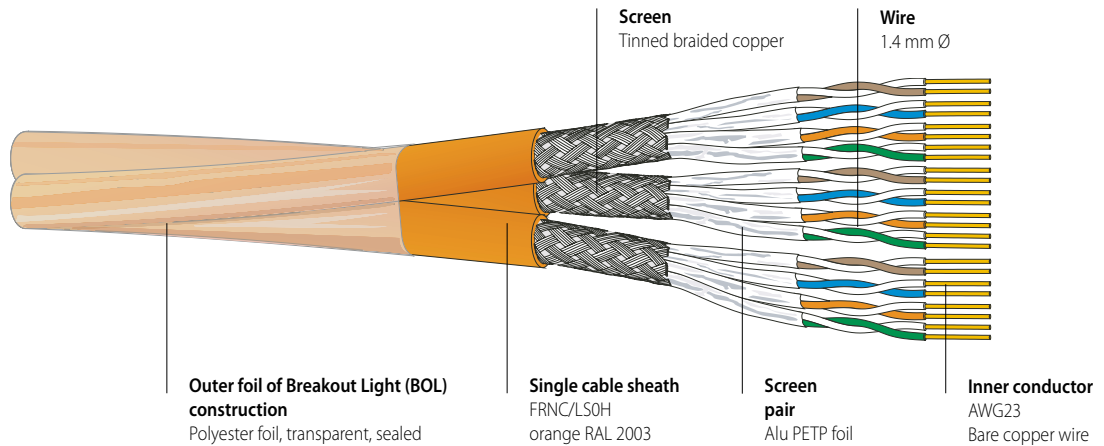
- Zero halogen, non corrosive gases
- Flame propagation
- Flame spread
- Smoke density
- Power over Ethernet plus
- EMC
- Cat./Class

IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2)
 IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 IEC 60332-3-24, EN 60332-3-24
 IEC 61034-1/-2, EN 61034-1/-2 (VDE 0482-1034-1/-2)
 IEEE 802.3at
 shielded
 better than Cat.7 / Class F

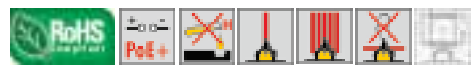
COPPER DATA CABLES, SHIELDED

Data cable S/FTP Cat.7 AWG23

CU 7002 nx4P Breakout Light (BOL)



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality Cat.7 data cable - exceeds the requirements of ISO/IEC 11801, IEC 61156-5, EN 50173-1 and EN 50288-4-1.
 Excellent shielding effect due to individually screened pairs and overall copper braid.
 Easy handling, small outer diameter and reduced weight thanks to the Breakout Light construction with outer polyester foil instead of an overall cable sheath.
 Considerable shorter installation time due to the multi-cable construction
 Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.

APPLICATIONS

Data cable for structured premises cabling.
 For the transmission of digital and analogue voice, video and data signals.
 Suitable for all applications up to class F applications (600 MHz) in accordance with EN 50173-1 and ISO/IEC 11801 and for the transmission of broadband signals (such as cable TV) in accordance with IEC 15018.
 Applicable for Power over Ethernet (PoE) / PoE+.
 Especially suitable for Consolidation Points (e.g. in open-plan offices).

VERSIONS

Article No.	Number of elements 4P 1 x 4 x 0.57 (AWG 23)	Sheath	Sheath Ø mm	Weight kg/km	Cu weight kg/km	Fireload MJ/m	PU*
182976	3 x 4P	FRNC/LSOH ¹⁾	16.1	185	93.3	1.71	1000 m drum
182874	4 x 4P	FRNC/LSOH ¹⁾	18.0	245	124.4	2.28	1000 m drum
188486	6 x 4P	FRNC/LSOH ¹⁾	21.2	390	186.6	3.42	1000 m drum

* 500 m und 2000 m drums on request

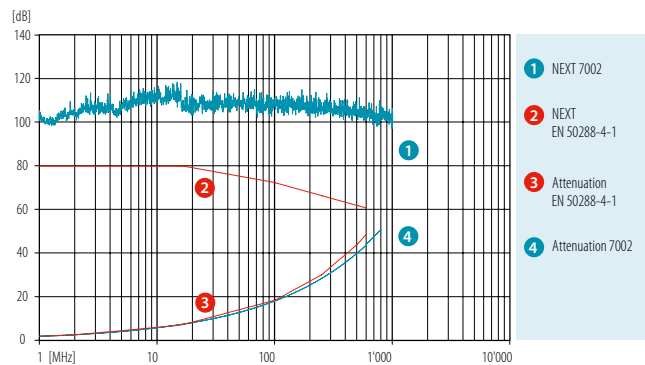
¹⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

ELECTRICAL CHARACTERISTICS

CATEGORY	5e		6	6 _A	7		
Frequency [MHz]	1	4	10	100	250	500	600
Attenuation [dB/100m]	1.9	3.6	5.6	17.9	28	41	46
NEXT [dB]	100	100	100	100	100	92	90
PS NEXT [dB]	97	97	97	97	97	89	87
ACR-N [dB]	98	96	94	82	72	58	44
PS-ACR-N [dB]	95	93	91	79	69	55	41
ACR-F [dB]	98	98	98	78	69	56	45
PS-ACR-F [dB]	95	95	95	75	66	53	42
Return loss [dB]	26	30	33	33	28	26	25

These performance data are typical measured values.

Loop resistance at 20°C: 140 Ω/km
 Mutual capacitance: 42 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Transfer impedance at 1/10/30 MHz: < 6/6/10 mΩ/m
 Coupling attenuation (limit curve of critical state - IEC 61156): ≥ 85 dB
 Near end unbalance att. LCL at 1-600 MHz: > 40 dB
 Delay Skew: 12 ns/100 m
 NVP: 81 %



MECHANICAL CHARACTERISTICS

Bending radius (flat side)	during draw-in:	CU 7002 3x4P	CU 7002 4x4P	CU 7002 6x4P
	permanently installed:	≥ 130 mm	≥ 144 mm	≥ 170 mm
Tensile strength:		≥ 65 mm	≥ 72 mm	≥ 85 mm
Crush resistance:		≤ 300 N	≤ 400 N	≤ 600 N
Impact:		≥ 1000 N/10 cm	≥ 10 impacts	
Temperature range	during installation:	0° C to + 50° C		
	in operation:	-20° C to + 60° C		

GENERAL CHARACTERISTICS

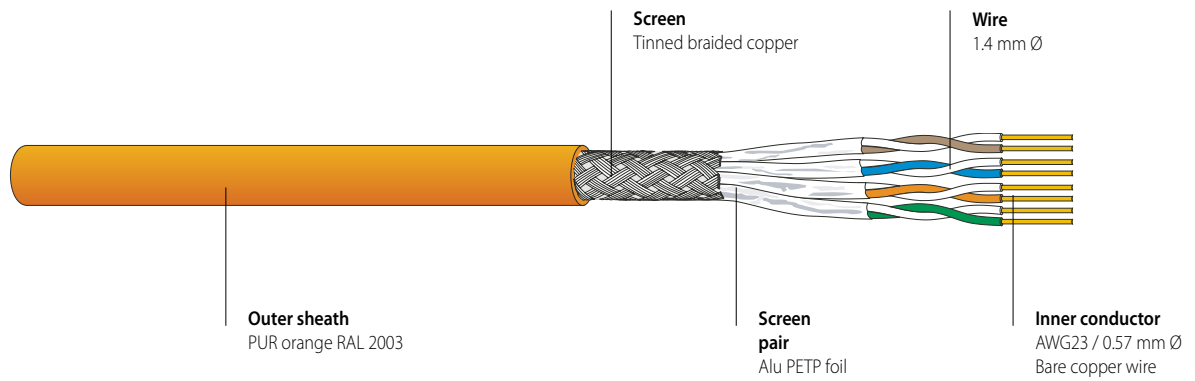
Wire colour code: white/blue, white/orange, white/green, white/brown
 in accordance with IEC 60189 and IEC 60708

Imprint: DATWYLER «cable type» «additional text» «batch number» «meter marks»

- Zero halogen, non corrosive gases
 - Flame propagation
 - Flame spread
 - Smoke density
 - Power over Ethernet plus
 - EMC
 - Cat./Class
- IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2)
 IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 IEC 60332-3-24, EN 60332-3-24
 IEC 61034-1/-2, EN 61034-1/-2, (VDE 0482-1034-1/-2)
 IEEE 802.3at
 shielded
 better than Cat.7 / Class F

Industrial data cable S/FTP Cat.7 AWG23

CU 7002 4P Industrial PUR



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality Cat.7 data cable with PUR sheath - exceeds the requirements of ISO/IEC 11801, IEC 61156-5, EN 50173-1 and EN 50288-4-1.
Compatible with Datwyler IP67 connecting hardware.
Excellent shielding effect due to individually screened pairs and overall copper braid.
Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.

APPLICATIONS

Data cable for structured premises cabling - designed for use in indoor and outdoor industrial areas.
Oil resistant.
For the transmission of digital and analogue voice, video and data signals.
Suitable for all ICT network applications up to class F applications (600 MHz) in accordance with EN 50173-1 and ISO/IEC 11801.
Applicable for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Dimension	Sheath	Sheath Ø	Weight	Cu weight	Fire load		PU
	n x n x mm (AWG)		mm			kg/km	kg/km	
187689	4 x 2 x 0.57 (AWG23)	PUR ¹⁾	7.9	73.9	31.1	0.19	0.70	1000 m drum

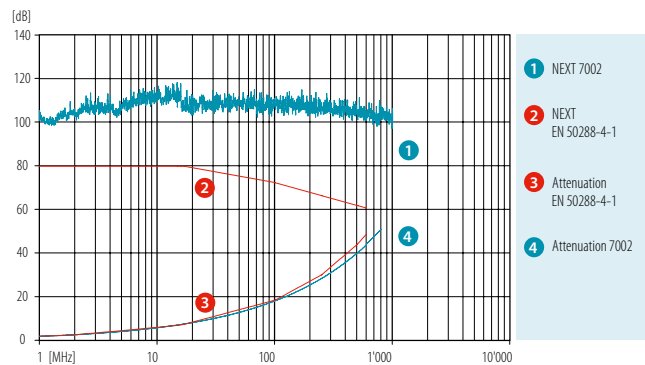
¹⁾ PUR = Polyurethane

ELECTRICAL CHARACTERISTICS

CATEGORY	5e		6	6 _A	7		
Frequency [MHz]	1	4	10	100	250	500	600
Attenuation [dB/100m]	1.9	3.6	5.6	17.9	28	41	46
NEXT [dB]	100	100	100	100	100	92	90
PS NEXT [dB]	97	97	97	97	97	89	87
ACR [dB]	98	96	94	82	72	58	44
PS ACR [dB]	95	93	91	79	69	55	41
ELFEXT [dB]	98	98	98	78	69	56	45
PS ELFEXT [dB]	95	95	95	75	66	53	42
Return loss [dB]	26	30	33	33	28	26	25

These performance data are typical measured values.

Loop resistance at 20° C: 140 Ω/km
 Mutual capacitance: 42 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Transfer impedance at 1/10/30 MHz: < 6/6/10 mΩ/m
 Coupling attenuation (limit curve of critical state - IEC 61156) ≥ 85 dB
 Near end unbalance att. > 40 dB
 LCL at 1-600 MHz: 12 ns/100 m
 Delay Skew: 12 ns/100 m
 NVP: 81 %



MECHANICAL CHARACTERISTICS

Bending radius during draw-in: ≥ 60 mm
 permanently installed: ≥ 30 mm
 Tensile strength: ≤ 110 N
 Crush resistance: ≥ 1000 N/10 cm
 Impact: ≥ 10 impacts
 Temperature range during installation: 0° C to + 50° C
 in operation: -30° C to + 60° C

GENERAL CHARACTERISTICS

Wire colour code white/blue
 white/orange
 white/green
 white/brown
 in accordance with IEC 60189 and IEC 60708

Imprint DATWYLER «cable type» «additional text» «batch number» «meter marks»

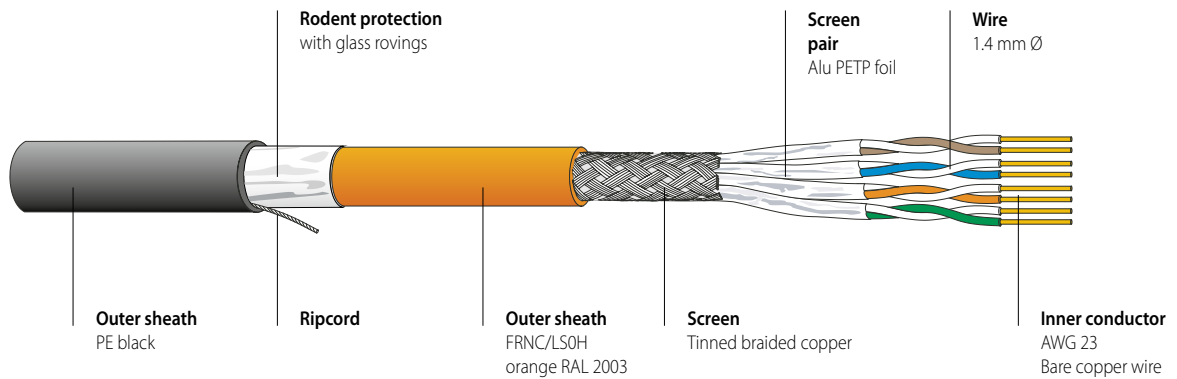
Zero halogen IEC 60754-1-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2)
 Flame propagation IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 Oil-resistant EN 60811-2-1
 Power over Ethernet plus IEEE 802.3at
 EMC shielded
 Cat./Class better than Cat.7 / Class F

COPPER DATA CABLES, SHIELDED

Data cable S/FTP Cat.7 AWG23

CU 7002 4P GG-PE

with rodent protection and PE cable sheeth



PRODUCT INFORMATION



FEATURES

Applicable for outdoor installation due to rodent protection and PE outer cable sheath with higher UV resistance.
 Robust cable design with a high mechanical stability.
 Electrically and mechanically high-quality Cat.7 data cable - exceeds the requirements of ISO/IEC 11801, IEC 61156-5, EN 50173-1 and EN 50288-4-1.
 Excellent shielding effect due to individually screened pairs and overall copper braid.
 Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.

APPLICATIONS

Data cable for structured premises and outdoor cabling.
 With rodent protection and increased UV protection (due to PE outer sheath).
 For the transmission of digital and analogue voice, video and data signals.
 Suitable for all ICT network applications up to class F applications (600 MHz) in accordance with EN 50173-1 and ISO/IEC 11801.
 Applicable for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Dimension n x n x mm (AWG)	Sheath	Sheath Ø mm	Weight kg/km	Cu weight kg/km	Fire load		PU
						kWh/m	MJ/m	
191923	4 x 2 x 0.57 (AWG23)	FRNC/LS0H-PE ¹⁾	11.6	141	31.1	0.75	2.69	on request

¹⁾ FRNC/LS0H = Flame Retardant Non Corrosive /Low Smoke Zero Halogen

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

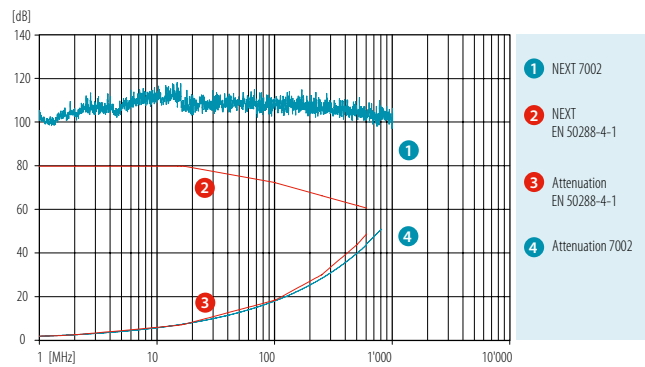
CU 7002 4P GG-PE 0312/e

ELECTRICAL CHARACTERISTICS

CATEGORY	5e		6	6 _A	7		
Frequency [MHz]	1	4	10	100	250	500	600
Attenuation [dB/100m]	1.9	3.6	5.6	17.9	28	41	46
NEXT [dB]	100	100	100	100	100	92	90
PS NEXT [dB]	97	97	97	97	97	89	87
ACR-N [dB]	98	96	94	82	72	58	44
PS-ACR-N [dB]	95	93	91	79	69	55	41
ACR-F [dB]	98	98	98	78	69	56	45
PS-ACR-F [dB]	95	95	95	75	66	53	42
Return loss [dB]	26	30	33	33	28	26	25

These performance data are typical measured values.

Loop resistance at 20° C: 140 Ω/km
 Mutual capacitance: 42 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Coupling attenuation (limit curve of critical state - IEC 61156): ≥ 85 dB
 Near end unbalance att. LCL at 1-600 MHz: > 40 dB
 Delay Skew: 12 ns/100 m
 NVP: 81 %



MECHANICAL CHARACTERISTICS

Bending radius during draw-in: ≥ 92 mm
 permanently installed: ≥ 46 mm
 Tensile strength: ≤ 150 N
 Crush resistance: ≥ 2000 N/10 cm
 Impact: ≥ 20 impacts
 Temperature range during installation: 0° C to + 50° C
 in operation: -20° C to + 60° C

GENERAL CHARACTERISTICS

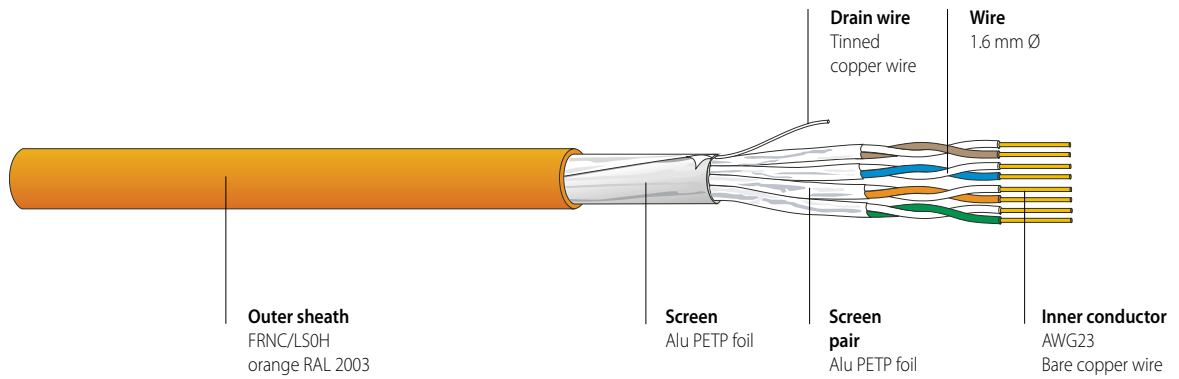
Wire colour code white/blue, white/orange, white/green, white/brown, in accordance with IEC 60189 and IEC 60708
 Imprint DATWYLER «cable type» «additional text» «batch number» «meter marks»

- Zero halogen, non corrosive gases
 - Smoke density
 - Power over Ethernet plus
 - EMC
 - Cat./Class
- IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2)
 IEC 61034-1/-2, EN 61034-1/-2 (VDE 0482-1034-1/-2)
 IEEE 802.3at shielded better than Cat.7 / Class F

COPPER DATA CABLES, SHIELDED

Data cable F/FTP Cat.7 AWG23

CU 7052 4P / 2x4P F8



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality Cat.7 data cable - exceeds the requirements of ISO/IEC 11801, IEC 61156-5, EN 50173-1 and EN 50288-4-1. Excellent shielding effect due to individually screened pairs and overall foil screen. Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.

APPLICATIONS

Data cable for structured premises cabling. For the transmission of digital and analogue voice, video and data signals. Suitable for all ICT network applications up to class F applications (600 MHz) in accordance with EN 50173-1 and ISO/IEC 11801 and for the transmission of broadband signals (such as cable TV) in accordance with IEC 15018. Applicable for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Dimension n x n x mm (AWG)	Sheath	Sheath Ø mm	Weight kg/km	Cu weight kg/km	Fire load		PU
						kWh/m	MJ/m	
182911	4 x 2 x 0.57 (AWG23)	FRNC/LSOH ¹⁾	7.4	60	31.1	0.16	0.57	1000 m drum
182912	2 x (4 x 2 x 0.57 (AWG23))	FRNC/LSOH ¹⁾	7.4 x 15.6	120	62.2	0.32	1.14	500 m drum

¹⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

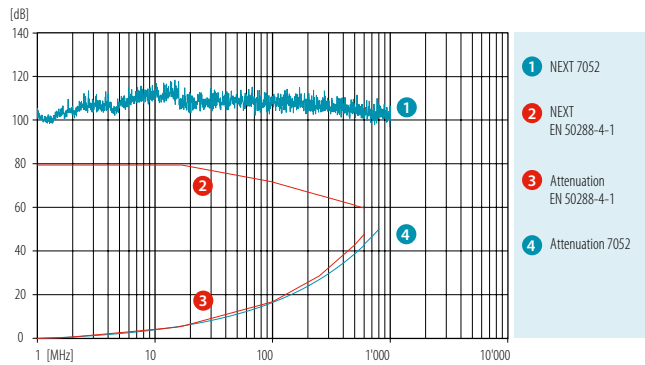
CU 7052 4P/2x4P 0712/e

ELECTRICAL CHARACTERISTICS

CATEGORY	5e		6	6 _A	7		8	
Frequency [MHz]	1	4	10	100	250	500	600	862
Attenuation [dB/100m]	1,9	3,7	5,6	17,9	28	41	46	54
NEXT [dB]	98	98	98	98	98	90	88	81
PS NEXT [dB]	95	95	95	95	95	87	85	78
ACR-N [dB]	96	94	92	80	70	56	42	27
PS-ACR-N [dB]	93	91	89	77	67	53	39	24
ACR-F [dB]	96	96	96	76	68	54	43	35
PS-ACR-F [dB]	93	93	93	73	64	51	40	32
Return loss [dB]	24	28	31	31	26	24	23	20

These performance data are typical measured values.

Loop resistance at 20° C: 140 Ω/km
 Mutual capacitance: 42 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Coupling attenuation (limit curve of critical state - IEC 61156): ≥ 75 dB
 Near end unbalance att. LCL: > 40 dB
 Delay Skew: 12 ns/100 m
 NVP: 81 %



MECHANICAL CHARACTERISTICS

Bending radius (flat side)
 Tensile strength:
 Crush resistance:
 Impact:
 Temperature range

during draw-in:
 permanently installed:
 during installation:
 in operation:

CU 7052 4P

≥ 60 mm
 ≥ 30 mm
 ≤ 110 N
 ≥ 1000 N/10 cm
 ≥ 10 impacts
 0° C to + 50° C
 -20° C to + 60° C

CU 7052 2x4P F8

≥ 60 mm
 ≥ 30 mm
 ≤ 220 N
 ≥ 1000 N/10 cm
 ≥ 10 impacts
 0° C to + 50° C
 -20° C to + 60° C

GENERAL CHARACTERISTICS

Wire colour code

white/blue
 white/orange
 white/green
 white/brown
 in accordance with IEC 60189 and IEC 60708

Imprint

DATWYLER «cable type» «additional text» «batch number» «meter marks»

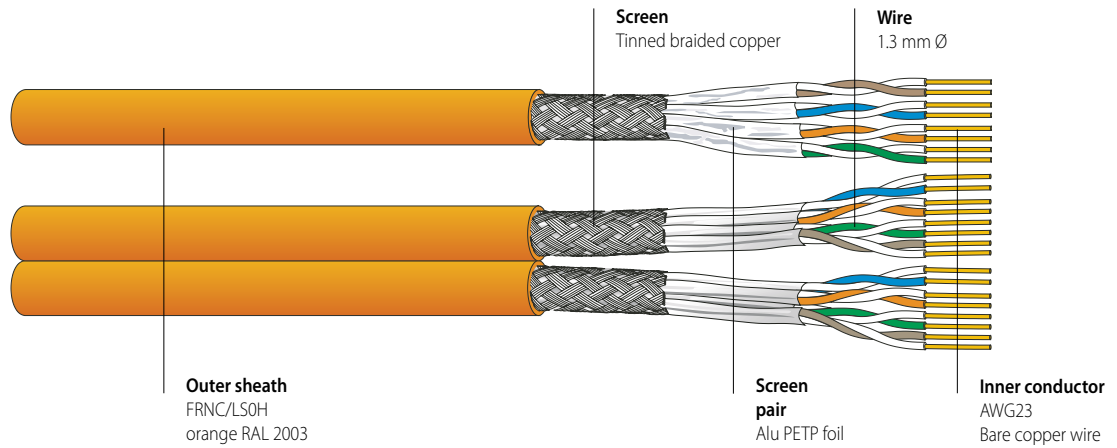
- Zero halogen, non corrosive gases
- Flame propagation
- Flame spread
- Smoke density
- Power over Ethernet plus
- EMC
- Cat./Class

IEC 60754-1/-2, EN 50267-2-1/-2-2, VDE 0482-267-2-1/-2-2
 IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
 IEC 60332-3-24, EN 50266-24 Cat. C, VDE 0482-266-2-4 Cat. C
 IEC 61034-1/-2, EN 61034-1/-2 (EN 50268-1/-2), VDE 0482-1034-1/-2 (VDE 0482-268)-1/-2)
 IEEE 802.3at
 shielded
 better than Cat.7 / Class F

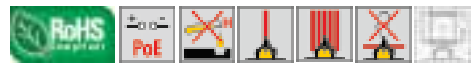
COPPER DATA CABLES, SHIELDED

Data cable S/FTP Cat.6_A AWG23

CU 7060 4P / 2x4P F8



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality Cat.6_A data cable - exceeds the requirements of ISO/IEC 11801, IEC 61156-5, EN 50173-1 and prEN 50288-10-1. Excellent shielding effect due to individually screened pairs and overall copper braid. Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.

APPLICATIONS

Data cable for structured premises cabling. For the transmission of digital and analogue voice, video and data signals. Suitable for all ICT network applications up to class E_A applications (500 MHz) in accordance with EN 50173-1 and ISO/IEC 11801. Applicable for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Dimension n x n x mm (AWG)	Sheath	Sheath Ø mm	Weight kg/km	Cu weight kg/km	Fire load		PU
						kWh/m	MJ/m	
182924	4 x 2 x 0.55 (AWG23)	FRNC/LS0H ¹⁾	7.1	55.0	26.4	0.152	0.55	1000 m drum
182927	2 x (4 x 2 x 0.55 (AWG23))	FRNC/LS0H ¹⁾	7.1 x 15	110.0	52.8	0.304	1.10	500 m drum

¹⁾ FRNC/LS0H = Flame Retardant Non Corrosive /Low Smoke Zero Halogen

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

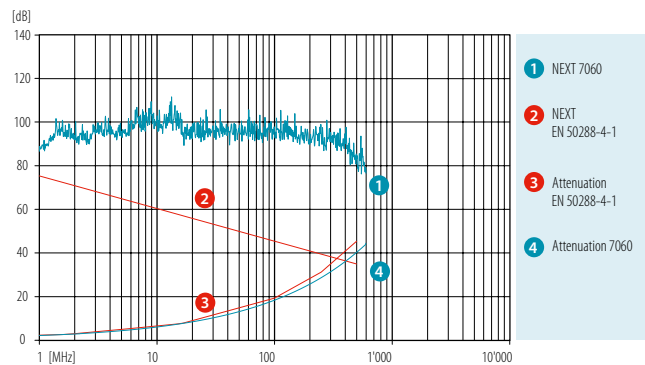
CU 7060 4P 0312/e

ELECTRICAL CHARACTERISTICS

CATEGORY	5e		6	6 _A			
Frequency [MHz]	1	4	10	100	250	500	600
Attenuation [dB/100m]	2.1	3.8	5.9	19.8	30	43	47
NEXT [dB]	93	93	93	93	82	77	75
PS NEXT [dB]	90	90	90	90	79	74	72
ACR-N [dB]	91	89	87	73	52	34	28
PS-ACR-N [dB]	88	86	84	70	49	31	25
ACR-F [dB]	96	96	96	74	61	43	39
PS-ACR-F [dB]	93	93	93	71	58	40	36
Return loss [dB]	26	28	30	30	27	25	24

These performance data are typical measured values.

Loop resistance at 20° C: 146 Ω/km
 Mutual capacitance: 42 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Transfer impedance at 1/10/30 MHz: < 6/10/20 mΩ/m
 Coupling attenuation (limit curve of critical state - IEC 61156): ≥ 75 dB
 Near end unbalance att. LCL: > 40 dB
 Delay Skew: 4 ns/100 m
 NVP: 80 %



MECHANICAL CHARACTERISTICS

Bending radius	during draw-in:	CU 7060 4P	CU 7060 2x4P F8
	permanently installed:	≥ 65 mm	≥ 65 mm
Tensile strength:		≥ 30 mm	≥ 30 mm
Crush resistance:		≤ 95 N	≥ 190 N
Impact:		≥ 1000 N/10 cm	≥ 1000 N/10 cm
Temperature range	during installation:	≥ 10 impacts	≥ 10 impacts
	in operation:	0° C to + 50° C	0° C to + 50° C
		-20° C to + 60° C	-20° C to + 60° C

GENERAL CHARACTERISTICS

Wire colour code	white/blue white/orange white/green white/brown in accordance with IEC 60189 and IEC 60708
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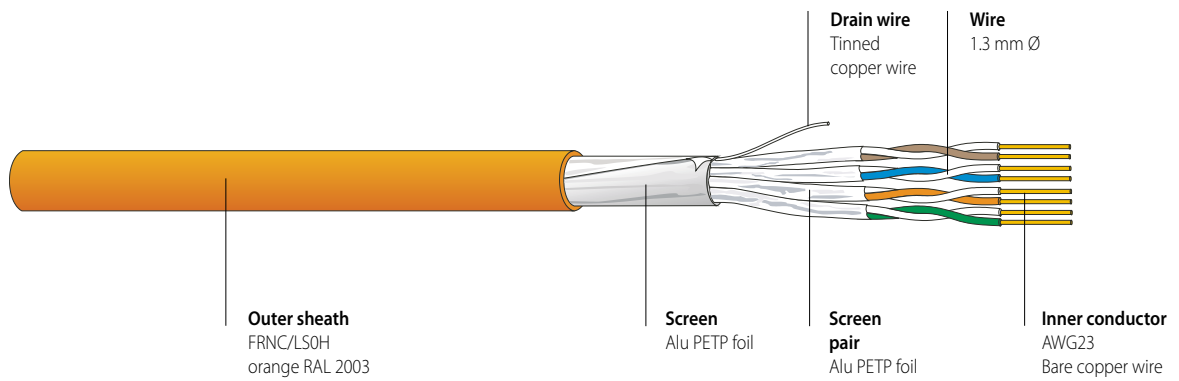
Imprint DATWYLER «cable type» «additional text» «batch number» «meter marks»

- Zero halogen, non corrosive gases
 - Flame propagation
 - Flame spread
 - Smoke density
 - Power over Ethernet
 - EMC
 - Cat./Class
- IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2)
 IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 IEC 60332-3-24, EN 60332-3-24
 IEC 61034-1/-2, EN 61034-1/-2 (VDE 0482-1034-1/-2)
 IEEE 802.3af
 shielded
 better than Cat.6_A (typical values of Cat.7 for lengths up to ~70 m)
 Class E_A

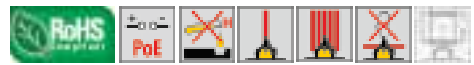
COPPER DATA CABLES, SHIELDED

Data cable F/FTP Cat.6_A AWG23

CU 6552 4P / 2x4P F8



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality Cat.6_A data cable - exceeds the requirements of ISO/IEC 11801, IEC 61156-5, EN 50173-1 and prEN 50288-10-1. Excellent shielding effect due to individually screened pairs and overall foil screen. Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.

APPLICATIONS

Data cable for structured premises cabling. For the transmission of digital and analogue voice, video and data signals. Suitable for all ICT network applications up to class E_A applications (500 MHz) in accordance with EN 50173-1 and ISO/IEC 11801. Applicable for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Dimension n x n x mm (AWG)	Sheath	Sheath Ø mm	Weight kg/km	Cu weight kg/km	Fire load		PU
						kWh/m	MJ/m	
191454	4 x 2 x 0.55 (AWG 23)	FRNC/LSOH ¹⁾	7.0	48.5	20.0	0.14	0.52	1000 m drum
191456	2 x (4 x 2 x 0.55 (AWG 23))	FRNC/LSOH ¹⁾	7.0 x 14.3	97.0	40.0	0.28	1.04	500 m drum

¹⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

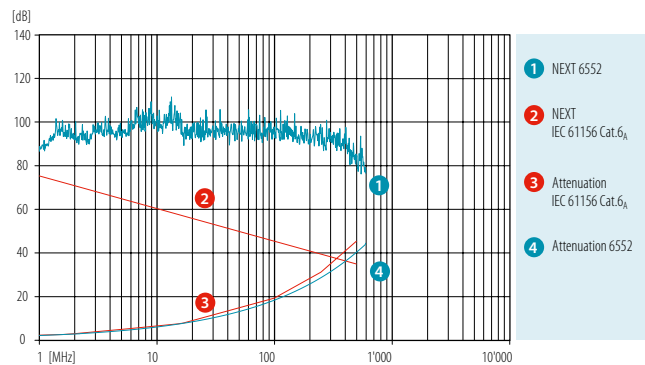
CU 6552 4P 0312/e

ELECTRICAL CHARACTERISTICS

CATEGORY	5e		6	6 _A		
Frequency [MHz]	1	4	10	100	250	500
Attenuation [dB/100m]	2.1	3.8	5.9	19.0	30	43
NEXT [dB]	93	93	93	93	83	75
PS NEXT [dB]	90	90	90	90	80	72
ACR-N [dB]	91	89	87	73	53	32
PS-ACR-N [dB]	88	86	84	70	50	29
ACR-F [dB]	96	96	96	74	56	33
PS-ACR-F [dB]	93	93	93	71	53	30
Return loss [dB]	26	28	30	30	27	21

These performance data are typical measured values.

Loop resistance at 20° C: 150 Ω/km
 Mutual capacitance: 42 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Transfer impedance at 1/10/30 MHz: < 50/100/200 mΩ/m
 Coupling attenuation (limit curve of critical state - IEC 61156): ≥ 70 dB
 Near end unbalance attenuation LCL: > 40 dB
 Delay Skew: 5 ns/100 m
 NVP: 79 %



MECHANICAL CHARACTERISTICS

Bending radius	during draw-in:	CU 6552 4P	CU 6552 2x4P F8
	permanently installed:	≥ 56 mm	≥ 56 mm
Tensile strength:		≥ 28 mm	≥ 28 mm
Crush resistance:		≤ 95 N	≤ 190 N
Impact:		≥ 1000 N/10 cm	≥ 1000 N/10 cm
Temperature range	during installation:	≥ 10 impacts	≥ 10 impacts
	in operation:	0° C to + 50° C	0° C to + 50° C
		-20° C to + 60° C	-20° C to + 60° C

GENERAL CHARACTERISTICS

Wire colour code	white/blue
	white/orange
	white/green
	white/brown
	in accordance with IEC 60189 and IEC 60708

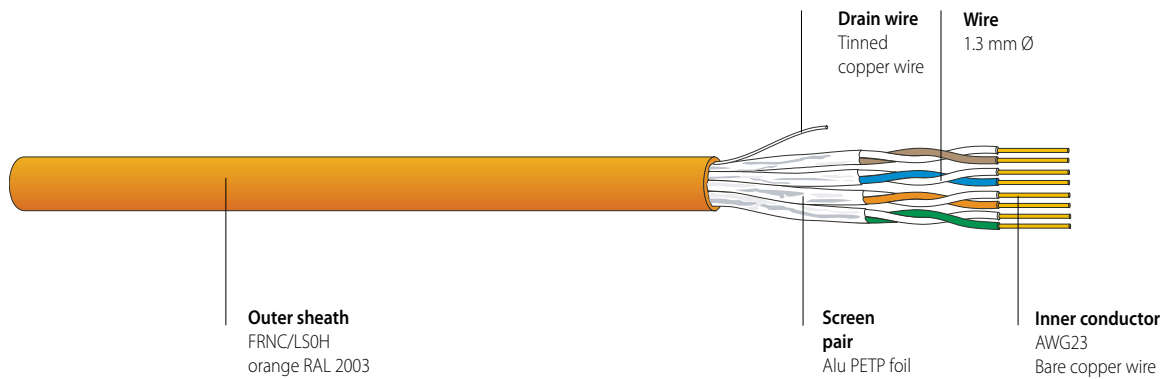
Imprint DATWYLER «cable type» «additional text» «batch number» «meter marks»

- Zero halogen, non corrosive gases
 - Flame propagation
 - Flame spread
 - Smoke density
 - Power over Ethernet
 - EMC
 - Cat./Class
- IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2)
 IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 IEC 60332-3-24, EN 60332-3-24
 IEC 61034-1/-2, EN 61034-1/-2 (VDE 0482-1034-1/-2)
 IEEE 802.3af
 shielded
 Cat.6_A / Class E_A

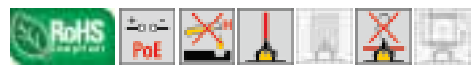
COPPER DATA CABLES, SHIELDED

Data cable U/FTP Cat.6_A AWG23

CU 6502 4P / 2x4P F8



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality Cat.6_A data cable - exceeds the requirements of ISO/IEC 11801, IEC 61156-5, EN 50173-1 and prEN 50288-10-1. Good shielding effect due to individually screened pairs. Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.

APPLICATIONS

Data cable for structured premises cabling. For the transmission of digital and analogue voice, video and data signals. Suitable for all ICT network applications up to class E_A applications (500 MHz) in accordance with EN 50173-1 and ISO/IEC 11801. Applicable for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Dimension n x n x mm (AWG)	Sheath	Sheath Ø mm	Weight kg/km	Cu weight kg/km	Fire load		PU
						kWh/m	MJ/m	
191453	4 x 2 x 0.55 (AWG 23)	FRNC/LS0H ¹⁾	7.0	47.8	20.0	0.15	0.55	1000 m drum
191455	2 x (4 x 2 x 0.55 (AWG 23))	FRNC/LS0H ¹⁾	7.0 x 14.3	95.6	40.0	0.30	1.10	500 m drum

¹⁾ FRNC/LS0H = Flame Retardant Non Corrosive /Low Smoke Zero Halogen

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

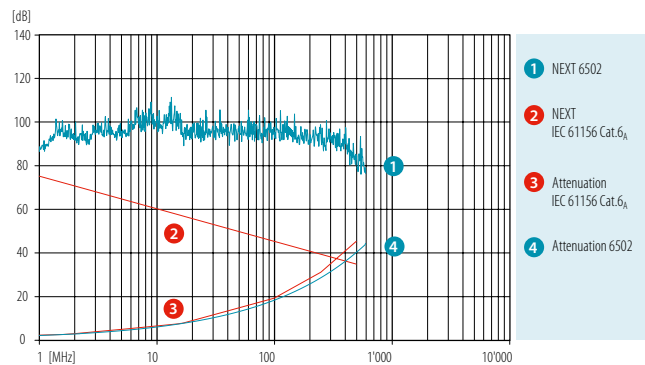
CU 6502 4P 0312/e

ELECTRICAL CHARACTERISTICS

CATEGORY	5e		6	6 _A		
Frequency [MHz]	1	4	10	100	250	500
Attenuation [dB/100m]	2.1	3.8	5.9	19.0	30	43
NEXT [dB]	93	93	93	93	83	75
PS NEXT [dB]	90	90	90	90	80	72
ACR-N [dB]	91	89	87	73	53	32
PS-ACR-N [dB]	88	86	84	70	50	29
ACR-F [dB]	96	96	96	74	56	33
PS-ACR-F [dB]	93	93	93	71	53	30
Return loss [dB]	26	28	30	30	27	21

These performance data are typical measured values.

Loop resistance at 20° C: 150 Ω/km
 Mutual capacitance: 42 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Transfer impedance at 1/10/30 MHz: < 50/100/200 mΩ/m
 Coupling attenuation (limit curve of critical state - IEC 61156): ≥ 55 dB
 Near end unbalance attenuation LCL: > 40 dB
 Delay Skew: 5 ns/100 m
 NVP: 79 %



MECHANICAL CHARACTERISTICS

Bending radius	during draw-in:	CU 6502 4P	CU 6502 2x4P F8
	permanently installed:	≥ 56 mm	≥ 56 mm
Tensile strength:		≥ 28 mm	≥ 28 mm
Crush resistance:		≤ 95 N	≤ 190 N
Impact:		≥ 1000 N/10 cm	≥ 1000 N/10 cm
Temperature range	during installation:	≥ 10 impacts	≥ 10 impacts
	in operation:	0° C to + 50° C	0° C to + 50° C
		-20° C to + 60° C	-20° C to + 60° C

GENERAL CHARACTERISTICS

Wire colour code: white/blue, white/orange, white/green, white/brown, in accordance with IEC 60189 and IEC 60708

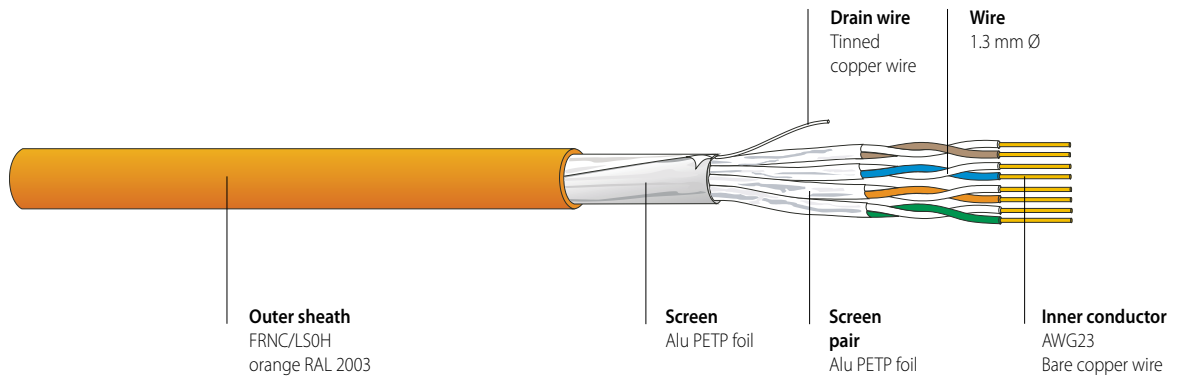
Imprint: DATWYLER «cable type» «additional text» «batch number» «meter marks»

- Zero halogen, non corrosive gases
 - Flame propagation
 - Smoke density
 - Power over Ethernet
 - EMC
 - Cat./Class
- IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2)
 IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 IEC 61034-1/-2, EN 61034-1/-2 (VDE 0482-1034-1/-2)
 IEEE 802.3af shielded
 Cat.6_A / Class E_A

COPPER DATA CABLES, SHIELDED

Data cable F/FTP Cat.6 AWG23

CU 6052 4P / 2x4P F8



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality Cat.6 data cable - fulfils the requirements of ISO/IEC 11801, IEC 61156-5, EN 50173-1 and EN 50288-5-1. Good shielding effect due to individually screened pairs and overall foil screen. Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.

APPLICATIONS

Data cable for structured premises cabling. For the transmission of digital and analogue voice, video and data signals. Suitable for all ICT network applications up to class E applications (250 MHz) in accordance with EN 50173-1 and ISO/IEC 11801. Applicable for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Dimension	Sheath	Sheath Ø	Weight	Cu weight	Fire load		PU
	n x n x mm (AWG)					mm	kg/km	
188512	4 x 2 x 0.55 (AWG 23)	FRNC/LSOH ¹⁾	7.0	48.7	20.0	0.144	0.517	1000 m drum
188513	2 x (4 x 2 x 0.55 (AWG 23))	FRNC/LSOH ¹⁾	7.0 x 14.8	97.7	40.0	0.225	0.810	500 m drum

¹⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

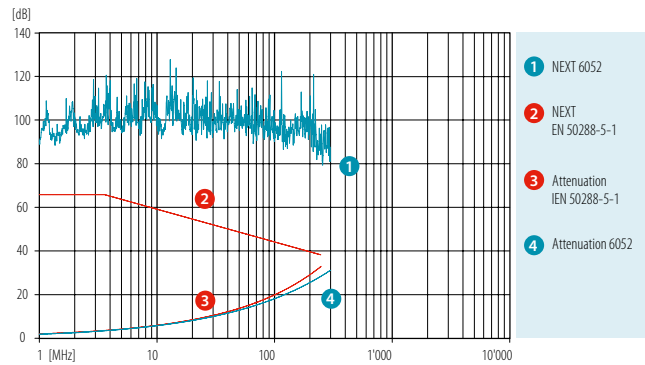
CU 6052 4P 0312/e

ELECTRICAL CHARACTERISTICS

CATEGORY	5e		6			
Frequency [MHz]	1	4	10	100	250	300
Attenuation [dB/100m]	2.1	3.8	5.9	19.8	30	32
NEXT [dB]	93	93	93	93	83	80
PS NEXT [dB]	90	90	90	90	80	79
ACR-N [dB]	91	89	87	73	53	48
PS-ACR-N [dB]	88	86	84	70	50	45
ACR-F [dB]	96	96	96	74	56	49
PS-ACR-F [dB]	93	93	93	71	53	46
Return loss [dB]	26	28	30	30	27	26

These performance data are typical measured values.

Loop resistance at 20° C: 150 Ω/km
 Mutual capacitance: 42 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Transfer impedance at 1/10/30 MHz: < 50/100/200 mΩ/m
 Coupling attenuation (limit curve of critical state - IEC 61156): ≥ 65 dB
 Near end unbalance attenuation LCL: > 40 dB
 Delay Skew: 5 ns/100 m
 NVP: 79 %



MECHANICAL CHARACTERISTICS

Bending radius	during draw-in:	CU 6052 4P	CU 6052 2x4P F8
	permanently installed:	≥ 56 mm	≥ 56 mm
Tensile strength:		≥ 28 mm	≥ 28 mm
Crush resistance:		≤ 95 N	≤ 190 N
Impact:		≥ 1000 N/10 cm	≥ 1000 N/10 cm
Temperature range	during installation:	≥ 10 impacts	≥ 10 impacts
	in operation:	0° C to + 50° C	0° C to + 50° C
		-20° C to + 60° C	-20° C to + 60° C

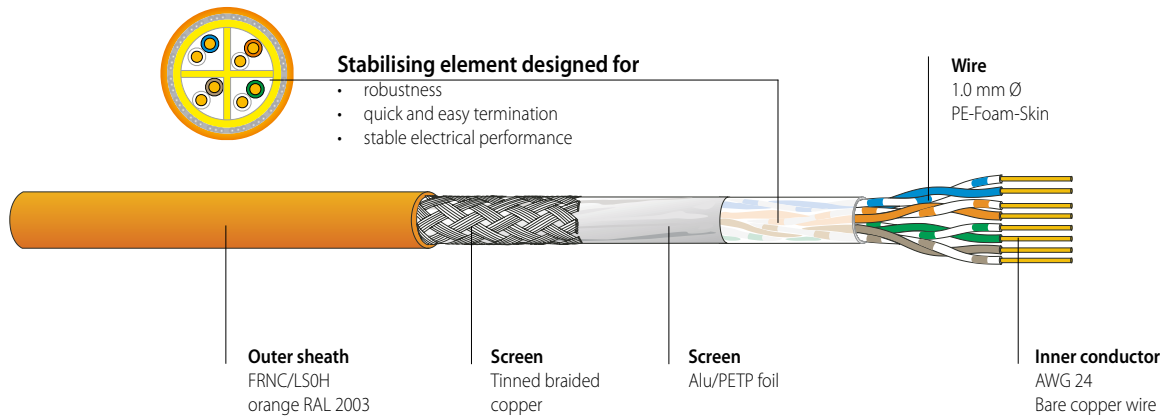
GENERAL CHARACTERISTICS

Wire colour code: white/blue, white/orange, white/green, white/brown
 in accordance with IEC 60189 and IEC 60708

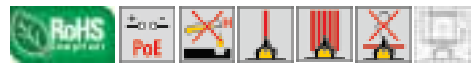
Imprint: DATWYLER «cable type» «additional text» «batch number» «meter marks»

- Zero halogen, non corrosive gases
 - Flame propagation
 - Flame spread
 - Smoke density
 - Power over Ethernet
 - EMC
 - Cat./Class
- IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2)
 IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 IEC 60332-3-24, EN 60332-3-24
 IEC 61034-1/-2, EN 61034-1/-2 (VDE 0482-1034-1/-2)
 IEEE 802.3af
 shielded
 Cat.6 / Class E

Data cable SF/UTP Cat.6 AWG24
CU 6702 4P



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality Cat.6 data cable - fulfils the requirements of ISO/IEC 11801, IEC 61156-5, EN 50173-1 und EN 50288-5-1. Robust cable design with a very high mechanical stability and reliable electrical performance thanks to the stabilising element. Excellent shielding effect due to overall foil and copper braid.

Simple, fast and reliable terminations thanks to the special cable stripper Abi 62.



Article No. 185640

Tool is applicable for
1. removal of outer sheath
2. removal of stabilising element from pairs

Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.

APPLICATIONS

Data cable for structured premises cabling. For the transmission of digital and analogue voice, video and data signals. Suitable for all ICT network applications up to class E applications (250 MHz) in accordance with EN 50173-1 and ISO/IEC 11801. Applicable for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Dimension n x n x mm (AWG)	Sheath	Sheath Ø mm	Weight kg/km	Cu weight kg/km	Fire load		PU
						kWh/m	MJ/m	
182943	4 x 2 x 0.54 (AWG24)	FRNC/LS0H ¹⁾	7.4	63.7	27.7	0.25	0.89	1000 m drum

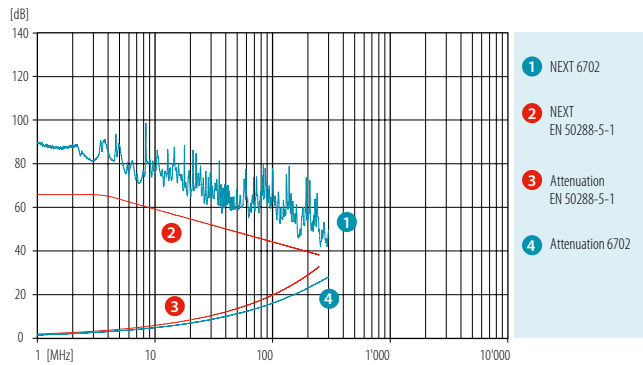
¹⁾ FRNC/LS0H = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

ELECTRICAL CHARACTERISTICS

CATEGORY	5e			6		
Frequency [MHz]	1	4	10	100	250	300
Attenuation [dB/100m]	1.8	3.4	5.1	17.2	26	30
NEXT [dB]	84	75	71	50	43	40
PS NEXT [dB]	81	72	68	47	40	37
ACR-N [dB]	82	72	66	33	17	10
PS-ACR-N [dB]	79	69	63	30	14	7
ACR-F [dB]	90	80	71	42	35	31
PS-ACR-F [dB]	87	77	68	39	32	28
Return loss [dB]	27	30	32	30	25	25

These performance data are typical measured values.

Loop resistance at 20° C: 157 Ω/km
 Mutual capacitance: 50 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Transfer impedance at 1/10/30 MHz: < 40/80/180 mΩ/m
 Coupling attenuation (limit curve of critical state - IEC 61156): ≥ 55 dB
 Near end unbalance att. LCL at 1-250 MHz: > 40 dB
 Delay Skew: 25 ns/100 m
 NVP: 68 %



MECHANICAL CHARACTERISTICS

Bending radius during draw-in: ≥ 58 mm
 permanently installed: ≥ 29 mm
 Tensile strength: ≤ 110 N
 Crush resistance: ≥ 3000 N/10 cm
 Impact: ≥ 30 impacts
 Temperature range during installation: 0° C to + 50° C
 in operation: -20° C to + 60° C

GENERAL CHARACTERISTICS

Wire colour code white - blue/blue
 white - orange/orange
 white - green/green
 white - brown/brown
 in accordance with IEC 60189 and IEC 60708 (ring marked)

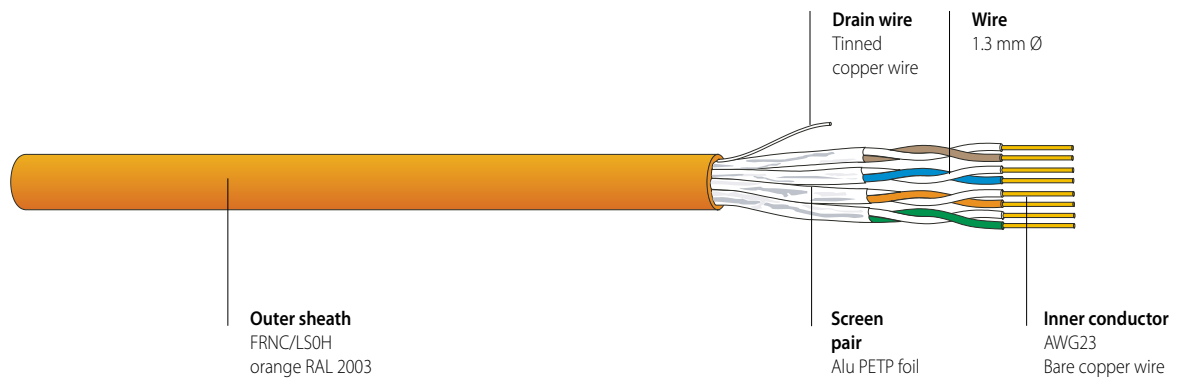
Imprint DATWYLER «cable type» «additional text» «batch number» «meter marks»

Zero halogen, non corrosive gases
 Flame propagation
 Flame spread
 Smoke density
 Power over Ethernet
 EMC
 Cat./Class

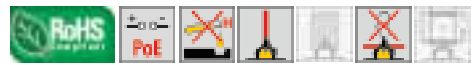
IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2)
 IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 IEC 60332-3-24, EN 60332-3-24
 IEC 61034-1/-2, EN 61034-1/-2 (VDE 0482-1034-1/-2)
 IEEE 802.3af
 shielded
 better than Cat.6 / Class E

Data cable U/FTP Cat.6 AWG23

CU 6002 4P



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality Cat.6 data cable - fulfils the requirements of ISO/IEC 11801, IEC 61156-5, EN 50173-1 and EN 50288-5-1.
 Good shielding effect due to individually screened pairs.
 Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.

APPLICATIONS

Data cable for structured premises cabling.
 For the transmission of digital and analogue voice, video and data signals.
 Suitable for all ICT network applications up to class E applications (250 MHz) in accordance with EN 50173-1 and ISO/IEC 11801.
 Applicable for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Dimension	Sheath	Sheath Ø	Weight	Cu weight	Fire load		PU
	n x n x mm (AWG)					kWh/m	MJ/m	
182936	4 x 2 x 0.55 (AWG 23)	FRNC/LSOH ¹⁾	7.0	47.8	20.0	0.15	0.55	1000 m drum

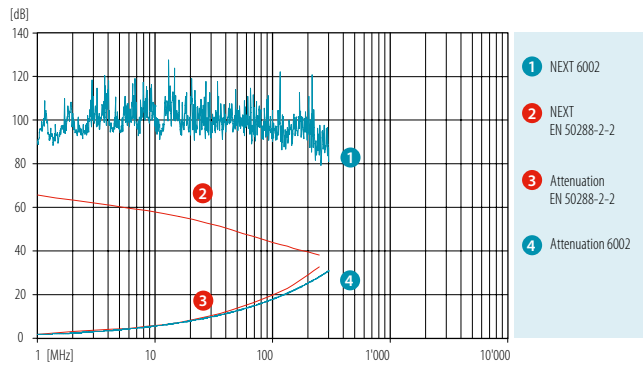
¹⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

ELECTRICAL CHARACTERISTICS

CATEGORY	5e			6	
Frequency [MHz]	1	4	10	100	250
Attenuation [dB/100m]	2.1	3.8	5.9	19.8	30
NEXT [dB]	93	93	93	93	83
PS NEXT [dB]	90	90	90	90	80
ACR-N [dB]	91	89	87	73	53
PS-ACR-N [dB]	88	86	84	70	50
ACR-F [dB]	96	96	96	74	56
PS-ACR-F [dB]	93	93	93	71	53
Return loss [dB]	26	28	30	30	27

These performance data are typical measured values.

Loop resistance at 20° C: 150 Ω/km
 Mutual capacitance: 42 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Transfer impedance at 1/10/30 MHz: < 50/100/200 mΩ/m
 Coupling attenuation (limit curve of critical state - IEC 61156): ≥ 55 dB
 Near end unbalance attenuation LCL: > 40 dB
 Delay Skew: 5 ns/100 m
 NVP: 79 %



MECHANICAL CHARACTERISTICS

Bending radius during draw-in: ≥ 56 mm
 permanently installed: ≥ 28 mm
 Tensile strength: ≤ 95 N
 Crush resistance: ≥ 1000 N/10 cm
 Impact: ≥ 10 impacts
 Temperature range during installation: 0° C to + 50° C
 in operation: -20° C to + 60° C

GENERAL CHARACTERISTICS

Wire colour code white/blue
 white/orange
 white/green
 white/brown
 in accordance with IEC 60189 and IEC 60708

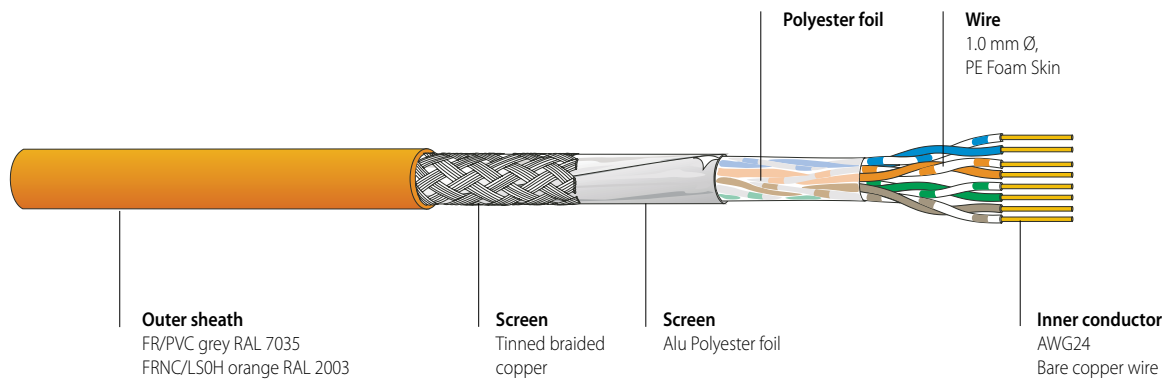
Imprint DATWYLER «cable type» «additional text» «batch number» «meter marks»

- Zero halogen, non corrosive gases
- Flame propagation
- Smoke density
- Power over Ethernet
- EMC
- Cat./Class

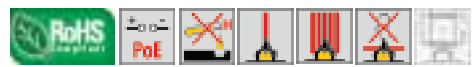
IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2)
 IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 IEC 61034-1/-2, EN 61034-1/-2 (VDE 0482-1034-1/-2)
 IEEE 802.3af
 shielded
 Cat.6 / Class E

COPPER DATA CABLES, SHIELDED

Data cable SF/UTP Cat.5e AWG24
CU 5502 4P



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality Cat 5e data cable - fulfils the requirements of ISO/IEC 11801, IEC 61156-5, EN 50173-1 and EN 50288-2-1. Excellent shielding effect due to overall foil and copper braid. Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.

APPLICATIONS

Data cable for structured premises cabling. For the transmission of digital and analogue voice, video and data signals. Suitable for all ICT network applications up to class D applications (100 MHz) in accordance with EN 50173-1 and ISO/IEC 11801. Applicable for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Dimension n x n x mm (AWG)	Sheath	Sheath Ø mm	Weight kg/km	Cu weight kg/km	Fire load		PU
						kWh/m	MJ/m	
181112	4 x 2 x 0.54 (AWG24)	FR/PVC ¹⁾	6.1	45.1	26.0	0.15	0.55	1000 m drum
181111	4 x 2 x 0.54 (AWG24)	FRNC/LSOH ²⁾	6.1	45.9	26.0	0.13	0.44	1000 m drum

¹⁾ FR/PVC = Flame Retardant / Polyvinyl Chloride

²⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

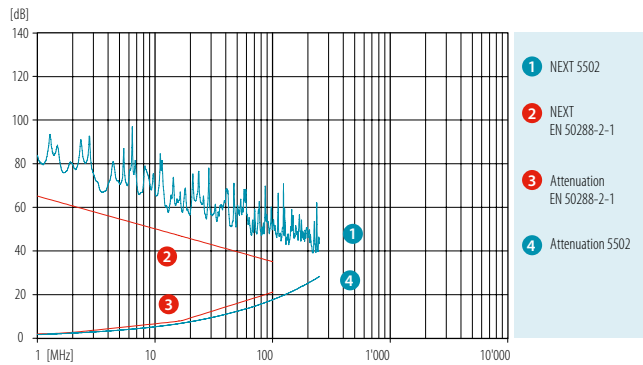
CU 5502 4P 0312/e

ELECTRICAL CHARACTERISTICS

CATEGORY	5e				
Frequency [MHz]	1	4	10	100	250
Attenuation [dB/100m]	1.9	3.6	5.6	18.2	29
NEXT [dB]	75	70	65	44	40
PS NEXT [dB]	72	67	62	41	37
ACR-N [dB]	73	66	59	26	11
PS-ACR-N [dB]	70	63	56	23	8
ACR-F [dB]	84	69	63	41	31
PS-ACR-F [dB]	81	66	60	38	28
Return loss [dB]	27	31	31	28	24

These performance data are typical measured values.

Loop resistance at 20° C: 155 Ω/km
 Mutual capacitance: 43 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Transfer impedance at 1/10/30 MHz: < 30/60/170 mΩ/m
 Near end unbalance attenuation LCL : > 40 dB
 Delay Skew: 8 ns/100 m
 NVP: 76 %



MECHANICAL CHARACTERISTICS

Bending radius (flat side) during draw-in: ≥ 48 mm
 permanently installed: ≥ 24 mm
 Tensile strength: ≤ 91 N
 Crush resistance: ≥ 1000 N/10 cm
 Impact: ≥ 10 impacts
 Temperature range during installation: 0° C to + 50° C
 in operation: -20° C to + 60° C

GENERAL CHARACTERISTICS

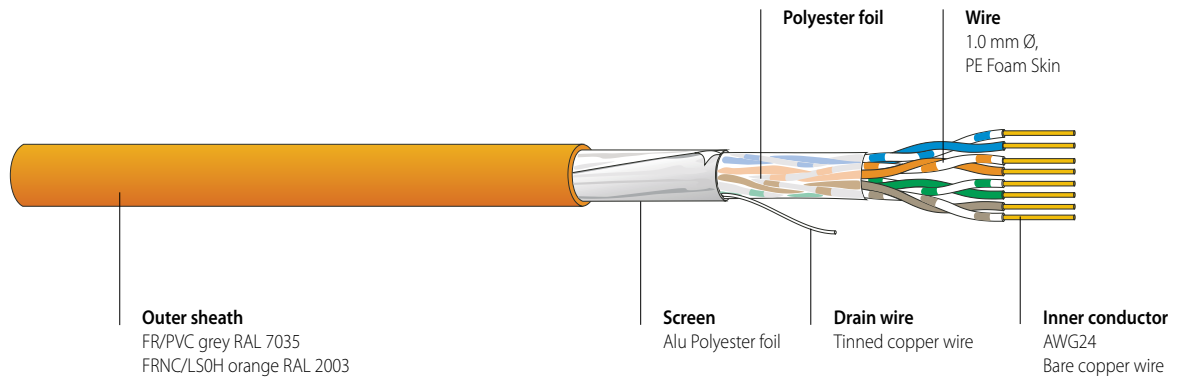
Wire colour code white - blue/blue
 white - orange/orange
 white - green/green
 white - brown/brown (ring marked)
 in accordance with IEC 60189 and IEC 60708

Imprint DATWYLER «cable type» «additional text» «batch number» «meter marks»

- Zero halogen IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2) - applies to FRNC/LSOH
- non corrosive gases
- Flame propagation IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
- Flame spread IEC 60332-3-24, EN 60332-3-24 - applies to FRNC/LSOH
- Smoke density IEC 61034-1/-2, EN 61034-1/-2 (VDE 0482-1034-1/-2) - applies to FRNC/LSOH
- Power over Ethernet IEEE 802.3af
- EMC shielded
- Cat./Class better than Cat.5e / Class D

Data cable F/UTP Cat.5e AWG24

CU 5002 4P



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality Cat 5e data cable - fulfils the requirements of ISO/IEC 11801, IEC 61156-5, EN 50173-1 and EN 50288-2-1. Excellent shielding effect due to overall screen foils. Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.

APPLICATIONS

Data cable for structured premises cabling. For the transmission of digital and analogue voice, video and data signals. Suitable for all ICT network applications up to class D applications (100 MHz) in accordance with EN 50173-1 and ISO/IEC 11801. Applicable for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Dimension n x n x mm (AWG)	Sheath	Sheath Ø mm	Weight kg/km	Cu weight kg/km	Fire load		PU
						kWh/m	MJ/m	
181114	4 x 2 x 0.54 (AWG24)	FR/PVC ¹⁾	6.0	40.0	19.5	0.16	0.56	1000 m drum
181113	4 x 2 x 0.54 (AWG24)	FRNC/LSOH ²⁾	6.0	40.8	19.5	0.14	0.51	1000 m drum

¹⁾ FR/PVC = Flame Retardant / Polyvinyl Chloride

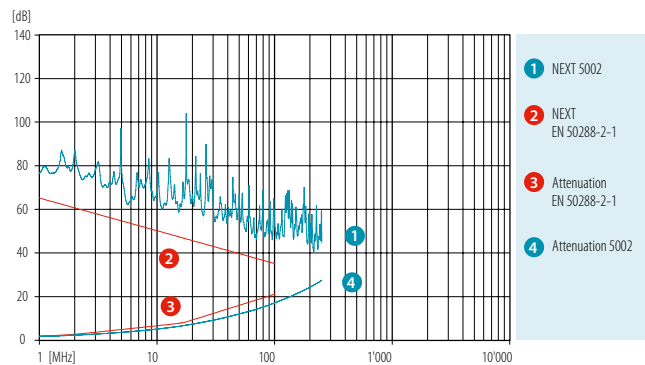
²⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

ELECTRICAL CHARACTERISTICS

CATEGORY	5e				
Frequency [MHz]	1	4	10	100	250
Attenuation [dB/100m]	1.9	3.6	5.6	18.2	29
NEXT [dB]	75	70	65	44	40
PS NEXT [dB]	72	67	62	41	37
ACR-N [dB]	73	66	59	26	11
PS-ACR-N [dB]	70	63	56	23	8
ACR-F [dB]	84	69	63	41	31
PS-ACR-F [dB]	81	66	60	38	28
Return loss [dB]	27	31	31	28	24

These performance data are typical measured values.

Loop resistance at 20° C: 155 Ω/km
 Mutual capacitance: 43 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Transfer impedance at 1/10/30 MHz: < 45/90/190 mΩ/m
 Near end unbalance att. LCL: > 40 dB
 Delay Skew: 8 ns/100 m
 NVP: 76 %



MECHANICAL CHARACTERISTICS

Bending radius (flat side) during draw-in: ≥ 48 mm
 permanently installed: ≥ 24 mm
 Tensile strength: ≤ 91 N
 Crush resistance: ≥ 1000 N/10 cm
 Impact: ≥ 10 impacts
 Temperature range during installation: 0° C to + 50° C
 in operation: -20° C to + 60° C

GENERAL CHARACTERISTICS

Wire colour code white - blue/blue
 white - orange/orange
 white - green/green
 white - brown/brown (ring marked)
 in accordance with IEC 60189 and IEC 60708

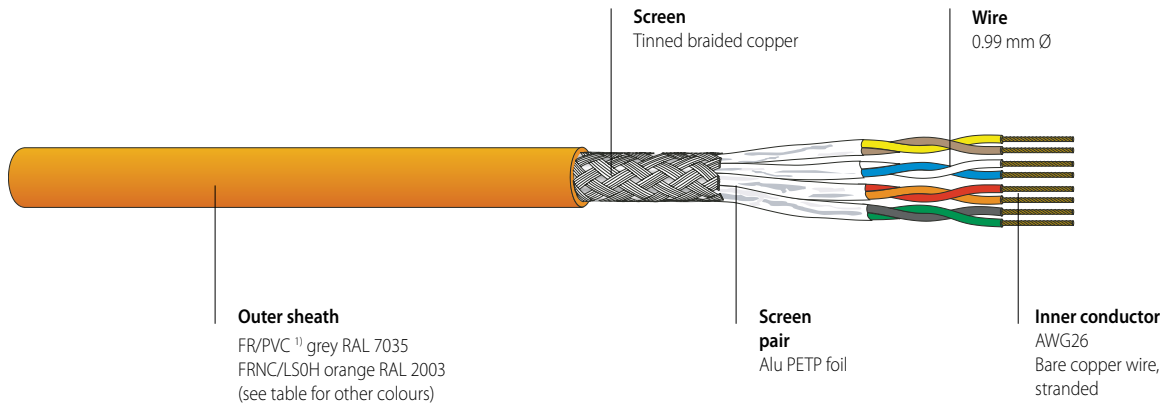
Imprint DATWYLER «cable type» «additional text» «batch number» «meter marks»

Zero halogen
 non corrosive gases
 Flame propagation
 Smoke density
 Power over Ethernet
 EMC
 Cat./Class

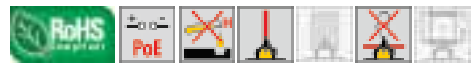
IEC 60754-1/-2, EN 50267-2-1/-2-2
 (VDE 0482-267-2-1/-2-2) - applies to FRNC/LS0H
 IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 IEC 61034-1/-2, EN 61034-1/-2
 (VDE 0482-1034-1/-2) - applies to FRNC/LS0H
 IEEE 802.3af
 shielded
 better than Cat.5e / Class D

Flexible data cable S/FTP Cat.7_A AWG26

CU 7150 4P flex



PRODUCT INFORMATION



FEATURES

Electrically and mechanically excellent Cat.7_A patch cord - exceeds the requirements of ISO/IEC 11801, IEC 61156-6, IEC 61156-8, EN 50173-1, EN 50288-4-2 and prEN 50288-9-2.
Excellent shielding effect due to individually screened pairs and overall copper braid.
Easy wire identification and termination due to different coloured wires.
Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.
Optimised for RJ45 connecting systems.
Differently coloured sheaths facilitate clearly arranged installations and visual differentiation of services.

APPLICATIONS

As patch cord in patch panels and as equipment connection cable.
For the transmission of digital and analogue voice, video and data signals.
For flexible workplace cabling with long patch cords.
Especially suitable for CP (Consolidation Point) applications.
Suitable for all ICT network applications up to class F_A applications (1000 MHz) in accordance with EN 50173-1 and ISO/IEC 11801.
Optimized for the transmission of broadband signals (such as cable TV) in accordance with IEC 15018.
Applicable for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Colour	Dimension n x n x mm ² (AWG)	Sheath	Sheath Ø mm	Weight kg/km	Cu weight kg/km	Fire load		PU
							kWh/m	MJ/m	
191410	grey	4 x 2 x 0.132 (AWG26)	FRNC/LSOH ²⁾	5.8	39.5	18.1	0.11	0.38	1000 m drum
on request	orange	4 x 2 x 0.132 (AWG26)	FRNC/LSOH ²⁾	5.8	39.5	18.1	0.11	0.38	1000 m drum
on request	black	4 x 2 x 0.132 (AWG26)	FRNC/LSOH ²⁾	5.8	39.5	18.1	0.11	0.38	1000 m drum
on request	green	4 x 2 x 0.132 (AWG26)	FRNC/LSOH ²⁾	5.8	39.5	18.1	0.11	0.38	1000 m drum
on request	yellow	4 x 2 x 0.132 (AWG26)	FRNC/LSOH ²⁾	5.8	39.5	18.1	0.11	0.38	1000 m drum
on request	red	4 x 2 x 0.132 (AWG26)	FRNC/LSOH ²⁾	5.8	39.5	18.1	0.11	0.38	1000 m drum
on request	blue	4 x 2 x 0.132 (AWG26)	FRNC/LSOH ²⁾	5.8	39.5	18.1	0.11	0.38	1000 m drum

PVC versions available on request

¹⁾ FR/PVC = Flame Retardant / Polyvinyl Chloride

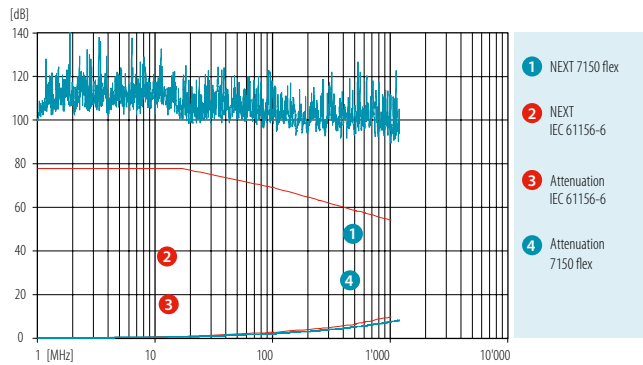
²⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

ELECTRICAL CHARACTERISTICS

CATEGORY			5e	6	6 _A	7	CATV	7 _A		
Frequency [MHz]	1	4	10	100	250	500	600	862	1000	1200
Attenuation [dB/10m]	0.25	0.49	0.76	2.55	4.10	5.90	6.50	7.7	8.50	9.20
NEXT [dB]	100	100	100	100	95	92	90	90	90	90
PS NEXT [dB]	97	97	97	97	92	89	87	87	87	87
ACR-N [dB/10m]	100	99	99	97	91	86	83	82	81	80
PS-ACR-N [dB/10m]	97	96	96	94	88	83	80	79	78	77
ACR-F [dB/10m]	100	99	99	97	95	91	88	87	86	85
PS-ACR-F [dB/10m]	97	96	96	94	92	88	85	84	83	82
Return loss [dB]	26	32	35	30	27	24	23	21	20	19

These performance data are typical measured values.

Loop resistance at 20° C: 270 Ω/km
 Mutual capacitance: 43 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Transfer impedance: 10 mΩ/m
 Coupling attenuation (limit curve of critical state - IEC 61156): ≥ 70 dB
 Near end unbalance attenuation LCL : > 40 dB
 Delay Skew: 4 ns/100 m
 NVP: 78 %



MECHANICAL CHARACTERISTICS

Bending radius: ≥ 20 mm
 Repeated bending: ≥ 1000 cycles
 Tensile strength: ≤ 56 N
 Temperature range: during installation: 0° C to +50° C
 in operation: -20° C to +60° C

GENERAL CHARACTERISTICS

Wire colour code: white /blue, red/orange, black/green, yellow/brown, in accordance with IEC 60189 and IEC 60708

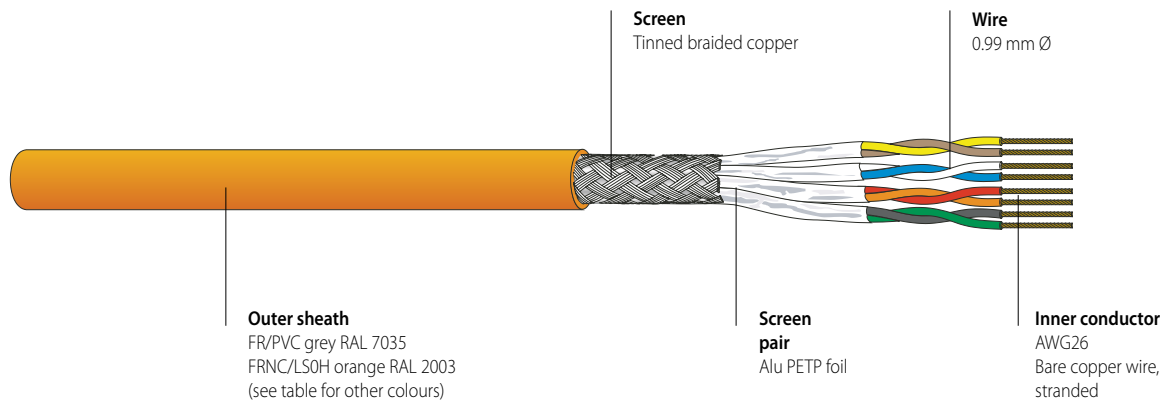
Imprint: DATWYLER «cable type» «additional text» «batch number» «meter marks»

Zero halogen
 non corrosive gases
 Flame propagation
 Smoke density
 Power over Ethernet
 EMC
 Cat./Class

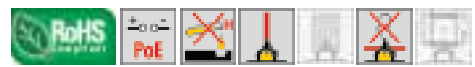
IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2) - applies to FRNC/LS0H
 IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 IEC 61034-1/-2, EN 61034-1/-2 (VDE 0482-1034-1/-2) - applies to FRNC/LS0H
 IEEE 802.3af shielded
 Cat.7_A / Class F_A

Flexible data cable S/FTP Cat.7 AWG26

CU 7702 4P flex



PRODUCT INFORMATION



FEATURES

Electrically and mechanically excellent Cat.7 patch cord - exceeds the requirements of ISO/IEC 11801, IEC 61156-6, EN 50173-1 and EN 50288-4-2.
 Excellent shielding effect due to individually screened pairs and overall copper braid.
 Easy wire identification and termination due to different coloured wires.
 Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.
 Optimised for RJ45 connecting systems.
 Differently coloured sheaths facilitate clearly arranged installations and visual differentiation of services.

APPLICATIONS

As patch cord in patch panels and as equipment connection cable.
 For the transmission of digital and analogue voice, video and data signals.
 For flexible workplace cabling with long patch cords.
 Especially suitable for CP (Consolidation Point) applications.
 Suitable for all ICT network applications up to class F applications (600 MHz) in accordance with EN 50173-1 and ISO/IEC 11801.
 Optimized for the transmission of broadband signals (such as cable TV) in accordance with IEC 15018.
 Applicable for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Colour	Dimension n x n x mm ² (AWG)	Sheath	Sheath Ø mm	Weight kg/km	Cu weight kg/km	Fire load		PU
							kWh/m	MJ/m	
179500	grey	4 x 2 x 0.132 (AWG26)	FR/PVC ¹⁾	5.8	38.8	18.1	0.13	0.48	1000 m drum
181146	grey	4 x 2 x 0.132 (AWG26)	FRNC/LSOH ²⁾	5.8	39.5	18.1	0.11	0.38	1000 m drum
182784	orange	4 x 2 x 0.132 (AWG26)	FRNC/LSOH ²⁾	5.8	39.5	18.1	0.11	0.38	1000 m drum
182871	black	4 x 2 x 0.132 (AWG26)	FRNC/LSOH ²⁾	5.8	39.5	18.1	0.11	0.38	1000 m drum
182872	green	4 x 2 x 0.132 (AWG26)	FRNC/LSOH ²⁾	5.8	39.5	18.1	0.11	0.38	1000 m drum
181243	yellow	4 x 2 x 0.132 (AWG26)	FRNC/LSOH ²⁾	5.8	39.5	18.1	0.11	0.38	1000 m drum
182773	red	4 x 2 x 0.132 (AWG26)	FRNC/LSOH ²⁾	5.8	39.5	18.1	0.11	0.38	1000 m drum
182873	blue	4 x 2 x 0.132 (AWG26)	FRNC/LSOH ²⁾	5.8	39.5	18.1	0.11	0.38	1000 m drum
185655	purple	4 x 2 x 0.132 (AWG26)	FRNC/LSOH ²⁾	5.8	39.5	18.1	0.11	0.38	1000 m drum
188440	white	4 x 2 x 0.132 (AWG26)	FRNC/LSOH ²⁾	5.8	39.5	18.1	0.11	0.38	1000 m drum

PVC versions available on request

¹⁾ FR/PVC = Flame Retardant / Polyvinyl Chloride

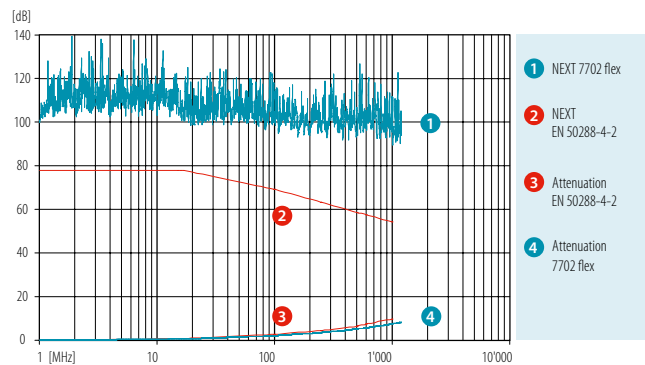
²⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

ELECTRICAL CHARACTERISTICS

CATEGORY	5e		6	6 _A	7		800	862	
Frequency [MHz]	1	4	10	100	250	500	600	800	862
Attenuation [dB/10m]	0.26	0.50	0.79	2.67	4.30	6.20	6.71	7.90	8.30
NEXT [dB]	100	100	100	100	95	92	90	90	90
ACR-N [dB/10m]	97	97	97	97	92	89	87	87	87
PS-ACR-N [dB/10m]	100	99	99	97	91	86	83	82	82
ACR-F [dB/10m]	97	96	96	94	88	83	80	79	79
PS-ACR-F [dB/10m]	100	99	99	97	95	91	88	87	87
PS ELFEXT [dB]	97	96	96	94	92	88	85	84	84
Return loss [dB]	26	32	35	30	27	24	23	21	21

These performance data are typical measured values.

Loop resistance at 20° C: 270 Ω/km
 Mutual capacitance: 43 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Transfer impedance: 10 mΩ/m
 Coupling attenuation (limit curve of critical state - IEC 61156): ≥ 70 dB
 Near end unbalance attenuation LCL : > 40 dB
 Delay Skew: 4 ns/100 m
 NVP: 78 %



MECHANICAL CHARACTERISTICS

Bending radius: ≥ 20 mm
 Repeated bending: ≥ 1000 cycles
 Tensile strength: ≤ 56 N
 Temperature range: during installation: 0° C to +50° C
 in operation: -20° C to +60° C

GENERAL CHARACTERISTICS

Wire colour code: white /blue, red/orange, black/green, yellow/brown, in accordance with IEC 60189 and IEC 60708

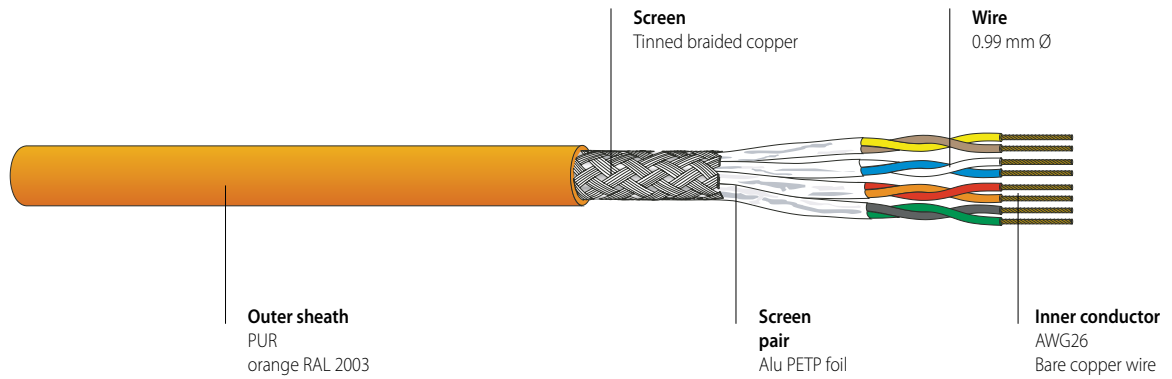
Imprint: DATWYLER «cable type» «additional text» «batch number» «meter marks»

Zero halogen, non corrosive gases, Flame propagation, Smoke density, Power over Ethernet, EMC, Cat./Class

IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2) - applies to FRNC/LS0H
 IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 IEC 61034-1/-2, EN 61034-1/-2 (VDE 0482-1034-1/-2) - applies to FRNC/LS0H
 IEEE 802.3af shielded better than Cat.7 / Class F

Industrial Flexible data cable S/FTP Cat.7 AWG26

CU 7702 4P flex Industrial PUR



PRODUCT INFORMATION



FEATURES

Electrically and mechanically excellent Cat.7 patch cord with PUR sheath - exceeds the requirements of ISO/IEC 11801, IEC 61156-6, EN 50173-1 and EN 50288-4-2.
 Excellent shielding effect due to individually screened pairs and overall copper braid.
 Easy wire identification and termination due to different coloured wires.
 Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.
 Compatible with Datwyler IP67 RJ45 plug.

APPLICATIONS

As patch cord in patch panels and as equipment connection cable - designed for use in industrial areas.
 Oil resistant.
 For transmission of digital and analogue voice, video and data signals.
 For flexible workplace cabling with long patch cords.
 Especially suitable for CP (Consolidation Point) applications.
 Suitable for all ICT network applications up to class F applications (600 MHz) in accordance with EN 50173-1 and ISO/IEC 11801.
 Applicable for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Dimension n x n x mm (AWG)	Sheath	Sheath Ø mm	Weight kg/km	Cu weight kg/km	Fire load		PU
						kWh/m	MJ/m	
187688	4 x 2 x 0.132 (AWG26)	PUR ¹⁾	6.4	52.4	18.1	0.15	0.54	1000 m drum

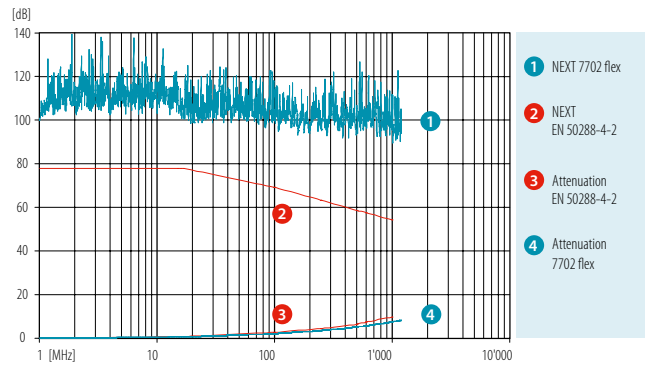
¹⁾ PUR = Polyurethane

ELECTRICAL CHARACTERISTICS

CATEGORY			5e	6	6 _A	7	
Frequency [MHz]	1	4	10	100	250	500	600
Attenuation [dB/10m]	0.26	0.50	0.79	2.67	4.30	6.20	6.71
NEXT [dB]	100	100	100	100	95	92	90
PS NEXT [dB]	97	97	97	97	92	89	87
ACR-N [dB/10m]	100	99	99	97	91	86	83
PS-ACR-N [dB/10m]	97	96	96	94	88	83	80
ACR-F [dB/10m]	100	99	99	97	95	91	88
PS-ACR-F [dB/10m]	97	96	96	94	92	88	85
Return loss [dB]	26	32	35	30	27	24	23

These performance data are typical measured values.

Loop resistance at 20° C: 270 Ω/km
 Mutual capacitance: 43 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Transfer impedance: 10 mΩ/m
 Coupling attenuation (limit curve of critical state - IEC 61156): ≥ 70 dB
 Near end unbalance attenuation LCL : > 40 dB
 Delay Skew: 4 ns/100 m
 NVP: 78 %



MECHANICAL CHARACTERISTICS

Bending radius: ≥ 34 mm
 Repeated bending: ≥ 1000 cycles
 Tensile strength: on request
 Temperature range: during installation: 0° C to +50° C
 in operation: -30° C to + 60° C

GENERAL CHARACTERISTICS

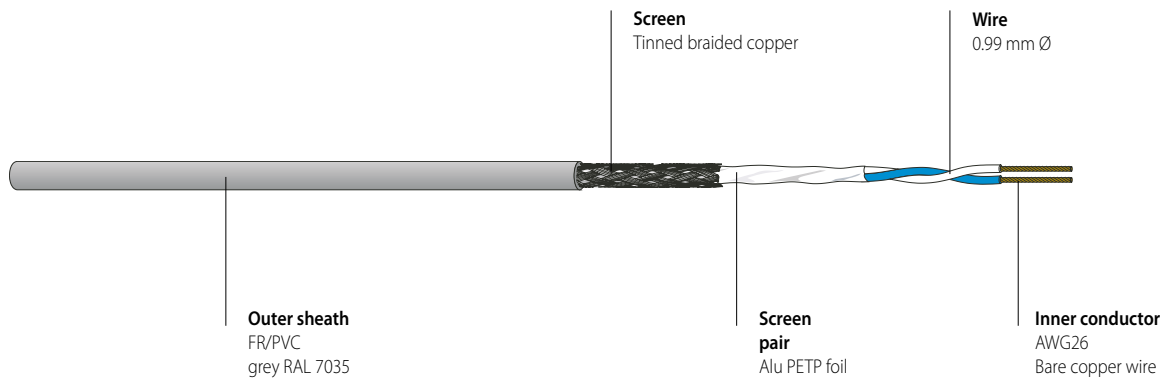
Wire colour code: white /blue, red/orange, black/green, yellow/brown, in accordance with IEC 60189 and IEC 60708

Imprint: DATWYLER «cable type» «additional text» «batch number» «meter marks»

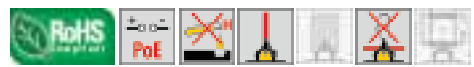
- Zero halogen: IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2)
- non corrosive gases
- Flame propagation: IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
- Oil-resistant: EN 60811-2-1
- Power over Ethernet: IEEE 802.3af
- EMC: shielded
- Cat./Class: better than Cat.7 / Class F

Flexible data cable S/FTP Cat.7 AWG26

CU 1P flex Multimedia



PRODUCT INFORMATION



FEATURES

Electrically and mechanically excellent 1 pair Cat.7 patch cord - exceeds the requirements of ISO/IEC 11801, IEC 61156-6, EN 50173-1 and EN 50288-4-2.
 Excellent shielding effect due to individually screened pairs and overall copper braid.
 Easy wire identification and termination due to different coloured wires.
 Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.
 Optimised for RJ45 connecting systems.

APPLICATIONS

As patch cord in patch panels and as equipment connection cable.
 For the transmission of digital and analogue voice, video and data signals.
 For flexible workplace cabling with long patch cables.
 Suitable for all 1 pair ICT network applications up to class F applications (600 MHz) in accordance with EN 50173-1 and ISO/IEC 11801.

VERSIONS

Article No.	Dimension n x n x mm (AWG)	Sheath	Sheath Ø mm	Weight kg/km	Cu weight kg/km	Fire load		PU
						kWh/m	MJ/m	
182884	1 x 2 x 0.132 (AWG26)	FRNC/LSOH ¹⁾	3.5	18.4	9.5	0.05	0.18	1000 m drum

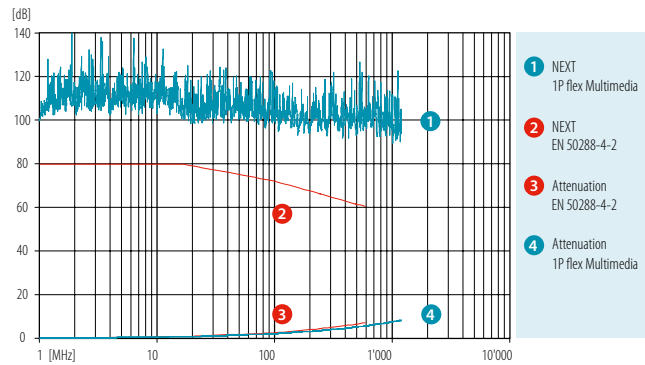
¹⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

ELECTRICAL CHARACTERISTICS

CATEGORY			5e	6	6 _A	7					
Frequency [MHz]	1	4	10	100	250	500	600	800	862	1000	1200
Attenuation [dB/10m]	0.26	0.50	0.79	2.67	4.30	6.20	6.71	7.90	8.30	8.90	9.90
NEXT [dB]	100	100	100	100	95	92	90	90	90	90	90
ACR-N [dB/10m]	100	99	99	97	91	86	83	82	82	81	80
PS-ACR-F [dB/10m]	100	99	99	97	95	91	88	87	87	86	85
Return loss [dB]	26	32	35	30	27	24	23	21	21	20	19

These performance data are typical measured values.

Loop resistance at 20° C: 270 Ω/km
 Mutual capacitance: 43 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Transfer impedance: 10 mΩ/m
 Near end unbalance attenuation LCL : > 40 dB
 Delay Skew: 4 ns/100 m
 NVP: 78 %



MECHANICAL CHARACTERISTICS

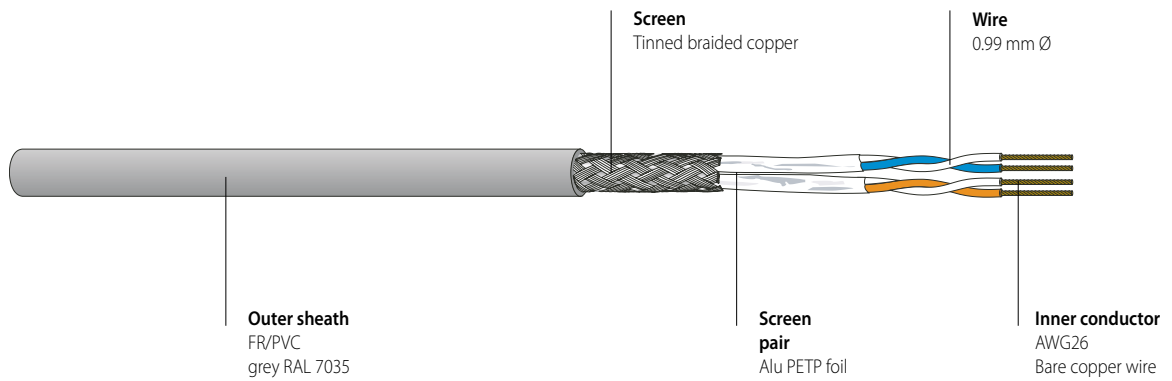
Bending radius: ≥ 28 mm
 Repeated bending: ≥ 1000 cycles
 Tensile strength: ≤ 14 N
 Temperature range: during installation: 0° C to +50° C
 in operation: -20° C to +60° C

GENERAL CHARACTERISTICS

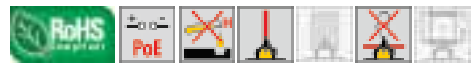
Wire colour code: 1P: white/blue
 Imprint: DATWYLER «cable type» «additional text» «batch number» «meter marks»
 Zero halogen
 non corrosive gases
 Flame propagation
 Smoke density
 Power over Ethernet
 EMC
 Cat./Class
 IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2)
 IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 IEC 61034-1/-2, EN 61034-1/-2 (VDE 0482-1034-1/-2)
 IEEE 802.3af
 shielded
 better than Cat.7 / Class F

Flexible data cable S/FTP Cat.7 AWG26

CU 2P flex Multimedia



PRODUCT INFORMATION



FEATURES

Electrically and mechanically excellent 2 pair Cat.7 patch cord - exceeds the requirements of ISO/IEC 11801, IEC 61156-6, EN 50173-1 and EN 50288-4-2.
 Excellent shielding effect due to individually screened pairs and overall copper braid.
 Easy wire identification and termination due to different coloured wires.
 Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.
 Optimised for RJ45 connecting systems.

APPLICATIONS

As patch cord in patch panels and as equipment connection cable.
 For the transmission of digital and analogue voice, video and data signals.
 For flexible workplace cabling with long patch cables.
 Suitable for all 2 pair ICT network applications up to class F applications (600 MHz) in accordance with EN 50173-1 and ISO/IEC 11801.

VERSIONS

Article No.	Dimension n x n x mm (AWG)	Sheath	Sheath Ø mm	Weight kg/km	Cu weight kg/km	Fire load		PU
						kWh/m	MJ/m	
182885	2 x 2 x 0.132 (AWG26)	FRNC/LSOH ¹⁾	5.0	28.8	12.0	0.09	0.35	1000 m drum

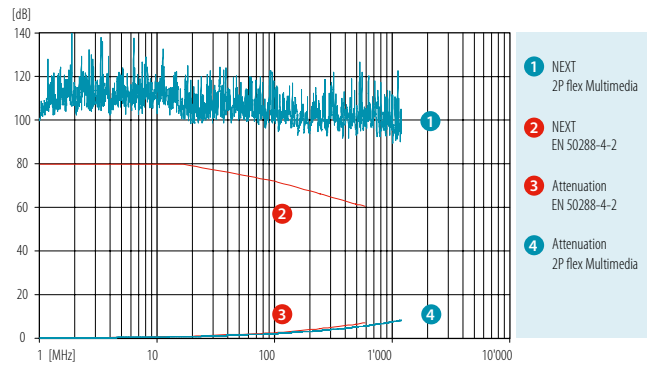
¹⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

ELECTRICAL CHARACTERISTICS

CATEGORY			5e	6	6 _A	7					
Frequency [MHz]	1	4	10	100	250	500	600	800	862	1000	1200
Attenuation [dB/10m]	0.26	0.50	0.79	2.67	4.30	6.20	6.71	7.90	8.30	8.90	9.90
NEXT [dB]	100	100	100	100	95	92	90	90	90	90	90
ACR-N [dB/10m]	100	99	99	97	91	86	83	82	82	81	80
PS-ACR-F [dB/10m]	100	99	99	97	95	91	88	87	87	86	85
Return loss [dB]	26	32	35	30	27	24	23	21	21	20	19

These performance data are typical measured values.

Loop resistance at 20° C: 270 Ω/km
 Mutual capacitance: 43 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Transfer impedance: 10 mΩ/m
 Near end unbalance attenuation LCL : > 40 dB
 Delay Skew: 4 ns/100 m
 NVP: 78 %



MECHANICAL CHARACTERISTICS

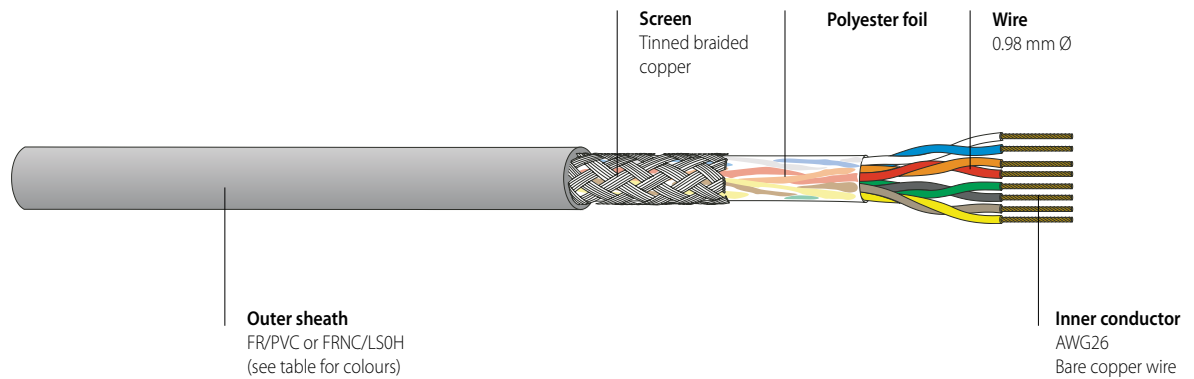
Bending radius: ≥ 28 mm
 Repeated bending: ≥ 1000 cycles
 Tensile strength: ≤ 18 N
 Temperature range: during installation: 0° C to +50° C
 in operation: -20° C to +60° C

GENERAL CHARACTERISTICS

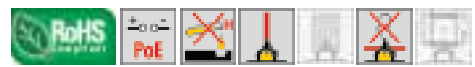
Wire colour code: 2P: white/blue, white/orange
 Imprint: DATWYLER «cable type» «additional text» «batch number» «meter marks»
 Zero halogen
 non corrosive gases
 Flame propagation
 Smoke density
 Power over Ethernet
 EMC
 Cat./Class
 IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2)
 IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 IEC 61034-1/-2, EN 61034-1/-2 (VDE 0482-1034-1/-2)
 IEEE 802.3af
 shielded
 better than Cat.7 / Class F

Flexible data cable S/UTP Cat.5e AWG26

CU 5502 4P flex



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality Cat.5e patch cord - exceeds the requirements of ISO/IEC 11801, IEC 61156-6, EN 50173-1 and EN 50288-2-2.
 Construction optimised for fast and reliable terminations.
 Easy wire identification and termination due to different coloured wires.
 Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.
 Optimised for RJ45 connecting systems.
 Differently coloured sheaths facilitate clearly arranged installations and visual differentiation of services.

APPLICATIONS

As patch cord in patch panels and as equipment connection cable.
 For the transmission of digital and analogue voice, video and data signals.
 Suitable for all ICT network applications up to class D applications (100 MHz) in accordance with EN 50173-1 and ISO/IEC 11801.
 Applicable for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Colour	Dimension n x n x mm ² (AWG)	Sheath	Sheath Ø mm	Weight kg/km	Cu weight kg/km	Fire load		PU
							kWh/m	MJ/m	
179595	grey	4 x 2 x 0.16 (AWG26)	FR/PVC ¹⁾	5,1	34	23,5	0,11	0,38	1000 m drum
179517	black	4 x 2 x 0.16 (AWG26)	FR/PVC ¹⁾	5,1	34	23,5	0,11	0,38	1000 m drum
179513	green	4 x 2 x 0.16 (AWG26)	FR/PVC ¹⁾	5,1	34	23,5	0,11	0,38	1000 m drum
179514	yellow	4 x 2 x 0.16 (AWG26)	FR/PVC ¹⁾	5,1	34	23,5	0,11	0,38	1000 m drum
179515	red	4 x 2 x 0.16 (AWG26)	FR/PVC ¹⁾	5,1	34	23,5	0,11	0,38	1000 m drum
179516	blue	4 x 2 x 0.16 (AWG26)	FR/PVC ¹⁾	5,1	34	23,5	0,11	0,38	1000 m drum
181101	grey	4 x 2 x 0.16 (AWG26)	FRNC/LSOH ²⁾	5,1	35	23,5	0,09	0,31	1000 m drum
181100	orange	4 x 2 x 0.16 (AWG26)	FRNC/LSOH ²⁾	5,1	35	23,5	0,09	0,31	1000 m drum
181106	black	4 x 2 x 0.16 (AWG26)	FRNC/LSOH ²⁾	5,1	35	23,5	0,09	0,31	1000 m drum
181102	green	4 x 2 x 0.16 (AWG26)	FRNC/LSOH ²⁾	5,1	35	23,5	0,09	0,31	1000 m drum
181103	yellow	4 x 2 x 0.16 (AWG26)	FRNC/LSOH ²⁾	5,1	35	23,5	0,09	0,31	1000 m drum
181104	red	4 x 2 x 0.16 (AWG26)	FRNC/LSOH ²⁾	5,1	35	23,5	0,09	0,31	1000 m drum
181105	blue	4 x 2 x 0.16 (AWG26)	FRNC/LSOH ²⁾	5,1	35	23,5	0,09	0,31	1000 m drum
181107	purple	4 x 2 x 0.16 (AWG26)	FRNC/LSOH ²⁾	5,1	35	23,5	0,09	0,31	1000 m drum
181108	white	4 x 2 x 0.16 (AWG26)	FRNC/LSOH ²⁾	5,1	35	23,5	0,09	0,31	1000 m drum

¹⁾ FR/PVC = Flame Retardant / Polyvinyl Chloride

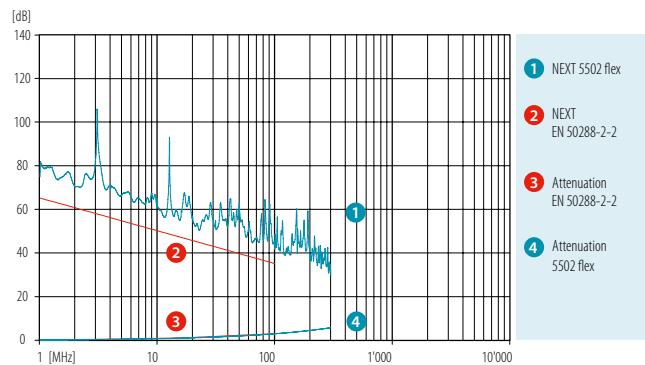
²⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

ELECTRICAL CHARACTERISTICS

CATEGORY	5e					
Frequency [MHz]	1	4	10	100	250	300
Attenuation [dB/10m]	0.2	0.5	0.8	3.0	5.2	5.8
NEXT [dB]	75	70	65	42	35	33
PS NEXT [dB]	72	67	62	39	32	30
ACR-N [dB/10m]	74	69	64	39	30	27
PS-ACR-N [dB/10m]	71	66	61	36	27	24
ACR-F [dB/10m]	80	78	75	60	53	50
PS-ACR-F [dB/10m]	77	75	72	57	50	47
Return loss [dB]	24	30	30	28	23	23

These performance data are typical measured values.

Loop resistance at 20° C: 220 Ω/km
 Mutual capacitance: 45 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Transfer impedance at 1/10/30 MHz: 20/9/25 mΩ/m
 Near end unbalance attenuation LCL: > 40 dB
 Delay Skew: 15 ns/100 m
 NVP: 75 %



MECHANICAL CHARACTERISTICS

Bending radius: ≥ 20 mm
 Repeated bending: ≥ 1000 cycles
 Tensile strength: ≤ 63 N
 Crush resistance: ≥ 1000 N/10 cm
 Impact: ≥ 10 impacts
 Temperature range during installation: 0° C to + 50° C
 in operation: -20° C to + 60° C

GENERAL CHARACTERISTICS

Wire colour code: white/blue, red/orange, black/green, yellow/brown

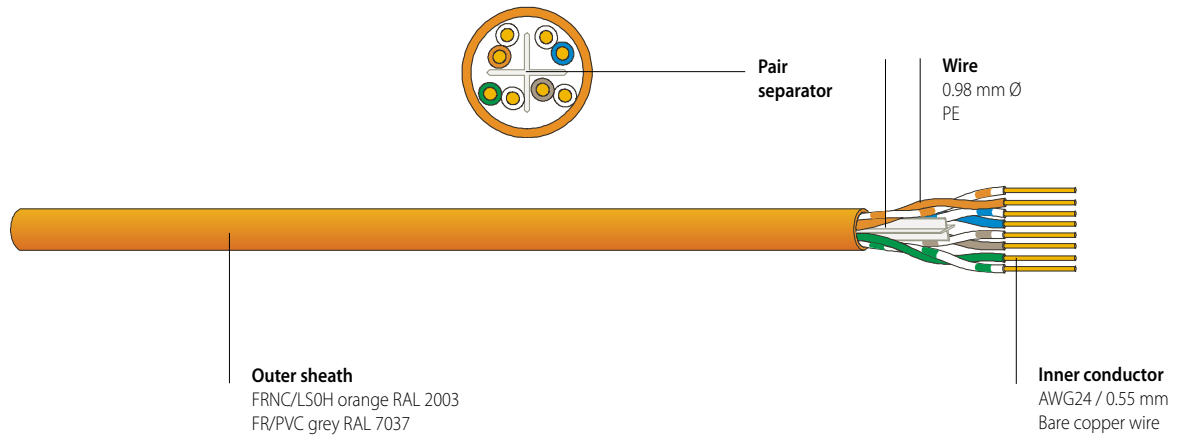
Imprint: DATWYLER «cable type» «additional text» «batch number» «meter marks»

Zero halogen
 non corrosive gases
 Flame propagation
 Smoke density

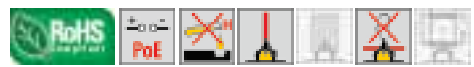
Power over Ethernet
 EMC
 Cat./Class

IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2) - applies to FRNC/LS0H
 IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 IEC 61034-1/-2, EN 61034-1/-2 (VDE 0482-1034-1/-2) - applies to FRNC/LS0H
 IEEE 802.3af shielded better than Cat.5e / Class D

Data cable U/UTP Cat.6 AWG24
CU 662 4P



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality Cat.6 data cable - fulfils the requirements of ISO/IEC 11801, IEC 61156-5, EN 50173-1 and EN 50288-6-1.
Robust cable design with reliable electrical performance thanks to stabilising element.
Very good NEXT reserve due to cable construction with a pair separator (cross).
Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.

APPLICATIONS

Data cable for structured premises cabling.
For the transmission of digital and analogue voice, video and data signals.
Suitable for all ICT network applications up to class E applications (250 MHz) in accordance with EN 50173-1 and ISO/IEC 11801.
Applicable for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Dimension n x n x mm (AWG)	Sheath	Sheath Ø mm	Weight kg/km	CU weight kg/km	Fire load		PU
						kWh/m	MJ/m	
391362	4 x 2 x 0,55 (AWG24)	FR/PVC ¹⁾	6,0	39,8	19,4	0,20	0,72	305 m pull quick
391369	4 x 2 x 0,55 (AWG24)	FR/PVC ¹⁾	6,0	39,8	19,4	0,20	0,72	500 m drum
391361	4 x 2 x 0,55 (AWG24)	FRNC/LSOH ²⁾	6,0	41,3	19,4	0,17	0,60	305 m reel in box
391368	4 x 2 x 0,55 (AWG24)	FRNC/LSOH ²⁾	6,0	41,3	19,4	0,17	0,60	500 m drum

¹⁾ FR/PVC = Flame Retardant / Polyvinyl Chloride

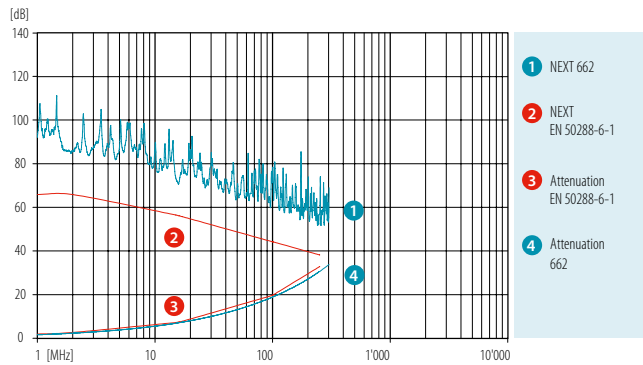
²⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

ELECTRICAL CHARACTERISTICS

CATEGORY			5e	6		
Frequency [MHz]	1	4	10	100	250	300
Attenuation [dB/100m]	1.8	3.6	5.6	18.1	29.1	31.5
NEXT [dB]	85	80	73	59	52	50
PS NEXT [dB]	82	77	70	56	49	47
ACR-N [dB]	83	76	67	41	23	18
PS-ACR-N [dB]	80	73	64	38	20	15
ACR-F [dB]	86	78	67	47	37	33
PS-ACR-F [dB]	83	75	64	45	34	30
Return loss [dB]	27	32	32	30	25	25

These performance data are typical measured values.

Loop resistance at 20° C: 155 Ω/km
 Mutual capacitance: 50 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Delay Skew: 20 ns/100 m
 NVP: 67 %



MECHANICAL CHARACTERISTICS

Bending radius
 during draw-in: ≥ 45 mm
 permanently installed: ≥ 22,5 mm

Tensile strength: ≤ 91 N
 Crush resistance: ≥ 1000 N/10 cm
 Impact: ≥ 10 impacts

Temperature range
 during installation: 0° C to + 50° C
 in operation: -20° C to + 60° C

GENERAL CHARACTERISTICS

Wire colour code
 white - blue/blue
 white - orange/orange
 white - green/green
 white-brown/brown (ring marked)
 in accordance with IEC 60189 and IEC 60708

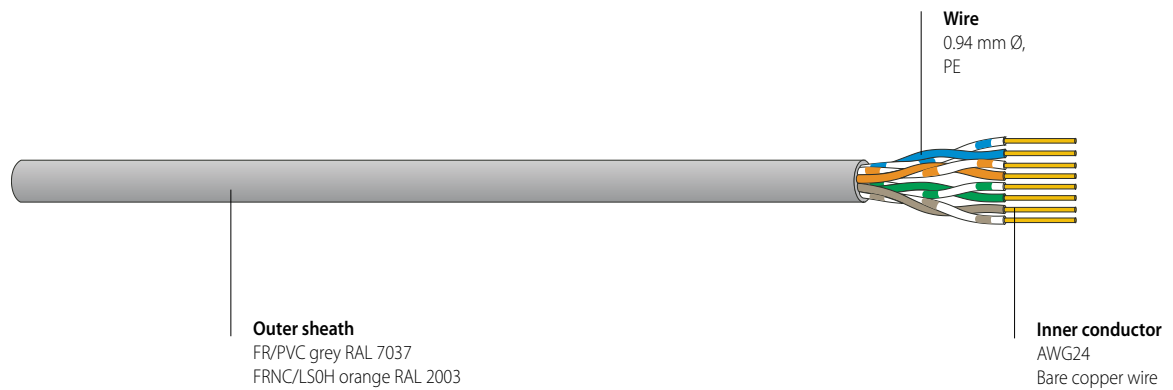
Imprint
 DATWYLER «cable type» «additional text» «batch number» «meter marks»

Zero halogen
 non corrosive gases
 Flame propagation
 Smoke density

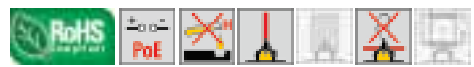
Power over Ethernet
 Cat./Class
 IEC 60754-1/-2, EN 50267-2-1/-2-2
 (VDE 0482-267-2-1/-2-2) - applies to FRNC/LSOH
 IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 IEC 61034-1/-2, EN 61034-1/-2
 (VDE 0482-1034-1/-2) - applies to FRNC/LSOH
 IEEE 802.3af
 better than Cat.6 / Class E

Data cable U/UTP Cat.5e AWG24

CU 502 4P



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality Cat 5e cable - fulfils the requirements of ISO/IEC 11801, IEC 61156-5, EN 50173-1 and EN 50288-3-1.
Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.

APPLICATIONS

Data cable for structured premises cabling.
For the transmission of digital and analogue voice, video and data signals.
Suitable for all ICT network applications up to class D applications (100 MHz) in accordance with EN 50173-1 and ISO/IEC 11801.
Applicable for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Dimension n x n x mm (AWG)	Sheath	Sheath Ø mm	Weight kg/km	CU weight kg/km	Fire load		PU
						kWh/m	MJ/m	
388495	4 x 2 x 0,51 (AWG24)	FR/PVC ¹⁾	5,5	33,6	18,1	0,14	0,49	305 m pull quick
388500	4 x 2 x 0,51 (AWG24)	FRNC/LSOH ²⁾	5,5	33,8	18,1	0,12	0,43	305 m pull quick
388493	4 x 2 x 0,51 (AWG24)	FR/PVC ¹⁾	5,5	33,6	18,1	0,14	0,49	500 m drum
388501	4 x 2 x 0,51 (AWG24)	FRNC/LSOH ²⁾	5,5	33,8	18,1	0,12	0,43	500 m drum

¹⁾ FR/PVC = Flame Retardant / Polyvinyl Chloride

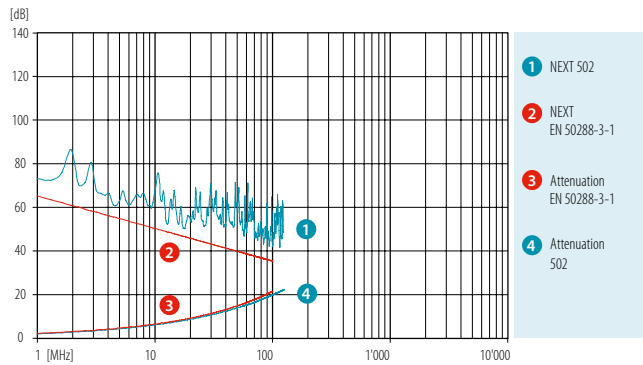
²⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

ELECTRICAL CHARACTERISTICS

CATEGORY	5e				
Frequency [MHz]	1	4	10	100	125
Attenuation [dB/100m]	1.9	3.7	6.0	19.8	22.3
NEXT [dB]	71	61	55	40	39
PS NEXT [dB]	68	58	52	37	36
ACR-N [dB]	69	57	49	20	17
PS-ACR-N [dB]	66	54	46	17	14
ACR-F [dB]	76	68	57	34	32
PS-ACR-F [dB]	73	65	54	31	29
Return loss [dB]	26	29	30	27	26

These performance data are typical measured values.

Loop resistance at 20° C: 170 Ω/km
 Mutual capacitance: 50 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 NVP: 66 %



MECHANICAL CHARACTERISTICS

Bending radius
 during draw-in: ≥ 44 mm
 permanently installed: ≥ 22 mm

Tensile strength: ≤ 87 N

Temperature range
 during installation: 0° C to + 50° C
 in operation: -20° C to + 60° C

GENERAL CHARACTERISTICS

Wire colour code
 white - blue/blue
 white - orange/orange
 white - green/green
 white - brown/brown (ring marked)
 in accordance with IEC 60189 and IEC 60708

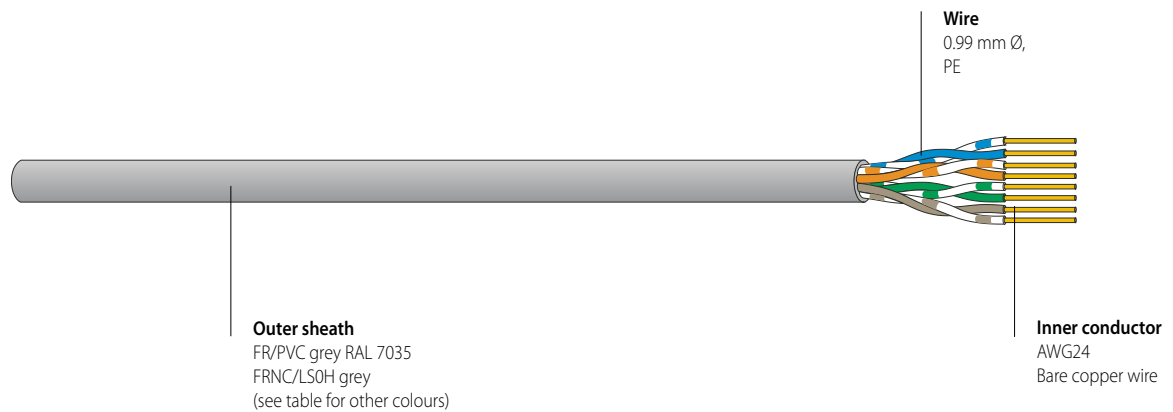
Imprint
 DATWYLER «cable type» «additional text» «batch number» «meter marks»

Zero halogen
 non corrosive gases
 Flame propagation
 Smoke density
 IEC 60754-1/-2, EN 50267-2-1/-2-2
 (VDE 0482-267-2-1/-2-2) - applies to FRNC/LSOH

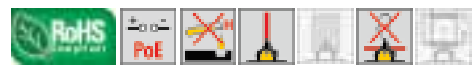
Power over Ethernet
 Cat./Class
 IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 IEC 61034-1/-2, EN 61034-1/-2
 (VDE 0482-1034-1/-2) - applies to FRNC/LSOH
 IEEE 802.3af
 better than Cat.5e / Class D

Flexible data cable U/UTP Cat.6 AWG24

CU 602 4P flex



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality Cat.6 patch cord - exceeds the requirements of ISO/IEC 11801, IEC 61156-6, EN 50173-1 and EN 50288-6-2.
Construction optimised for fast and reliable terminations.
Easy wire identification and termination due to different coloured wires.
Compatible with all current connecting hardware in accordance with EN 50173 and ISO/IEC 11801.
Optimised for RJ45 connecting systems.
Differently coloured sheaths facilitate clearly arranged installations and visual differentiation of services.

APPLICATIONS

As patch cord in patch panels and equipment connection cable.
For the transmission of digital and analogue voice, video and data signals.
Suitable for all ICT network applications up to class E applications (250 MHz) in accordance with EN 50173-1 and ISO/IEC 11801.
Applicable for Power over Ethernet (PoE) / PoE+.

VERSIONS

Article No.	Colour	Dimension n x n x mm ² (AWG)	Sheath	Sheath Ø mm	Weight kg/km	Cu weight kg/km	Fire load		PU
							kWh/m	MJ/m	
182771	grey	4 x 2 x 0.22 (AWG24)	FR/PVC ¹⁾	5.1	28.1	17.5	0.14	0.49	1000 m drum
182772	grey	4 x 2 x 0.22 (AWG24)	FRNC/LSOH ²⁾	5.1	27.9	17.5	0.11	0.40	1000 m drum
187667	black	4 x 2 x 0.22 (AWG24)	FRNC/LSOH ²⁾	5.1	27.9	17.5	0.11	0.40	1000 m drum
187665	white	4 x 2 x 0.22 (AWG24)	FRNC/LSOH ²⁾	5.1	27.9	17.5	0.11	0.40	1000 m drum
187666	yellow	4 x 2 x 0.22 (AWG24)	FRNC/LSOH ²⁾	5.1	27.9	17.5	0.11	0.40	1000 m drum
182845	blue	4 x 2 x 0.22 (AWG24)	FRNC/LSOH ²⁾	5.1	27.9	17.5	0.11	0.40	1000 m drum
187630	red	4 x 2 x 0.22 (AWG24)	FRNC/LSOH ²⁾	5.1	27.9	17.5	0.11	0.40	1000 m drum

¹⁾ FR/PVC = Flame Retardant / Polyvinyl Chloride

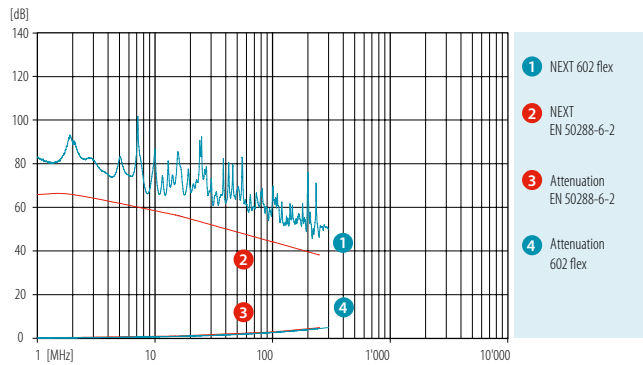
²⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

ELECTRICAL CHARACTERISTICS

CATEGORY	5e			6		
Frequency [MHz]	1	4	10	100	250	300
Attenuation [dB/10m]	0.3	0.6	0.9	3.0	5.0	5.5
NEXT [dB]	69	68	62	47	41	40
PS NEXT [dB]	66	65	59	44	38	37
ACR-N [dB/10m]	68	67	61	44	36	34
PS-ACR-N [dB/10m]	65	64	58	41	33	31
ACR-F [dB/10m]	75	69	67	54	48	48
PS-ACR-F [dB/10m]	72	66	64	51	45	45
Return loss [dB]	24	30	30	28	23	23

These performance data are typical measured values.

Loop resistance at 20° C: 180 Ω/km
 Mutual capacitance: 52 pF/m
 Impedance at 100 MHz: 100 Ω ±5 Ω
 Delay Skew: 18 ns/100 m
 NVP: 67 %



MECHANICAL CHARACTERISTICS

Bending radius: ≥ 20 mm
 Repeated bending: ≥ 1000 cycles
 Tensile strength: ≤ 72 N
 Temperature range: during installation: 0° C to + 50° C
 in operation: -20° C to + 60° C

GENERAL CHARACTERISTICS

Wire colour code: white - blue/blue
 white - orange/orange
 white - green/green
 white - brown/brown (ring marked)
 in accordance with IEC 60189 and IEC 60708

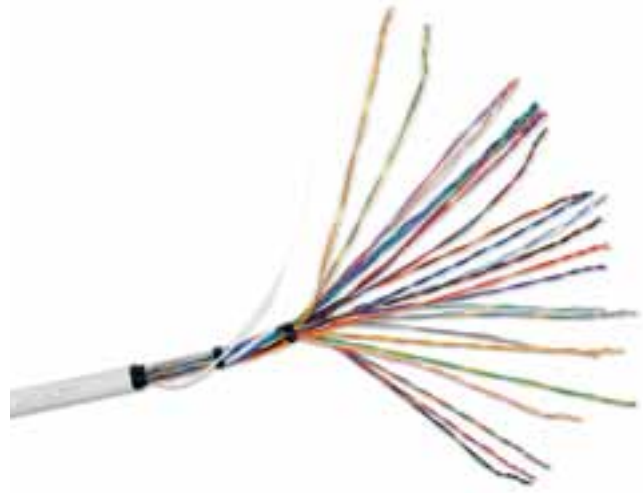
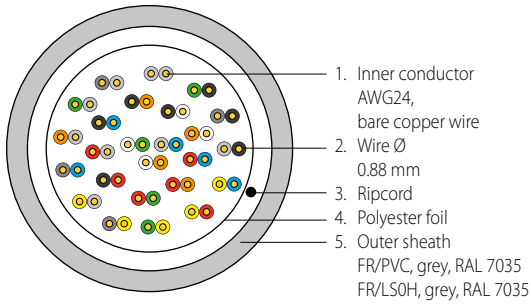
Imprint: DATWYLER «cable type» «additional text» «batch number» «meter marks»

Zero halogen non corrosive gases
 Flame propagation
 Smoke density
 Power over Ethernet
 Cat./Class: IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2) - applies to FRNC/LS0H
 IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
 IEC 61034-1/-2, EN 61034-1/-2 (VDE 0482-1034-1/-2) - applies to FRNC/LS0H
 IEEE 802.3af
 better than Cat.6 / Class E

TELEPHONE CABLES

Telephone cable U/UTP Cat.3

DATWYLER 25-pair Cat.3 indoor cable



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality 25-pair Cat.3 telephone cable. Easy identification of wires thanks to clear longitudinal colour markings and three-layer cable design. Exceeds the Cat.3 requirements of TIA/EIA 568B, ISO/IEC 11801, IEC 61156-4, and UL 444.

APPLICATIONS

Cat.3 telephone cable for indoor cabling. For the transmission of digital and analogue voice signals. Suitable for all applications up to Class C applications.

VERSIONS

Article No.	Dimensions n x n x mm	Sheath	Ø Sheath mm	Weight kg/km	Cu weight kg/km	PU
309046	25 x 2 x 0.50	FR/PVC ¹⁾	11.6	50	27	500 m drum
309103	25 x 2 x 0.50	FR/LSOH ²⁾	11.6	50	27	500 m drum

¹⁾ FR/PVC = Flame Retardant / Polyvinyl Chloride

²⁾ FR/LSOH = Flame Retardant / Low Smoke Zero Halogen

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia



General Information

CU Telefonkabel 25P Cat.3 0512/e

ELECTRICAL CHARACTERISTICS

CATEGORY	3				
Frequency [MHz]	1	4	8	10	16
Attenuation [dB/100m]	2.6	5.6	8.5	9.7	13.1
NEXT [dB]	41.3	32.3	27.8	26.3	23.3
ACR-N [dB]	38.7	26.7	19.3	16.6	10.2
ACR-F [dB]	39	26.9	20.9	19.0	14.9
Return loss [dB]	12.0	12.0	12.0	12.0	9.9

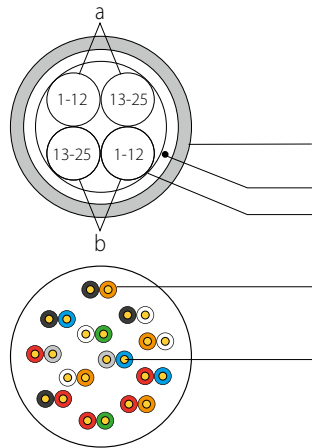
These performance data are typical measured values.

	Loop resistance a 20° C:	95 Ω/km
	Impedance at 1.0-16.0 MHz:	100 Ω ±15 Ω
	Delay Skew:	45 ns / 100 m
	NVP:	80 %
MECHANICAL CHARACTERISTICS	Bending radius	during draw-in: ≥ 92.8 mm permanently installed: ≥ 46.4 mm
	Crush resistance:	≤ 100 N
	Temperature range	during installation: 0° C to +50° C in operation: -20° C to +60° C
CABLE DESIGN	3P+9P+13P. Pairs are arranged in three layers.	
GENERAL CHARACTERISTICS	Wire colour code	bu/ wh-bu og/wh-og gn/wh-gn bn/wh-bn gy/wh-gy bu/ rd-bu og/ rd-og gn/ rd-gn bn/rd-bn gy/ rd-gy bu/ bk-bu og/ bk-og gn/ bk-gn bn/ bk-bn gy/ bk-gy bu/ ye-bu og/ ye-og gn/ ye-gn bn/ ye-bn gy/ ye-gy bu/ vt-bu og/ vt-og gn/ vt-gn bn/ vt-bn gy/ vt-gy
	Imprint	DATWYLER «cable type» «additional text» «batch number» «meter marks»
	 Flame propagation	IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
	 EMV	-
	Cat.	better than Cat.3

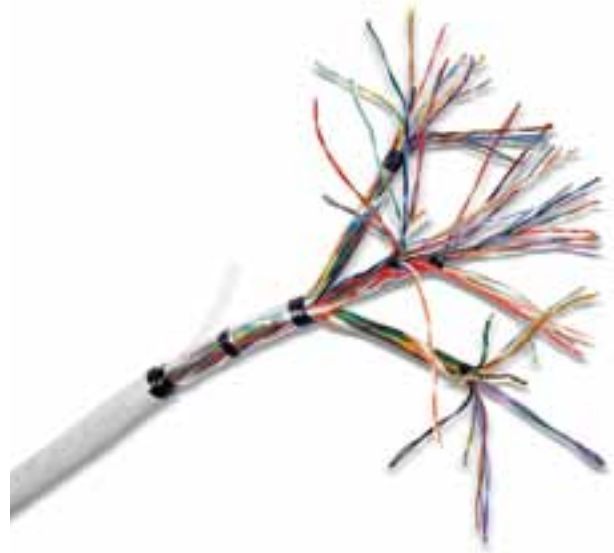
TELEPHONE CABLES

Telephone cable U/UTP Cat.3

DATWYLER 50-pair Cat.3 indoor cable



- Cable design: 4 wire bundles, 12/13 pairs each**
- a. Bundle marked with ID tape wh/bu
 - b. Bundle marked with ID tape wh/og
 - c. Outer sheath
FR/PVC, grey, RAL 7035
 - d. Ripcord
 - e. Polyester foil
FR/LSOH, grey, RAL 7035
- Wire bundle with 12/13 pairs each**
- 1. Inner conductor
AWG24,
bare copper wire
 - 2. Wire Ø 0.88 mm



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality 50-pair Cat.3 telephone cable. Easy identification of wires thanks to clear longitudinal colour markings, wire bundles and three-layer wire bundle design. Exceeds the Cat.3 requirements of TIA/EIA 568B, ISO/IEC 11801, IEC 61156-4, and UL 444.

APPLICATIONS

Cat.3 telephone cable for indoor cabling. For the transmission of digital and analogue voice signals. Suitable for all applications up to Class C applications.

VERSIONS

Article No.	Dimensions n x n x mm	Sheath	Ø Sheath mm	Weight kg/km	Cu weight kg/km	PU
309104	50 x 2 x 0.50	FR/PVC ¹⁾	15	91	55	500 m drum
309047	50 x 2 x 0.50	FR/LSOH ²⁾	15	91	55	500 m drum

¹⁾ FR/PVC = Flame Retardant / Polyvinyl Chloride

²⁾ FR/LSOH = Flame Retardant / Low Smoke Zero Halogen

ELECTRICAL CHARACTERISTICS

CATEGORY	3				
Frequency [MHz]	1	4	8	10	16
Attenuation [dB/100m]	2.6	5.6	8.5	9.7	13.1
NEXT [dB]	41.3	32.3	27.8	26.3	23.3
ACR-N [dB]	38.7	26.7	19.3	16.6	10.2
ACR-F [dB]	39	26.9	20.9	19.0	14.9
Return loss [dB]	12.0	12.0	12.0	12.0	9.9

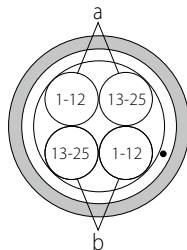
These performance data are typical measured values.

Loop resistance a 20° C:	95 Ω/km
Impedance at 1.0-16.0 MHz:	100 Ω ±15 Ω
Delay Skew:	45 ns / 100 m
NVP:	80 %

MECHANICAL CHARACTERISTICS

Bending radius	during draw-in: ≥ 120 mm
	permanently installed: ≥ 60 mm
Crush resistance:	≤ 100 N
Temperature range	during installation: 0° C to +50° C
	in operation: -20° C to +60° C

CABLE DESIGN



4 bundles with 12/13 pairs each.
 Bundle a:
 Pairs 1~12 and 13~25 tied up with white/blue identification tape each.
 Bundle b:
 Pairs 13~25 and 1~12 tied up with white/orange identification tape each.

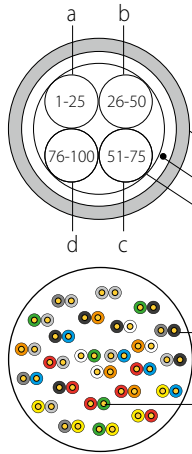
GENERAL CHARACTERISTICS

Wire colour code	bu/ wh-bu og/wh-og gn/wh-gn bn/wh-bn gy/wh-gy bu/ rd-bu og/ rd-og gn/ rd-gn bn/rd-bn gy/ rd-gy bu/ bk-bu og/ bk-og gn/ bk-gn bn/ bk-bn gy/ bk-gy bu/ ye-bu og/ ye-og gn/ ye-gn bn/ ye-bn gy/ ye-gy bu/ vt-bu og/ vt-og gn/ vt-gn bn/ vt-bn gy/ vt-gy
Imprint	DATWYLER «cable type» «additional text» «batch number» «meter marks»
Flame propagation	IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
EMV	-
Cat.	better than Cat.3

TELEPHONE CABLES

Telephone cable U/UTP Cat.3

DATWYLER 100-pair Cat.3 indoor cable



Cable design: 4 wire bundles, 25 pairs each

- a. Bundle marked with ID tape wh/bu
- b. Bundle marked with ID tape wh/og
- c. Bundle marked with ID tape wh/gn
- d. Bundle marked with ID tape wh/bn
- e. Outer sheath
FR/PVC, grey, RAL 7035
- f. Ripcord
- g. Polyester foil
FR/LSOH, grey, RAL 7035

Wire bundle with 25 pairs each

- 1. Inner conductor
AWG24,
bare copper wire
- 2. Wire Ø 0.88 mm



PRODUCT INFORMATION



FEATURES

Electrically and mechanically high-quality 100-pair Cat.3 telephone cable. Easy identification of wires thanks to clear longitudinal colour markings, wire bundles and three-layer wire bundle design. Exceeds the Cat.3 requirements of TIA/EIA 568B, ISO/IEC 11801, IEC 61156-4, and UL 444.

APPLICATIONS

Cat.3 telephone cable for indoor cabling. For the transmission of digital and analogue voice signals. Suitable for all applications up to Class C applications.

VERSIONS

Article No.	Dimensions n x n x mm	Sheath	Ø Sheath mm	Weight kg/km	Cu weight kg/km	PU
309105	100 x 2 x 0.50	FR/PVC ¹⁾	19.6	170	108	500 m drum
309106	100 x 2 x 0.50	FR/LSOH ²⁾	19.6	170	108	500 m drum

¹⁾ FR/PVC = Flame Retardant / Polyvinyl Chloride

²⁾ FR/LSOH = Flame Retardant / Low Smoke Zero Halogen

ELECTRICAL CHARACTERISTICS

CATEGORY	3				
Frequency [MHz]	1	4	8	10	16
Attenuation [dB/100m]	2.6	5.6	8.5	9.7	13.1
NEXT [dB]	41.3	32.3	27.8	26.3	23.3
ACR-N [dB]	38.7	26.7	19.3	16.6	10.2
ACR-F [dB]	39	26.9	20.9	19.0	14.9
Return loss [dB]	12.0	12.0	12.0	12.0	9.9

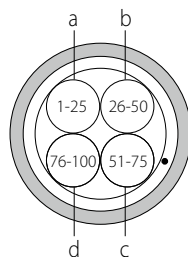
These performance data are typical measured values.

Loop resistance a 20° C:	95 Ω/km
Impedance at 1.0-16.0 MHz:	100 Ω ±15 Ω
Delay Skew:	45 ns / 100 m
NVP:	80 %

MECHANICAL CHARACTERISTICS

Bending radius	during draw-in:	≥ 157 mm
	permanently installed:	≥ 78.5 mm
Crush resistance:		≤ 100 N
Temperature range	during installation:	0° C to +50° C
	in operation:	-20° C to +60° C

CABLE DESIGN



4 bundles with 25 pairs each.
 Bundle a:
 Pairs 1~25 tied up with white/blue identification tape each.
 Bundle b:
 Pairs 26~50 tied up with white/orange identification tape each.
 Bundle c:
 Pairs 51~75 tied up with white/green identification tape each.
 Bundle d:
 Pairs 76~100 tied up with white/brown identification tape.

GENERAL CHARACTERISTICS

Wire colour code	bu/ wh-bu og/ wh-og gn/ wh-gn bn/ wh-bn gy/ wh-gy bu/ rd-bu og/ rd-og gn/ rd-gn bn/ rd-bn gy/ rd-gy bu/ bk-bu og/ bk-og gn/ bk-gn bn/ bk-bn gy/ bk-gy bu/ ye-bu og/ ye-og gn/ ye-gn bn/ ye-bn gy/ ye-gy bu/ vt-bu og/ vt-og gn/ vt-gn bn/ vt-bn gy/ vt-gy
Imprint	DATWYLER «cable type» «additional text» «batch number» «meter marks»
Flame propagation	IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
EMV	-
Cat.	better than Cat.3

Factory-assembled copper data cables



PRODUCT INFORMATION

CONCEPT

Faster, safer and more cost-effective: the trend towards pre-assembled systems

Ever shorter time frames for new buildings, renovations, modifications and extensions raise the question of how to carry out installations even more quickly, more safely and more cost-effectively.

Installation often has to take place during current operation and needs to be effected without costly on-site work, and as far as possible without any outside contractors. Neither the quality of the solution (maximum availability requirements) nor its performance should be forfeited in the process.

Datwyler's modular trunk solutions provide the perfect answer. Pre-assembled trunk cables are fabricated using high-performance cable products which are supplied in combination with different performance levels, modules and connectors. The products are delivered in the lengths requested by the customer and have already been tested and certified in accordance with the latest standards.

This provides installers and operators, particularly in data centers, with products which make it possible to install even extensive copper-based systems to the highest quality in a very short time.

DESCRIPTION

Tailor-made pre-terminated copper trunking cable assemblies

- in the requested lengths
- with customizes imprints on the single cables
- with the requested connectors
- 100% pre-tested, with measurement reports

APPLICABLE STANDARDS

Depending on the chosen type and Category of cable and connector the Class is based on the following standards:

- ISO/IEC 11801:2002 / Amd.2:2010
- EN 50173-1:2011
- TIA/EIA 568-B.2-10: 2008



PRODUCT INFORMATION

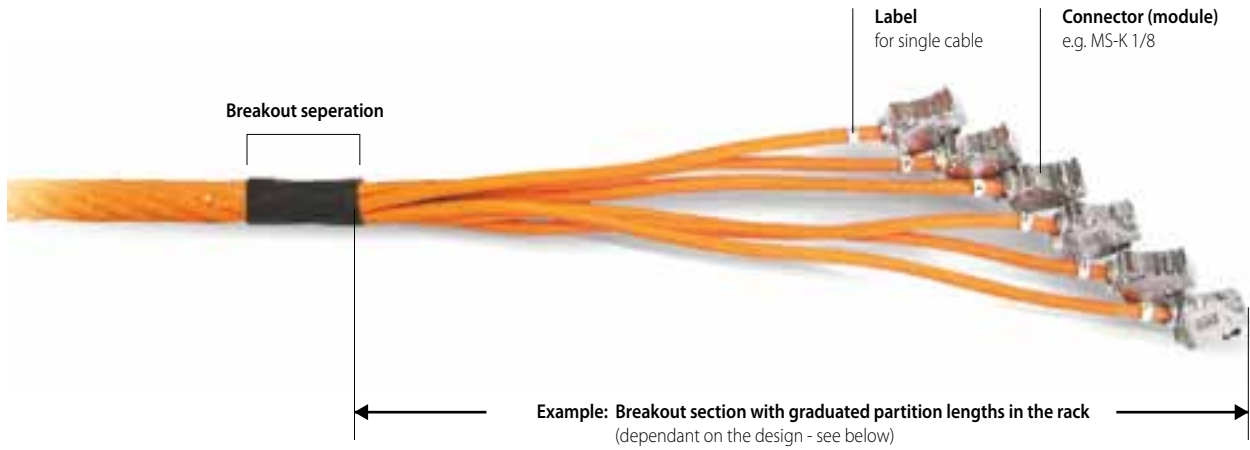
MODULES AND PLUGS

	type	application	construction	compatible with cable
Modules Cat.7_A / Class 7_A				
	Module PS-GG45 7 _A 4P Cat.7 _A	min. 10Gbase-T	shielded	flex / solid
	Module PS TERA 4P Cat.7 _A	min. 10GBase-T	shielded	solid
Modules Cat.6_A / Class E_A				
	RJ45 module KS-T Plus 1/8 Cat.6 _A (IEC)	up to 10GBase-T	shielded	flex / solid
	RJ45 module MS-K Plus 1/8 Cat.6 _A (IEC)	up to 10GBase-T	shielded	flex / solid
	RJ45 module MS-C _{6A} 1/8 Cat.6 _A (IEC)	up to 10GBase-T	shielded	flex / solid
Plugs Cat.6/6_A / Class E_A				
	RJ45 plug 4P Cat.6 _A	up to 10GBase-T	shielded	flex / solid
	RJ45 plug 4P Cat.6	up to 1GBase-T	shielded	flex / solid

CABLE TYPES

	cable type	max. Class	application	Ø [mm]	max. length [m]
Solid BOL cables (Breakout light)					
3-fold	CU 7002 3x4P	F	min. 10GBase-T	16.1	85
4-fold	CU 7002 4x4P	F	min. 10GBase-T	18.0	85
6-fold	CU 7002 6x4P	F	min. 10GBase-T	21.2	85
Flex BOL cables (Breakout light)					
6-fold	CU 7702 6x4P flex	F	min. 10GBase-T	17.6	60
12-fold	CU 7702 12x4P flex	F	min. 10GBase-T	22.2	60
Flex tube cables					
3-fold	CU 7702 3x4P flex	F	min. 10GBase-T	12	20
6-fold	CU 7702 6x4P flex	F	min. 10GBase-T	20	20
8-fold	CU 7702 8x4P flex	F	min. 10GBase-T	22	20
12-fold	CU 7702 12x4P flex	F	min. 10GBase-T	27	20
16-fold	CU 7702 16x4P flex	F	min. 10GBase-T	32	20
Single cables					
	CU 7702 4P flex	F	min. 10GBase-T	5.8	60
2-fold	CU 7702 4P flex	F	min. 10GBase-T	5.8 x 11.6	60
	CU 7120 4P	F _A	min. 10GBase-T	7.5	90
2-fold	CU 7120 2x4P F8	F _A	min. 10GBase-T	7.5 x 15.8	90

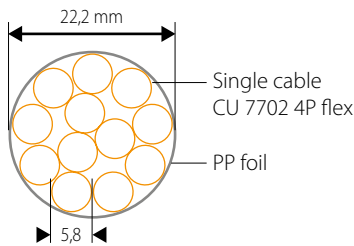
Dimensions & length definition



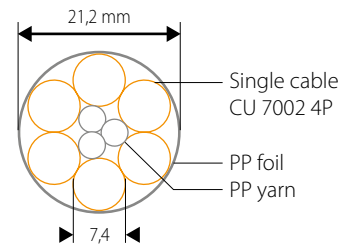
PRODUCT INFORMATION

DIMENSIONS

Flex BOL cable 12-fold
CU 7702 12x4P flex



Solid BOL cable 6-fold
CU 7002 6x4P



LENGTH DEFINITION

The following criteria are decisive for the length definition of a copper trunk:

Length_{horizontal}

Horizontal distance between the racks (cable fed from ceiling/from below).

We recommend the cables to be laid in trays above the racks to ensure that there will be no disruption to cooling air flow in the false floor. However, the cables can also be directed through the raised floor when it is amply dimensioned.

A1

Vertical distance up to the fixing point inside rack A

B1

Vertical distance up to the fixing point inside rack B

A2 (as per design)

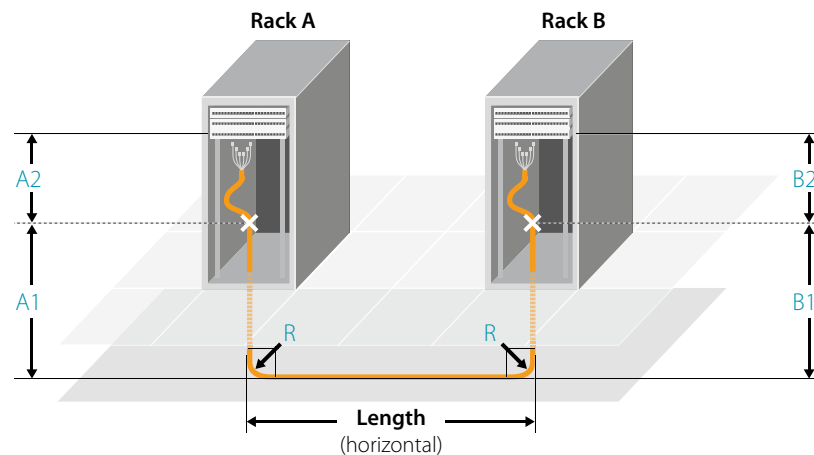
Breakout section in rack A (pre-assembled with connectors)

B2 (as per design)

Breakout section in rack B (pre-assembled with connectors)

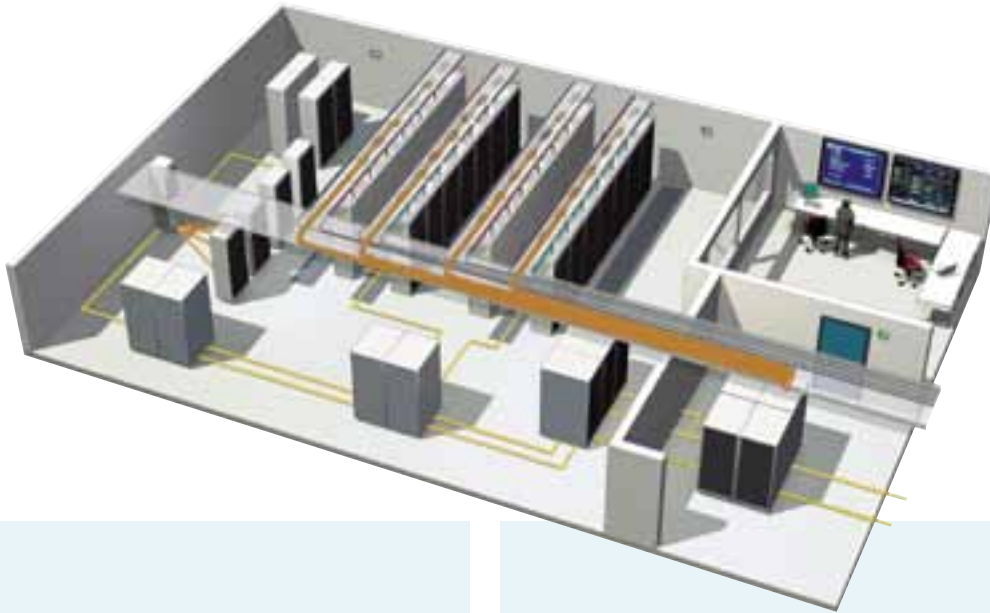
R

Admissible bending radius for the copper trunk in case of insertion into the rack from ceiling or from below.



$$\text{Total length} = \text{Length}_{\text{horizontal}} + (A1+A2) + (B1+B2)$$

Checklist: Project planning with copper trunks



Project planning with copper trunks



DO YOU NEED THE COPPER TRUNKS FOR TODAY OR FUTURE NEEDS?

1GBase-T, 10GBase-T, ...



PLEASE CHOOSE THE RIGHT COPPER CABLE TYPE!

Choose the cable type - taking into account the requested number of single cables and their Category.
Flex cables are extremely flexible in terms of packing density but have higher attenuation - their maximum link lengths are a little bit shorter!



PLEASE CHOOSE THE RIGHT MODULES OR PLUGS FOR THE PLANNED APPLICATION!

Category 5e, 6, 6_A, 7 or 7_A?
For Class D, E, E_A, F or F_A?



PLEASE CHOOSE THE SUITABLE PATCH PANEL!

- KS
- MS
- MPS
- ...



WHAT WILL BE THE LENGTH OF THE REQUESTED COPPER TRUNKS?

Where do you want to install them?
In cable trays above the racks or in the false floor?
Please consider the diameter, the weight and the admissible bending radius of the trunks!



HOW DO YOU WANT TO DIRECT THE TRUNKS INSIDE THE DISTRIBUTION RACK UP TO THE PATCH PANELS?

- side-fed from right?
- side-fed from left?
- centred from behind?
- or ...?



THE SINGLE CABLES CAN BE FANNED IN DIFFERENT LENGTHS - DEPENDING ON THE WAY OF FIXING INSIDE THE RACK.

Usually all cables are fanned in the same length - with enough reserve up to the farthest connecting point.
Excess cable lengths can be laid in a tray behind a 19"/1U cable management panel.



CUSTOMER-SPECIFIC IMPRINT / LABELLING?

Available on request for all copper trunks.



PLEASE CONSIDER SOME EXTRA TIME FOR THE FACTORY-ASSEMBLY IN YOUR TIMETABLE!

YOU NEED CONSULTING SERVICE?
PLEASE DO NOT HESITATE TO CALL US.
WE WILL BE HAPPY TO HELP YOU!

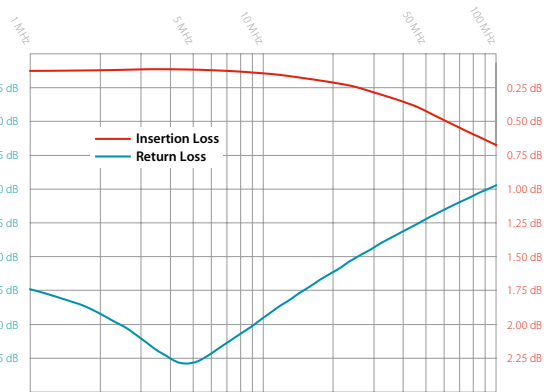
You will find the Datwyler phone numbers on the back page of the catalogue.
For all current information please see our homepage:

WWW.DATWYLER.COM

COPPER PATCH CORDS

High-end network isolator EN-60KDS

Surge protection and galvanic isolation
in one compact Keystone module



Typical frequency response characteristics of EN-60KDS (200 mm connecting cable)



PRODUCT INFORMATION

DESCRIPTION

Compact 1-gigabit network isolator in Keystone construction suitable for device installation or permanent installation.

Can be used in any Keystone-compatible wall outlet panel.

When retrofitting existing installations its rear connecting cable acts as a simple extension.

Meets the performance requirements of TIA 568 Cat.5e and ISO 11801 Class D in the Permanent Link and is thus designed for transmissions of up to 1 gigabit per second.

APPLICATION

In medical technology, recording studios, measuring and monitoring technology and in the potential-free connection of remote computer systems.

Galvanic isolation of any device connected to a copper-based Ethernet network (wires and screen).

Suppresses potential equalisation currents and protects medical and non-medical equipment and systems from the consequences of dangerous network voltage surges which can be caused by switching operations, moisture, electrostatic discharge, differences in potential or lightning strike.

Attenuates low-frequency signal components so well that it effectively prevents ripple pickup in connected devices.

STANDARDS

IEC 60601- 1:1988 A1:1991 and A2: 1995 (2nd Edition); IEC 60601-1-1:2000; IEC 60601- 1: 2005 (3rd Edition); IEC 60601-1-2:2007; UL 60601; IEC 61000-4-2 (ESD; 15kV Air / 8kV Contact); IEC 61000-4-4 (EFT; 40A, 5/50ns) and IEC 61000-4-5 (Lightning; 12A 8/20 µs)

TECHNICAL SPECIFICATIONS

Length of connecting cable: 20 cm = standard on stock, other lengths on request (from 3 cm up to 10 m)

Electric strength: 6000 VAC at 50 Hz (1 min.), 8500 VDC

Insertion Loss: < 1dB (1 MHz < f < 100 MHz)

Supported network protocols: IEEE802.3 10BaseT (Cl.14), 100BaseTx (Cl.25), 1000BaseT (Cl.40)

Kenzeichnungen: CE, UL (E249126), RoHS compliant, lead-free

Operating conditions: Temperature: 10° bis 45° C / Air humidity: 10% up to 90% (non-condensing) / Barometric pressure: 860 hPa up to 1060 hPa

Max. applied voltage (permanent): 400 VAC at 50/60 Hz

Dimensions (housing w/o cable): H x W x L = 23.5 x 17.3 x 39.9 mm

Article No.	Description	PU
417906 + length of cable	High-end network isolator EN-60KDS, length = ? cm	1 pc.

Datwyler is a distribution partner of EMO Systems GmbH

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

High-End Netzwerkisolator EN-60KDS 0512/e

PS-GG45™ patch cords

Measurement / Patch cord PS-GG45 7_A 1000 MHz 4P, shielded
 Adapter patch cords PS-GG45 7_A / RJ45 4P, shielded



Measurement/patch cord 1000 MHz 4P
 PS-GG45 7_A / PS-GG45 7_A



Adapter patch cord 4P
 PS-GG45 7_A / RJ45

PRODUCT INFORMATION

APPLICATION

Measurement / Patch cord PS-GG45 7_A 1000 MHz 4P, shielded

Patch cords with PS-GG45 7_A plugs allow for Class F_A compliant cabling systems (up to 1000 MHz) and for Class F installations (up to 600 MHz). The PS-GG45 7_A plug uses only 4 x 2 contacts in the top and bottom corners of the PS-GG45 7_A module, whereby best NEXT und RL values can be achieved. The unused contacts will be connected through a switch to ground. Measurement cords with PS-GG45 7_A plugs are primarily needed for acceptance testings.

Adapter patch cords PS-GG45 7_A / RJ45 4P, shielded

As PS-GG45 7_A plugs are not compatible with RJ45 jacks, the RJ45 jacks in active devices can be connected to the high-performance cabling system with adapter patch cords only. These flex cables are fitted with a PS-GG45 7_A plug on one side and a RJ45 plug on the other side.

Future viability

GG45 cabling systems that use standard patch cords (RJ45/RJ45) provide enough electrical reserve capacities for 10-gigabit Ethernet applications (10GBase-T).

When deploying adapter patch cords with one RJ45 and one PS-GG45 plug you can achieve more than 1000 times better reserve capacities in the Channel.

These reserve capacities are large enough also for the transmission of future applications in Class F_A cabling systems up to 1000 MHz (e. g. 40-gigabit Ethernet).

APPLICABLE STANDARDS

IEC 60603-7- (RJ45)
 IEC 60076-3-110 (GG45, not backward compatible with RJ45)
 ISO/IEC 11801:2002/Amd.1:2008 and Amd.2:2010 (Class F_A)
 EN 50173-1:2011

Article No.	Length	Description	Plug 1 / plug 2	Cable	Colour	Wiring
400120	2 m	Measurement/Patch cord 1000 MHz 4P	GG45 7 _A / GG45 7 _A	FRNC/LS0H ¹⁾	orange	1:1
400121	1 m	Adapter patch cord 4P	GG45 7 _A / RJ45	FRNC/LS0H	orange	1:1
400122	2 m	Adapter patch cord 4P	GG45 7 _A / RJ45	FRNC/LS0H	orange	1:1
400123	3 m	Adapter patch cord 4P	GG45 7 _A / RJ45	FRNC/LS0H	orange	1:1
400125	5 m	Adapter patch cord 4P	GG45 7 _A / RJ45	FRNC/LS0H	orange	1:1

¹⁾ FRNC/LS0H = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

GG45™ is a registered trade name of NEXANS

COPPER PATCH CORDS

PS-TERA™ / RJ45 patch cords

Measurement / Patch cord PS-TERA 4P, shielded

Adapter patch cords PS-TERA / RJ45, shielded



PRODUCT INFORMATION

APPLICATION

Measurement/Patch cord PS-TERA 4P with flexible cable CU 7150 4P flex, shielded

Patch cords with PS-TERA 4P plugs allow for Class F_A compliant cabling systems (up to 1000 MHz) and for Class F installations (up to 600 MHz).

Measurement cords with PS-TERA 4P plugs are primarily needed for acceptance testings.

Adapter patch cords PS-TERA / RJ45 with flexible cables, shielded

For multimedia cabling systems with tried and tested copper components and innovative connection technology for Class F_A in accordance with EN 50173 and ISO/IEC 11801.

PS-TERA connectors guarantee highest flexibility: Each port of one 4P module can be used for a separate patch. This allows for simultaneous transmission of TV, video, data and voice in one and the same data cable (1 pair for each application).

DESCRIPTION

Flexible cable CU 7150 4P flex FRNC/LS0H (PiMF) up to 1000 MHz, screened, with grey cable sheath. The PS-TERA adapter patch cords are available in many types for adaption to the RJ45 standard. They are fitted with a PS-TERA plug for 4, 2 or 1 pair on one side and a RJ45 plug or RJ11 plug (telephony) on the other side.

APPLICABLE STANDARD

ISO/IEC 11801:2002/Amd.1:2008 and Amd.2:2010
EN 50173-1:2011

GENERAL CHARACTERISTICS

Zero halogen	IEC 60754-1/-2, EN 50267-2-1/-2-2
non corrosive gases	(VDE 0482-267-2-1/-2-2) - applies to FRNC/LS0H
Flame propagation	IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
Smoke density	IEC 61034-1/-2, EN 61034-1/-2
Power over Ethernet	(VDE 0482-1034-1/-2) - applies to FRNC/LS0H
EMC	IEEE 802.3at
Cat./Class	shielded
	Cat.7 _A / Class F _A with PS-TERA 4P plugs on both ends
	Cat.6 / Class E _A with one PS-TERA 4P and one RJ45 4P plug
	Cat.5e / Class D with one PS-TERA 2P and one RJ45 2P plug
	Cat.3 / telephony with one PS-TERA 1P and one RJ11 1P plug

TERA™ is a registered Trademark of SIEMON

PRODUCT INFORMATION

Article No.	Length	Boot colour		Description	Plug 1 / plug 2	Cable	Cable colour	Wiring
		PS-TERA	RJ45					
654010	2,0 m			Mess-/Patchkabel	PS-TERA 4P / PS-TERA 4P	FRNC/LSOH1)	grau	1:1
654058	1 m	black	black	Adapter patch cord	PS-TERA 4P / RJ45	FRNC/LSOH1)	grey	1:1
654060	2 m	black	black	Adapter patch cord	PS-TERA PS 4P / RJ45	FRNC/LSOH	grey	1:1
654062	3 m	black	black	Adapter patch cord	PS-TERA PS 4P / RJ45	FRNC/LSOH	grey	1:1
654066	5 m	black	black	Adapter patch cord	PS-TERA PS 4P / RJ45	FRNC/LSOH	grey	1:1
654158	1 m	yellow	yellow	Adapter patch cord	PS-TERA PS 2P / RJ45	FRNC/LSOH	grey	100BT (A)
654160	2 m	yellow	yellow	Adapter patch cord	PS-TERA PS 2P / RJ45	FRNC/LSOH	grey	100BT (A)
654162	3 m	yellow	yellow	Adapter patch cord	PS-TERA PS 2P / RJ45	FRNC/LSOH	grey	100BT (A)
654166	5 m	yellow	yellow	Adapter patch cord	PS-TERA PS 2P / RJ45	FRNC/LSOH	grey	100BT (A)
654258	1 m	blue	grey	Adapter patch cord	PS-TERA PS 2P / RJ45	FRNC/LSOH	grey	TR
654260	2 m	blue	grey	Adapter patch cord	PS-TERA PS 2P / RJ45	FRNC/LSOH	grey	TR
654262	3 m	blue	grey	Adapter patch cord	PS-TERA PS 2P / RJ45	FRNC/LSOH	grey	TR
654266	5 m	blue	grey	Adapter patch cord	PS-TERA PS 2P / RJ45	FRNC/LSOH	grey	TR
654208	1 m	red	red	Adapter patch cord	PS-TERA PS 2P / RJ45	FRNC/LSOH	grey	100BT (B)uplink
654210	2 m	red	red	Adapter patch cord	PS-TERA PS 2P / RJ45	FRNC/LSOH	grey	100BT (B)uplink
654212	3 m	red	red	Adapter patch cord	PS-TERA PS 2P / RJ45	FRNC/LSOH	grey	100BT (B)uplink
654216	5 m	red	red	Adapter patch cord	PS-TERA PS 2P / RJ45	FRNC/LSOH	grey	100BT (B)uplink

Note: customised patch cords (e.g. length, type) on request.

¹⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

COPPER PATCH CORDS

RJ45 patch cords Cat.6_A (IEC) 500 MHz shielded, wiring 1:1



PRODUCT INFORMATION

DESCRIPTION

Shielded patch cords and connection cables with shielded RJ45 plug on both ends, fitted with an overmoulding and an anti-s snag boot in the same colour as the cable sheath and with latch protection. The cable CU 7702 flex 4P (Cat.7) offers excellent NEXT and impedance values due to the individually foil screened pairs (PiMF). Due to the overall copper braid, the patch cables have an excellent screen performance and are highly flexible. They are optimized for the transmission of CATV signals up to 862 MHz. The patch cords meet all the requirements of Category 6_A (IEC) and the limit values stipulated for Class E_A cabling links (Channels) for 10GBase-T applications.

Standard assortment: from 0.5 m up to 20 m.
Customised adjustments (anti-s snag boot, termination, label) are available at short notice.

APPLICABLE STANDARDS

IEC 61935-2:2010 (Cat.6_A)
ISO/IEC 11801:2001 / Amd.1:2008 and Amd.2:2010 (Class E_A)
EN 50173-1:2011

GENERAL CHARACTERISTICS

- Zero halogen
 - non corrosive gases
 - Flame propagation
 - Smoke density
 - EMC
 - Cat/Class
- IEC 60754-1/-2, EN 50267-2-1/-2-2
(VDE 0482-267-2-1/-2-2) - applies to FRNC/LSOH¹⁾
IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
IEC 61034-1/-2, EN 61034-1/-2,
(VDE 0482-1034-1/-2) - applies to FRNC/LSOH shielded
Cat 6, Class E_A for 10GBase-T and 1GBase-T
CATV 862 MHz

Length	Article No. RJ45 patch cord Cat.6 _A , shielded, wiring 1:1 (with CU 7702 4P flex FRNC/LSOH ¹⁾ Cat.7)					
	grey	green	yellow	red	blue	orange
0.5 m	653503	653553	653603	653653	653703	(653753)*
1.0 m	653508	653558	653608	653658	653708	653758
1.5 m	653509	653559	653609	653659	653709	(653759)*
2.0 m	653510	653560	653610	653660	653710	653760
2.5 m	653511	653561	653611	653661	653711	(653761)*
3.0m	653512	653562	653612	653662	653712	653762
4.0 m	653514	653564	653614	653664	653714	(653764)*
5.0 m	653516	653566	653616	653666	653716	653766
6.0 m	653518	653568	653618	653668	653718	(653768)*
7.0 m	653520	653570	653620	653670	653720	653770
8.0 m	653522	653572	653622	653672	653722	(653772)*
9.0 m	653524	653574	653624	653674	653724	(653774)*
10.0 m	653526	653576	653626	653676	653726	(653776)*
12.5 m	653527	653577	653627	653677	653727	(653777)*
15.0 m	653528	653578	653628	653678	653728	(653778)*
20.0 m	653530	653580	653630	653680	653730	(653780)*

Note: Products marked with (*) and lengths up to 100 m are not on stock but can be delivered at short notice. Please do not hesitate to contact us.

¹⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

RJ45 patch cords Cat.5/5e 100 MHz shielded, wiring 1:1



PRODUCT INFORMATION

DESCRIPTION

The Datwyler patch cords and connection cables are fitted with a shielded RJ45 plug and a moulded anti-s snag boot on both ends. The cable CU 5502 flex 4P offers an excellent screen performance due to its overall copper braid and is highly flexible.

Standard assortment: from 0.5 m until 20 m.
Customised adjustments (anti-s snag boot, termination, label) are available at short notice.

APPLICABLE STANDARDS

ISO/IEC 11801:2002 (Class D, Channel)
EN 50173: 2011

GENERAL CHARACTERISTICS

Zero halogen	IEC 60754-1/-2, EN 50267-2-1/-2-2
non corrosive gases	(VDE 0482-267-2-1/-2-2) - applies to FRNC/LS0H ²⁾
Flame propagation	IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
Smoke density	IEC 61034-1/-2, EN 61034-1/-2
Power over Ethernet	(VDE 0482-1034-1/-2) - applies to FRNC/LS0H
EMC	IEEE 802.3at
Cat./Class	shielded
	Cat.5/5e / Class D for 100Base-T and 1GBase-T

Length	Article No. FR/PVC ¹⁾	FR/PVC	FR/PVC	FR/PVC	FR/PVC	FRNC/LS0H ²⁾
	grey	green	yellow	red	blue	orange
0.5 m	652003	652053	652103	652153	652203	(652753)*
1.0 m	652008	652058	652108	652158	652208	652758
1.5 m	652009	652059	652109	652159	652209	(652759)*
2.0 m	652010	652060	652110	652160	652210	652760
2.5 m	652011	652061	652111	652161	652211	(652761)*
3.0 m	652012	652062	652112	652162	652212	652762
4.0 m	652014	652064	652114	652164	652214	(652764)*
5.0 m	652016	652066	652116	652166	652216	652766
6.0 m	652018	652068	652118	652168	652218	(652768)*
7.0 m	652020	652070	652120	652170	652220	(652770)*
8.0 m	652022	652072	652122	652172	652222	652772
9.0 m	652024	652074	652124	652174	652224	(652774)*
10.0 m	652026	652076	652126	652176	652226	(652776)*
12.5 m	652027	652077	652127	652177	652227	(652777)*
15.0 m	652028	652078	652128	652178	652228	(652778)*
20.0 m	652030	652080	652130	652180	652230	(652780)*

Note: Products marked with (*) and lengths up to 100 m are not on stock but can be delivered at short notice. Please do not hesitate to contact us.

¹⁾ FR/PVC = Flame Retardant / Polyvinyl chloride

²⁾ FRNC/LS0H = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

COPPER PATCH CORDS

RJ45 measurement cable Cat.6_A (IEC) 500 MHz shielded, set with 2 pcs.

with serial numbers for documentation



PRODUCT INFORMATION

APPLICATION

For Channel link acceptance testings of Class D, E and E_A cabling.
When using test devices with dual measurement capability this cable is also suitable for Permanent Link measurements.

DESCRIPTION

RJ45 measurement cable Cat.6_A (IEC) up to 500 MHz, shielded, with serial numbers for documentation (set with 2 pieces).

Pack:	in resealable plastic bag
Cable sheath:	orange, halogen-free
Anti-snap boot:	moulded, grey, length: 2.0 m
Serial number imprint:	date (week/year) + batch number (for identification and traceability of the cables)
Measurement report:	included as colour printing, cable batch no. on the test report (report for each cable with parameters: NEXT, Insertion Loss, RL)
Identification:	side A and B with laminated label

APPLICABLE STANDARDS

IEC 61935-2:2010 (Cat.6_A)
ISO/IEC 11801:2001/Amd.2:2010 (Class E_A)
EN 50173-1:2011

Article No.	Description	PU
1411063	RJ45 measurement cable Cat.6 _A (IEC), shielded, L = 2,0 m, orange cable sheath, anti-snap boot in grey/grey	1 set

RJ45 patch cords IP67 Cat.6 250 MHz
shielded, wiring 1:1



PRODUCT INFORMATION

APPLICATION

Datwyler’s patch cords and connection cables IP67 Cat.6 are especially suitable for the harsh, industrial environment. The IP67 RJ45 plug is compatible with the Datwyler Modular Solution IP67 components.

DESCRIPTION

The cable type CU 7702 4P flex FRNC/LS0H Cat.7 provides outstanding electrical and mechanical properties. The shielded pairs (PiMF) and an additional overall copper braid ensure outstanding NEXT and impedance values.

The cable type CU 7702 4P flex Industrial PUR meets additional requirements of the industrial environment like oil resistance and robustness.

The standard version is fitted with an IP67 RJ45 plug on one side and a RJ45 plug with a moulded anti-snag boot on the other side.

In addition to the standard version this patch cable is available in other lengths and with other combinations of plugs (on request).

GENERAL PROPERTIES

Zero halogen non corrosive gases	IEC 60754-1/-2, EN 50267-2-1/-2-2 (VDE 0482-267-2-1/-2-2) - applies to FRNC/LS0H
Flame propagation	IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
Smoke density	IEC 61034-1/-2, EN 61034-1/-2 (VDE 0482-1034-1/-2) - applies to FRNC/LS0H
Oil resistant	EN 60811-2-1 - applies to PUR
Power over Ethernet	IEEE 802.3at
EMC	shielded
Cat./Class	Cat.6 / Class E

Patch cord:	plug A	IP67 RJ45, grey
	plug B	RJ45, anti-snag boot grey or orange

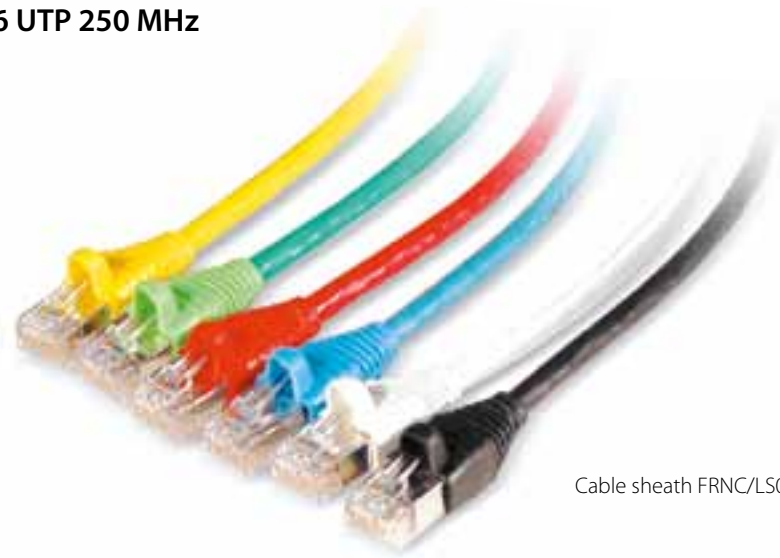
The IP67 plugs are compatible with Datwyler’s IP67 RJ45 connection components:
Article No. 185719, 185725, 185726, 417530

Length	Article No. CU 7702 4P flex Industrial PUR ¹⁾	Article No. CU 7702 4P flex Industrial FRNC/LS0H ²⁾
	plug B anti-snag boot grey	plug B anti-snag boot grey
1.0 m	on request	on request
2.0 m	on request	on request
3.0 m	on request	on request
5.0 m	on request	on request
7.0 m	on request	on request
10.0 m	on request	on request

¹⁾ PUR = Polyurethane ²⁾ FRNC/LS0H = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

COPPER PATCH CORDS

RJ45 patch cords Cat.6 UTP 250 MHz
unshielded, wiring 1:1



Cable sheath FRNC/LSOH¹⁾

PRODUCT INFORMATION

DESCRIPTION

Datwyler’s unshielded Cat.6 RJ45 patch cords and connection cables (up to 250 MHz) are fitted with a shielded RJ45 plug and a coloured moulded anti-snap boot on both ends. Plugs and anti-snap boots form one unit. The shielded RJ45 plugs provide for better performance. The CU 602 4P flex cable is suitable for transmission rates up to 250 MHz.

GENERAL CHARACTERISTICS

- Zero halogen
 - non corrosive gases
 - Flame propagation
 - Smoke density
 - Power over Ethernet
 - Cat./Class
- IEC 60754-1/-2, EN 50267-2-1/-2-2
(VDE 0482-267-2-1/-2-2) - applies to FRNC/LSOH¹⁾
IEC 60332-1-2, EN 60332-1-2 (VDE 0482-332-1-2)
IEC 61034-1/-2, EN 61034-1/-2
(VDE 0482-1034-1/-2) - applies to FRNC/LSOH
IEEE 802.3af
better than Cat.6 / Class E

Length	Article No. RJ45 patch cord Cat.6, unshielded, wiring 1:1 (with CU 602 4P flex, FRNC/LSOH ¹⁾ Cat.6)						
	grey	green	yellow	red	blue	white	black
0.5 m	651553	651853	651703	651803	651753	651653	651603
1.0 m	651558	651858	651708	651808	651758	651658	651608
1.5 m	651559	651859	651709	651809	651759	651659	651609
2.0 m	651560	651860	651710	651810	651760	651660	651610
2.5 m	651561	651861	651711	651811	651761	651661	651611
3.0 m	651562	651862	651712	651812	651762	651662	651612
4.0 m	651564	651864	651714	651814	651764	651664	651614
5.0 m	651566	651868	651716	651816	651766	651666	651616
6.0 m	651568	651870	651718	651818	651768	651668	651618
7.0 m	651570	651872	651720	651820	651770	651670	651620
7.5 m	651571	651874	651721	651821	651771	651671	651621
8.0 m	651572	651876	651722	651822	651772	651672	651622
10.0 m	651576	651877	651726	651826	651776	651676	651626
15.0 m	651578	651878	651728	651828	651778	651678	651628
20.0 m	651580	651880	651730	651830	651780	651680	651630

¹⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

RJ45 patch cords Cat.6 UTP 250 MHz unshielded, wiring 1:1



Cable sheath FR/PVC¹⁾
or FRNC/LSOH²⁾

PRODUCT INFORMATION

APPLICATION	Applicable for all applications up to Class E (250 MHz), for example Gigabit Ethernet 1000Base-T, Fast Ethernet 100Base-T, ISDN, and PoE according to IEEE 802.3af.
DESCRIPTION	RJ45 patch cord, Cat.6 (up to 250 MHz), unshielded, with a RJ45 plug (Cat.6) and a moulded anti-snag boot on both ends. Unshielded flexible cable U/UTP, 250 MHz, 4P, AWG 24. Cable sheath made of FR/PVC, also available as FRNC/LSOH. RJ45 plugs (8/8) Cat.6 in accordance with IEC 60603-7-4.
PROPERTIES	Flame retardant in accordance with IEC 60332-1, RoHS compliant.
APPLICABLE STANDARDS	IEC 61935-2, TIA/EIA 568-B.2-1 Cat.6, Commercial Building Telecommunications Cabling Standard, part 2: Balanced Twisted-Pair Cabling Components (as of June 2002).
PACKING UNIT	One patch cord, bundled as a ring in a plastic bag.

Length ³⁾	Article No. RJ45 patch cord U/UTP Cat.6, wiring 1:1, with grey cable sheath FR/PVC ¹⁾ or FRNC/LSOH ²⁾	
	FR/PVC	FRNC/LSOH
1.0 m	309021	309321
1.5 m	309022	309322
2.0 m	309023	309323
3.0 m	309025	309325
4.0 m	309026	309326
5.0 m	309027	309327
7.0 m	309029	309329
10.0 m	309031	309331

¹⁾ FR/PVC = Flame Retardant / Polyvinyl chloride

²⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

³⁾ other lengths on request, minimum order quantity = 100 pieces

COPPER PATCH CORDS

RJ45 patch cords Cat.5e UTP 100 MHz unshielded, wiring 1:1



Cable sheath FR/PVC¹⁾
or FRNC/LSOH²⁾

PRODUCT INFORMATION

APPLICATION	Applicable for all applications up to Class D (100 MHz), for example Gigabit Ethernet 1000Base-T, Fast Ethernet 100Base-T, ISDN, and PoE according to IEEE 802.3af.
DESCRIPTION	RJ45 patch cord Cat.5e (up to 100 MHz), unshielded, with a RJ45 plug (Cat.6) and a moulded anti-snag boot on both ends. Unshielded flexible cable U/UTP Cat.5e, 100 MHz, 4P, AWG 24. Cable sheath made of FR/PVC, also available as FRNC/LSOH. RJ45 plugs (8/8) Cat.6 in accordance with IEC 60603-7-2.
PROPERTIES	Flame retardant in accordance with IEC 60332-1, RoHS compliant.
APPLICABLE STANDARDS	IEC 61935-2, TIA/EIA 568-B.2-1 Cat.5e, Commercial Building Telecommunications Cabling Standard, part 2: Balanced Twisted-Pair Cabling Components (as of June 2002).
PACKING UNIT	One patch cord, bundled as a ring in a plastic bag.

Length ³⁾	Article no. RJ45 patch cord U/UTP Cat.5e, wiring 1:1, with grey cable sheath FR/PVC ¹⁾ or FRNC/LSOH ²⁾	
	grey FR/PVC	grey FRNC/LSOH
1.0 m	309001	309301
1.5 m	309002	309302
2.0 m	309003	309303
3.0 m	309005	309305
4.0 m	309006	309306
5.0 m	309007	309307
7.0 m	309009	309309
10.0 m	309011	309310

¹⁾ FR/PVC = Flame Retardant / Polyvinyl chloride

²⁾ FRNC/LSOH = Flame Retardant Non Corrosive / Low Smoke Zero Halogen

³⁾ other lengths on request, minimum order quantity = 100 pieces

Cable clips 2D
for labelling of patch cords



Fig. 1: Cable clip 2D to be attached to existent patch cord



Fig. 2: Patch cable with pre-assembled Cable clip 2D (with bar code)



Fig. 3: Cable clip 2D with customized text

PRODUCT INFORMATION

DESCRIPTION

The Cable clip 2D is suitable to be attached to already existent (cabled) patch cords or can be ordered together with new patch cords as a pre-assembled addition. Each cable clip can be moved to an easily readable position. No slipping down from a "hanging" patch cord. Text on self-laminating label. Its design makes it suitable for bar code labelling:

Versions:

- Cable clip 2D to be attached to both sides of an existent patch cord (can also be assembled to already connected patch cord - see fig. 1)
- Cable clips 2D, pre-assembled to a newly ordered patch cord, optional with standard serial number and 2D bar code (see fig. 2) or with customised text (see fig. 3) and/or 2D bar code (available on request)

MATERIAL

PVC

DIMENSIONS

W x H x D: 28 x 10 x 10 mm

SUITABLE CABLES

Round cables with 3 mm up to 5,8 mm external diameter, oval cables with 4,8 x 3,2 mm up to 6,6 x 4,0 mm.

COLOUR

white, similar to RAL 9010

Article No.	Description	PU
400312	Cable clip 2D (to be attached to existent patch cords) without self-laminating label (1 set = 50 pcs.)	1 set

Patch cord with pre-assembled Cable clips 2D

Note: Please order the requested patch cord separately - and please do not forget to mention the requested Cable clip 2D version when ordering!

400310	Cable clip 2D with label with standard serial number and 2D bar code (2 pcs. per patch cord, pre-assembled)	1 pc.
400311	Cable clip 2D with label with customised text (2 pcs. per patch cord, pre-assembled)	1 pc.

GG45™ connector system Cat.7_A

Module PS-GG45 7_A shielded

"Two-in-One" connector
backward compatible to RJ45



Keystone clip



Module PS-GG45 7_A
1000 MHz shielded



Termination tool for GG45

PRODUCT INFORMATION

APPLICATION

The module PS-GG45 7_A is a shielded module, compatible with RJ45 and specified up to 1000 MHz. It was developed especially for applications beyond 10-Gigabit Ethernet with highest bandwidths. When used together with Cat.7_A data cables and patch cords, it enables to fulfil all Class F_A requirements for the 4-connector Channel in accordance with ISO/IEC 11801 Amendment 1:2008. The "Two-in-One" module has 12 contacts that work in two different transmission modes: Standard = RJ45 and High-Speed = GG45.

DESCRIPTION

Robust zinc die casting housing with Keystone clip for easy installation in patch panels and faceplates with Keystone openings.
Quick and reliable wire-connections with the termination tool for GG45.
Depending on the plug that is used (RJ45 or GG45) there are 8 out of 12 contacts enabled:

- the RJ45 plug uses the 8 contacts on the top-level,
- the GG45 plug enables the 8 contacts in the upper and lower corners.

The 360° braid connection supplies best Coupling Attenuation values and provides for immunity against Alien Crosstalk or other external influences.


MECHANICAL PROPERTIES

Solid copper wire	0.51 mm (AWG 24) to 0.65 mm (AWG 22)
Diameter over insulation	0.7 mm to 1.4 mm (1.6 mm)
Version for stranded copper wire	AWG 24 up to AWG 27
Stranded wire	7 bare stranded wires

STANDARDS

IEC 60603-7-71 (Cat.7_A shielded, 1000 MHz)
ISO/IEC 11801:2002 / Amd.2:2010
EN 50173-1:2011

GENERAL CHARACTERISTICS

Termination	Pair configuration according to T568- A or T568-B, clearly marked with a colour code
Mounting	Suitable for Keystone openings in accordance with ISO/IEC 60603-7
 Cat./Class	Cat.7 _A / Class F _A

Article No.	Description	Colour	PU
400102	Module PS-GG45 7 _A 4P Two-in-One shielded	metal	10 pcs.
400103	Module PS-GG45 7 _A 4P Two-in-One shielded, for stranded wires	metal	10 pcs.
400105	Termination tool for PS-GG45	red	1 pc.

GG45™ is a registered trademark of NEXANS

Please find an up-to-date matrix showing which patch panels and outlets are suitable for the insertion of the respective Datwyler module on our homepage www.datwyler.com.

Subject to technical modification.



Module PS-TERA 4P Cat.7_A



Plug PS-TERA 4P, 2P, 1P shielded
Plug PS-TERA 1P unshielded



PS-TERA tool
For easy cable preparation



Parallel pliers

PRODUCT INFORMATION

FEATURES

The module PS-TERA is a shielded module that accepts 1-pair, 2-pair and 4-pair plugs. It fulfils all requirements for Cat.7A products up to 1000 MHz in accordance with IEC 61076-3-104. Therefore the module is suitable for 10-Gigabit Ethernet transmissions in accordance with IEEE 802.3an and for upcoming applications that need even higher bandwidths. The module is intended for screened Cat.7 or 7_A data cable termination. As it accepts 1-, 2- or 4-pair plugs, it enables the transmission of multiple applications over one data cable at the same time (Plug Sharing). The plugged in plugs are interlocked. Datwyler offers coloured cable boots for the differentiation of applications. Unused modules are protected with hinged dust shutters. The module is compatible with the wire diameters AWG 22 to AWG 23.

APPLICABLE STANDARDS

IEC 61076-3-104 (Cat.7_A shielded, 1000 MHz)
ISO/IEC 11801:2002 / Amd.2:2010
EN 50173-1:2011

INFORMATION

The PS-TERA modules could be fitted in all Datwyler faceplates, patch panels or floor box solutions with MPS openings

GENERAL CHARACTERISTICS

■ Cat./Klasse Cat.7_A / Class F_A

Article No.	Description	Colour	PU/1 set
1408502	Module PS-TERA 4P Cat.7 _A /F _A 1000 MHz	black	1 pc.
1408503	Plug PS-TERA 4P Cat.7 _A /F _A 1000 MHz	black	50 pcs.
1408504	Plug PS-TERA 2P	black	100 pcs.
1411985	Plug PS-TERA 1P	black	10 pcs.
1409554	Plug PS-TERA 1P unshielded (for telephone applications)	black	10 pcs.

more packaging units on request

ACCESSORIES

Article No.	Description	PU
1409210	PS-TERA tool for easy cable preparation	1 pc.
1412330	Parallel pliers for termination of modules	1 pc.

TERA™ is a registered Trademark of SIEMON

Please find an up-to-date matrix showing which patch panels and outlets are suitable for the insertion of the respective Datwyler module on our homepage www.datwyler.com.

Subject to technical modification.

RJ45 module KS-T Plus 1/8 tool-less Cat.6_A (IEC) shielded with dust shutter

PRODUCT INFORMATION

APPLICATION

For the transmission of digital and analogue voice-, video- and data signals. The module KS-T Plus is specified up to 500 MHz in compliance with the component standard IEC 60603-7-51. Enables acceptance testing with high spare capacity at the limit values stipulated for Class E_A Permanent Links when combined with shielded Cat.6_A, 7 and 7_A data cables. Therefore it is applicable for 10-Gigabit Ethernet transmissions in accordance with IEEE 802.3. Useable for Power over Ethernet Plus (PoE+) corresponding to IEEE 802.3at.

DESCRIPTION

Solid zinc die casting housing with mounting clip for installation in Keystone panels and outlets. Contact spring with phosphor bronze alloy, plated with gold. For connecting the wires a wire manager is used in combination with two integrated moveable housing wings for tool-less IDC connections. Only for cutting the wires a plane wire cutter is necessary. The 360° metal shield ensures a durable fully shielded environment. Strain relief via cable tie. The module is re-usable. Potential balancing possibility directly at the module when needed. With removable black dust shutter. Other colours available as accessories sets.



MECHANICAL PROPERTIES

Solid copper wire	0.50 mm (AWG 24) to 0.65 mm (AWG 22)
Re-connection	for AWG 22, AWG 23 and AWG 24 when using the same or bigger wire diameter.
Stranded copper wire	CU 7702 flex (AWG 26/7), re-usable once
Diameter over insulation	0.70 mm to 1.40 mm (1.60 mm)
Temperature range	storing: -40°C to +70°C
	during installation: -10°C to +60°C
	in operation: -20°C to +60°C

STANDARDS

IEC 60603-7-51 (Cat.6_A shielded, 500 MHz)
ISO/IEC 11801:2002 / Amd.2:2010
EN 50173-1:2011
TIA/EIA 568-B.2-10:2008

GENERAL CHARACTERISTICS

Termination	Wire guides with colour coding in accordance with T568-A or B
 M	Modular
 Cat./Class	Cat.6 _A / Class E _A

Article No.	Description	Colour	PU
418061	RJ45 module KS-T Plus 1/8 tool-less Cat.6 _A (IEC) shielded, with dust shutter	black	10 pcs.
418062	Dust shutters for modules KS-T Cat.6/E _A and KS-T Plus Cat.6 _A (1 set = 10 pcs.)	white	1 set
418063	Dust shutters for modules KS-T Cat.6/E _A and KS-T Plus Cat.6 _A (1 set = 10 pcs.)	black	1 set
418064	Dust shutters for modules KS-T Cat.6/E _A and KS-T Plus Cat.6 _A (1 set = 10 pcs.)	yellow	1 set
418065	Dust shutters for modules KS-T Cat.6/E _A and KS-T Plus Cat.6 _A (1 set = 10 pcs.)	blue	1 set
418066	Dust shutters for modules KS-T Cat.6/E _A and KS-T Plus Cat.6 _A (1 set = 10 pcs.)	green	1 set
418067	Dust shutters for modules KS-T Cat.6/E _A and KS-T Plus Cat.6 _A (1 set = 10 pcs.)	red	1 set

Please find an up-to-date matrix showing which patch panels and outlets are suitable for the insertion of the respective Datwyler module on our homepage www.datwyler.com.

Subject to technical modification.



Module MS-K Plus 1/8 Cat.6_A shielded



Dust shutters
Set with 25 pcs.

PRODUCT INFORMATION

APPLICATION	For the transmission of digital and analogue voice, video and data signals. The module MS-K Plus is specified up to 500 MHz in accordance with the component standard IEC 60 603-7-51. In combination with shielded Cat.6 _A , 7 and 7 _A data cables all Class D, E and E _A applications are applicable, that is including 10GBase-T (IEEE 802.3an). Useable for Power over Ethernet Plus (PoE+) in accordance with IEEE 802.3at.	
DESCRIPTION	Compact zinc die casting housing. Special construction for high packing density in faceplates/outlets (up to 3 modules). Tool-less wire termination. 360° braid connection to the strain relief bar. Strain relief bar fixed with a cable tie. With snap-in mounting in patch panels and faceplates by a special kind of Keystone fitting (180° turned).	
MECHANICAL PROPERTIES	Solid copper wire Stranded copper wire Re-connection frequency Diameter over insulation Temperature range	0.51 mm (AWG 24) to 0.63 mm (AWG 22) dependent on the construction ≤ 10-times when using the same or bigger wire diameter 0.7 to 1.4 mm (1.6 mm) storing: - 40°C to + 70°C during installation: - 10°C to + 60°C in operation: - 20°C to + 60°C
STANDARDS	IEC 60603-7-51 (Cat.6 _A shielded, 500 MHz) ISO/IEC 11801:2002 / Amd.2:2010 EN 50173-1:2011 TIA/EIA 568-B.2-10:2008	
GENERAL CHARACTERISTICS	Termination Potential balancing Mounting possibilities ■ Cat./Class	Pair-configuration in accordance with TIA 568-A, clearly marked with a colour code 6.3 mm flat plug connection capability at the module Suitable for patch panel MS-K 24x and faceplates MS-K (2 or 3 port) Cat 6 _A / Class E _A

Article No.	Description	Colour (similar)	PU
440004	RJ45 module MS-K Plus 1/8 Cat.6 _A (IEC), with colour code TIA 568-A	metal	10 pcs
OPTION 440005	RJ45 module MS-K Plus 1/8 Cat.6 _A (IEC), with colour code TIA 568-B metal	metal	10 pcs
OPTION 440006	RJ45 module MS-N Plus 1/8 Cat.6 _A (IEC), with colour code TIA 568-A	metal	10 pcs
417985	Dust shutter MS-K (1 set = 25 pcs)	grey	1 set
417986	Dust shutter MS-K (1 set = 25 pcs)	white, RAL 9010	1 set
440034	Dust shutter MS-K (1 set = 25 pcs)	red, RAL 3000	1 set
440035	Dust shutter MS-K (1 set = 25 pcs)	yellow, RAL 1021	1 set
440036	Dust shutter MS-K (1 set = 25 pcs)	blue, RAL 5015	1 set
440037	Dust shutter MS-K (1 set = 25 pcs)	green, RAL 6016	1 set
440038	Dust shutter MS-K (1 set = 25 pcs)	orange, RAL 2008	1 set
440039	Dust shutter MS-K (1 set = 25 pcs)	black, RAL 9005	1 set

Please find an up-to-date matrix showing which patch panels and outlets are suitable for the insertion of the respective Datwyler module on our homepage www.datwyler.com.

Subject to technical modification.

RJ45 module shielded Cat.6_A (IEC)Module MS-C6_A 1/8 Cat.6_A (IEC) 180°

for 10-Gigabit Ethernet



Dust shutters

PRODUCT INFORMATION

APPLICATION

For the transmission of digital and analogue voice, video and data signals.
The module MS-C6_A is specified up to 500 MHz in accordance with the component standard IEC 60 603-7-51. In combination with shielded Cat.6_A, 7 and 7_A data cables all applications up to Class E_A are applicable, that is including 10GBase-T (IEEE 802.3an).
Useable for PoE and Power over Ethernet Plus (PoE+) in accordance with IEEE 802.3at.

DESCRIPTION

Compact two-piece module, re-usable zinc die casting housing.
Special construction for high packing density in faceplates/outlets (up to 3 modules).
Tool-less, time-saving wire termination.
Possibility to terminate solid and flexible cables.
Outstanding electrical performance for 10-Gigabit Ethernet applications.
360° braid connection to the strain relief bar.
Strain relief via snap-in clip without cable tie.

MECHANICAL PROPERTIES

Wire connection	IDC insulation displacement connectors
Solid copper wire	0.50 mm (AWG 24/1) to 0.65 mm (AWG 22/1)
Stranded copper wire	AWG 26/7 to AWG 24/7, e.g. CU 7702 flex
Re-connection	feasible when using the same or bigger wire diameter
Diameter over insulation	0.7 mm to 1.4 mm (1.6 mm)
Temperature range	storing: - 40°C up to + 70°C
	during installation: - 10°C up to + 60°C
	in operation: - 20°C up to + 60°C

STANDARDS

IEC 60603-7-51 (Cat.6_A geschirmt, 500 MHz)
ISO/IEC 11801:2002 / Amd.2:2010
EN 50173-1:2011
TIA/EIA 568-B.2-10:2008

GENERAL CHARACTERISTICS

Termination	Configuration in accordance with TIA 568-A and B, clearly marked with a colour code
Potential balancing	2.8 mm flat plug connection capability at the module
Mounting possibilities	Suitable for MS patch panels and MS faceplates/outlets
■ Cat./Class	Cat.6 _A / Class E _A

Article No.	Description	Colour	PU
309250	Module MS-C6 _A 1/8 Cat.6 _A (IEC) 180°	metal	10 pcs.
309240	Module MS-C6 _A 1/8 Cat.6 _A (IEC) 180°	metal	100 pcs.
309248	Dust shutters	black	25 pcs.
309180	Dust shutters	white	25 pcs.
309181	Dust shutters	grey	25 pcs.
309182	Dust shutters	red	25 pcs.
309183	Dust shutters	yellow	25 pcs.
309184	Dust shutters	green	25 pcs.
309185	Dust shutters	blue	25 pcs.

Please find an up-to-date matrix showing which patch panels and outlets are suitable for the insertion of the respective Datwyler module on our homepage www.datwyler.com.

Subject to technical modification.



Module MS-C6_A 1/8 Cat.6_A (IEC) 180° - K (Keystone) Dust shutters

PRODUCT INFORMATION

APPLICATION

For the transmission of digital and analogue voice, video and data signals.
The module MS-C6_A 1/8 Cat.6_A (IEC) 180° - K (Keystone) is specified up to 500 MHz in accordance with the component standard IEC 60 603-7-51. In combination with shielded Cat.6_A, 7 and 7_A data cables all applications up to Class E_A are applicable, that is including 10GBase-T (IEEE 802.3an).
Useable for PoE and Power over Ethernet Plus (PoE+) in accordance with IEEE 802.3at.

DESCRIPTION

Compact two-piece module, re-usable zinc die casting housing.
Special construction for high packing density in faceplates/outlets (up to 3 modules).
Tool-less, time-saving wire termination.
Possibility to terminate solid and flexible cables.
Outstanding electrical performance for 10-Gigabit Ethernet applications.
360° braid connection to the strain relief bar.
Strain relief via snap-in clip without cable tie.

MECHANICAL PROPERTIES

Wire connection	IDC insulation displacement connectors
Solid copper wire	0.50 mm (AWG 24/1) to 0.65 mm (AWG 22/1)
Stranded copper wire	AWG 26/7 to AWG 24/7, e.g. CU 7702 flex
Re-connection	feasible when using the same or bigger wire diameter
Diameter over insulation	0.7 mm to 1.4 mm (1.6 mm)
Temperature range	storing: - 40°C up to + 70°C
	during installation: - 10°C up to + 60°C
	in operation: - 20°C up to + 60°C

STANDARDS

IEC 60603-7-51 (Cat.6_A geschirmt, 500 MHz)
ISO/IEC 11801:2002 / Amd.2:2010
EN 50173-1:2011
TIA/EIA 568-B.2-10:2008

GENERAL CHARACTERISTICS

Termination	Configuration in accordance with TIA 568-A and B, clearly marked with a colour code
Potential balancing	2.8 mm flat plug connection capability at the module
Mounting possibilities	Suitable for Keystone patch panels and Keystone faceplates/outlets
■ Cat./Class	Cat.6 _A / Class E _A

Article No.	Description	Colour	PU
309249	Module MS-C6 _A 1/8 Cat.6 _A (IEC) 180° - K (Keystone)	metal	10 pcs.
309239	Module MS-C6 _A 1/8 Cat.6 _A (IEC) 180° - K (Keystone)	metal	100 pcs.
309248	Dust shutters	black	25 pcs.
309180	Dust shutters	white	25 pcs.
309181	Dust shutters	grey	25 pcs.
309182	Dust shutters	red	25 pcs.
309183	Dust shutters	yellow	25 pcs.
309184	Dust shutters	green	25 pcs.
309185	Dust shutters	blue	25 pcs.

Please find an up-to-date matrix showing which patch panels and outlets are suitable for the insertion of the respective Datwyler module on our homepage www.datwyler.com.

Subject to technical modification.

UP-K Faceplate CSA Plus 2/8 (1/8) shielded Cat.6_A

flush / duct mounted & floor boxes

with 1 or 2 RJ45 jacks Cat.6_A (IEC) shielded, angled



Fig. 1:
Data outlet
CSA Plus 2/8 Cat.6_A
with central plate



Fig. 2:
Data outlet
CSA Plus 1/8 Cat.6_A
with central plate



Fig. 3:
Termination tool 110



Fig. 4:
Cover frame 80 x 80 mm

PRODUCT INFORMATION

DESCRIPTION

Data outlet CSA Plus Cat.6_A shielded, angled, for the transmission of digital and analogue voice, video and data signals up to 10 Gigabit Ethernet in accordance with IEEE 802.3 - provides high spare capacities to the limit values.

Exceeds the requirements for Cat.6_A products (500 MHz) in accordance with ISO/IEC 60603-7-51.

Applicable for Power over Ethernet (PoE) / PoE+ in accordance with IEEE 802.3at.

Compact design for easy flush or duct mounting and deployment in floor boxes.

Can be used in combination with design families from many vendors.

Housing made of zinc die casting.

Cable feed from all sides (+/- 30° angle).

Combined shielding contact and strain relief.

LSA connection technology for copper wires from 0.4 mm up to 0.63 mm (AWG26 - AWG22), diameters over insulation from 0.7 mm up to 1.6 mm (PE).

Convenient head on wire termination.

Color code in accordance with T568-A and T568-B.

Temperature range from -40° C up to + 70° C.

DIMENSIONS

70 x 70 x 47 mm (incl. central plate)

APPLICABLE STANDARDS

IEC 60603-7-51 (Cat.6_A shielded, 500 MHz)

ISO/IEC 11801:2002 / Amd.2:2010

EN 50173-1:2011

TIA/EIA 568-B.2-10:2008

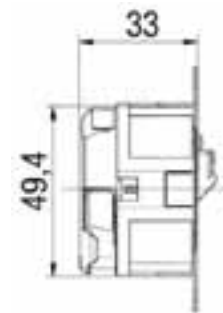
GENERAL PROPERTIES

EMC

shielded

Cat./Class

Cat.6_A / Class E_A



Article No.	Fig.	Description	Colour (similar)	PU
435060	1	UP-K Data outlet CSA Plus 2/8 Cat.6 _A (IEC) incl. central plate	pure white, RAL 9010	1 pc.
435061	1	UP-K Data outlet CSA Plus 2/8 Cat.6 _A (IEC) incl. central plate	oyster white, RAL 1013	1 pc.
435067	2	UP-K Data outlet CSA Plus 1/8 Cat.6 _A (IEC) incl. central plate	pure white, RAL 9010	1 pc.
435068	2	UP-K Data outlet CSA Plus 1/8 Cat.6 _A (IEC) incl. central plate	oyster white, RAL 1013	1 pc.
1400830	4	Cover frame for data outlet CSD 2/8, 80 x 80 mm	pure white, RAL 9010	10 pcs.
1401630	4	Cover frame for data outlet CSD 2/8, 80 x 80 mm	oyster white, RAL 1013	10 pcs.

Article No.	Description	PU
185896	3 IDC termination tool 110 (recommended for outlets CSD, patch panels CSP and CUP, and for KS modules)	1 pc.
	Assembly holders for mounting outlets in cable ducts	

Additional assembly tools / accessories can be found in the chapter System Accessories.

Patch panel CSA Plus 24/8 shielded Cat.6_A (IEC)
with 24 RJ45 jacks

shielded, suitable for 10GBase-T

Patch panel CSA Plus 24/8 Cat.6_A (IEC), shielded

PRODUCT INFORMATION

APPLICATION

For the transmission of digital and analogues voice, video and data signals. When used together with Cat.6_A, 7 or 7_A data cables the patch panel is suitable for all applications up to Class E_A (500 MHz), including 10 Gigabit Ethernet. Designed to keep the electromagnetic influence of adjacent data cables as small as possible and to fulfil the required Allien Crosstalk limit values. Applicable for Power over Ethernet (PoE) / PoE+ in accordance with IEEE 802.3at.

CONSTRUCTION

Housing: Solid metal, grey, similar to RAL 7035; simultaneous cover attachment and shielding contact using two screws
Boards: 4 base boards, each with 6 LSA Plus terminal blocks and 6 RJ45 sockets
Screen tap: 360° shielding via cable clip
Strain relief: with cable clip and a tie wrap

A termination aid is available as an optional accessory. This consists of two angular sheets that can easily be fixed to the frame or cabinet and make the cable termination more comfortable.

CONNECTION SYSTEM

Cable: LSA Plus punch down contacts for copper wires
AWG22 up to AWG26
Socket: Shielded RJ45 connector (measured up to 500 MHz)

APPLICABLE STANDARDS

IEC 60603-7-51 (Cat.6_A shielded, 500 MHz)
ISO/IEC 11801:2002 / Amd.2:2010
EN 50173-1:2011
TIA/EIA 568-B.2-10:2008

TERMINATION

Wire termination in accordance with T568A or T568B, colour coded

GENERAL PROPERTIES

 EMC shielded
 Cat./Class Cat.6_A / Class E_A

Article No.	Description	Colour (similar)	PU
417980	Patch panel CSA Plus 24/8 with 24x RJ45 jack Cat.6 _A (IEC)	RAL 7035	1 pc.
417985	Dust shutter for retrofitting (1 set = 24 pcs)	grey	1 set

Article No.	Accessories/Description	PU
1401624	Patch panel termination aid (1 set = 2 angular sheets)	1 set
1401609	LSA Plus termination tool for LSA punch down contacts	1 pc.

Additional assembly tools / accessories can be found in the chapter System Accessories.

RJ45 module shielded Cat. 6/E_AModule KS-T 1/8 tool-less Cat.6/E_ARJ45 module KS-T 1/8 tool-less Cat.6/E_A with dust shutter

PRODUCT INFORMATION

APPLICATION

For the transmission of digital and analogue voice-, video- and data signals. The module KS-T exceeds the IEC 60603-7-5 standard's requirements for Cat.6 connecting hardware up to 250 MHz. It also fulfils all Class E_A Channel requirements up to 500 MHz when combined with Cat.7 and Cat.7_A data cables. Therefore it is applicable for 10-Gigabit Ethernet transmissions in accordance with IEEE 802.3. Useable for Power over Ethernet Plus (PoE+) corresponding to IEEE 802.3at.

DESCRIPTION

Solid zinc die casting housing with mounting clip for installation in Keystone panels and outlets. Contact spring with phosphor bronze alloy, plated with gold. For connecting the wires a wire manager is used in combination with two integrated moveable housing wings for tool-less IDC connections. Only for cutting the wires a plane wire cutter is necessary. The 360° metal shield ensures a durable fully shielded environment. Strain relief via cable tie. The module is re-usable. Potential balancing possibility directly at the module when needed. With removable black dust shutter. Other colours available as accessories sets.

MECHANICAL PROPERTIES

Solid copper wire	0.50 mm (AWG 24) to 0.65 mm (AWG 22)
Re-connection	for AWG 22, AWG 23 and AWG 24 when using the same or bigger wire diameter
Stranded copper wire	CU 7702 flex (AWG 26/7), re-usable once
Diameter over insulation	0.70 mm to 1.40 mm (1.60 mm)
Temperature range	storing: -40°C to +70°C during installation: -10°C to +60°C in operation: -20°C to +60°C

STANDARDS

IEC 60603-7-5 (Cat.6 shielded, 250 MHz)
ISO/IEC 11801:2002 / Amd.2:2010
EN 50173-1:2011
TIA/EIA 568-B.2-10:2008

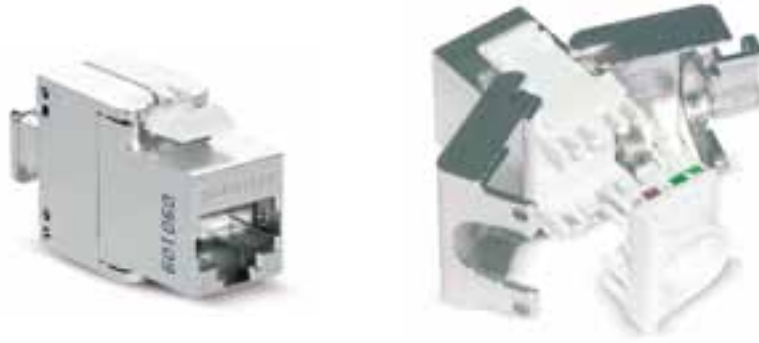
GENERAL CHARACTERISTICS

Termination	Wire guides with colour coding in accordance with T568-A or T568-B
M	Modular
Cat./Class	Cat.6 / Class E _A (Channel) when used together with Cat.7/7 _A data cables



Article No.	Description	Colour	PU
418060	RJ45 module KS-T 1/8 tool-less Cat.6/E _A shielded with dust shutter	black	10 pcs.
418062	Dust shutters for modules KS-T Cat.6/E _A and KS-T Plus Cat.6 _A (1 set = 10 pcs.)	white	1 set
418063	Dust shutters for modules KS-T Cat.6/E _A and KS-T Plus Cat.6 _A (1 set = 10 pcs.)	black	1 set
418064	Dust shutters for modules KS-T Cat.6/E _A and KS-T Plus Cat.6 _A (1 set = 10 pcs.)	yellow	1 set
418065	Dust shutters for modules KS-T Cat.6/E _A and KS-T Plus Cat.6 _A (1 set = 10 pcs.)	blue	1 set
418066	Dust shutters for modules KS-T Cat.6/E _A and KS-T Plus Cat.6 _A (1 set = 10 pcs.)	green	1 set
418067	Dust shutters for modules KS-T Cat.6/E _A and KS-T Plus Cat.6 _A (1 set = 10 pcs.)	red	1 set

Please find an up-to-date matrix showing which patch panels and outlets are suitable for the insertion of the respective Datwyler module on our homepage www.datwyler.com.

Subject to technical modification.

RJ45 module KS-TS 1/8 tool-less slimline Cat.6/E_A

PRODUCT INFORMATION

APPLICATION	For the transmission of digital and analogue voice-, video- and data signals. The module KS-TS is designed to shorten the termination and installation times. It exceeds the IEC 60603-7-5 standard's requirements for Cat.6 connecting hardware up to 250 MHz. It also fulfils all Class E _A Channel requirements up to 500 MHz when combined with Cat.7 and 7 _A data cables. Therefore it is applicable for 10-Gigabit Ethernet transmissions in accordance with IEEE 802.3. Useable for Power over Ethernet Plus (PoE+) corresponding to IEEE 802.3at.	
DESCRIPTION	Solid zinc die casting housing with mounting clip for installation in Keystone panels and outlets. Compact construction for high packing density in faceplates/outlets (up to 3 modules). Contact spring with phosphor bronze alloy, plated with gold. For connecting the wires a wire manager is used in combination with two integrated moveable housing wings for tool-less IDC connections. Only for cutting the wires a plane wire cutter is necessary. Strain relief via cable tie. The module is re-usable.	
MECHANICAL PROPERTIES	Solid copper wire Re-connection	0.50 mm (AWG 24) to 0.65 mm (AWG 22), for AWG 22, AWG 23 and AWG 24 when using the same or bigger wire diameter
	Stranded copper wire Diameter over insulation Temperature range	CU 7702 flex (AWG 26/7), re-usable once 0.7 mm to 1.4 mm (1.6 mm) storing: -40°C to +70°C during installation: -10°C to +60°C in operation: -10°C to +60°C
DIMENSIONS	Width x Height x Length	14,6 mm x 23,2 mm x 39,8 mm (slimline)
STANDARDS	IEC 60603-7-5 (Cat.6 shielded, 250 MHz) ISO/IEC 11801:2002 / Amd.2:2010 EN 50173-1:2011 TIA/EIA 568-B.2-10:2008	
GENERAL CHARACTERISTICS	Termination  M  Cat./Class	Wire guides with colour coding in accordance with T568-A or T568-B Modular Cat.6 / Class E _A (Channel) when used together with Cat.7/7 _A data cables

Article No.	Description	Colour	PU
418054	RJ45 module KS-TS 1/8 tool-less slimline Cat.6/E _A shielded	metal	10 pcs.

RJ45 module shielded Cat.6/E_AModule MS 1/8 Cat.6/E_A
for 10-Gigabit EthernetModule MS 1/8 Cat. 6/E_A shielded

Parallel pliers for easy termination

PRODUCT INFORMATION

APPLICATION

For the transmission of digital and analogue voice, video and data signals. The module MS 1/8 exceeds the IEC 60603-7-5 standard's requirements for Cat.6 connecting hardware up to 250 MHz. It also fulfils all Class E_A Channel requirements up to 500 MHz when combined with Cat.7 and 7_A data cables. Therefore it is applicable for 10-Gigabit Ethernet transmissions in accordance with IEEE 802.3. Useable for Power over Ethernet Plus (PoE+) corresponding to IEEE 802.3at.

DESCRIPTION

Compact zinc die casting housing.
360° screen connection with flat plug connector for potential balancing.
Integrated strain relief (cable tie).
High packing density due to very small dimension.
Stable mounting in patch panels and data outlets with a metal spring at the module.


MECHANICAL PROPERTIES

Solid copper wire	0.40 mm (AWG 26) to 0.65 mm (AWG 22)
Stranded copper wire	AWG 26/7 (with 7 bare stranded wires)
Re-connection	for AWG 22, AWG 23 and AWG 24 when using the same or bigger wire diameter
Diameter over insulation	0.70 mm to 1.40 mm (1.60 mm)
Temperature range	storing: -40°C to +70°C
	during installation: -10°C to +60°C
	in operation: -10°C to +60°C

STANDARDS

IEC 60603-7-5 (Cat.6 shielded, 250 MHz)
ISO/IEC 11801:2002 / Amd.2:2010
EN 50173-1:2011
TIA/EIA 568-B.2-10:2008

GENERAL CHARACTERISTICS

Termination	Wire guides with colour coding in accordance with T568-A and T568-B
 Cat./Class	Cat.6 / Class E _A (Channel) when used together with Cat.7/7 _A data cables

Article No.	Description	Colour	PU
185700	RJ45 module MS 1/8 Cat.6/E _A shielded,with colour code TIA 568-A	metal	10 pcs.
385700	RJ45 module MS 1/8 Cat.6/E _A shielded,with colour code TIA 568-A	metal	100 pcs.
1414227	RJ45 module MS 1/8 Cat.6/E _A shielded,with colour code TIA 568-B	metal	10 pcs
1412330	Paralleleinpresszange zur Montage der Module MS 1/8		1 pc.



Please find an up-to-date matrix showing which patch panels and outlets are suitable for the insertion of the respective Datwyler module on our homepage www.datwyler.com.

Subject to technical modification.



Patch panel CSP 24/8 Cat.6, shielded

PRODUCT INFORMATION

APPLICATION	For the transmission of digital and analogue voice and data signals. Especially suited for all Class E applications in accordance with EN 50173-1 and ISO/IEC 11801. Applicable for Power over Ethernet (PoE) / PoE+ in accordance with IEEE 802.3at.	
CONSTRUCTION	Housing:	Solid metal, front grey, similar to RAL 7035 (black on request); simultaneous cover attachment and shielding contact using two screws
	Boards:	3 base boards, each with 8 LSA terminal blocks and 8 RJ45 sockets
	Screen tap:	360° screening by ground clips
	Strain relief:	with tie wrap
	Dimensions:	19" / 1 U W x D x H = 482 mm x 96 mm x 44 mm
	A termination aid is available as an optional accessory. This consists of two angular sheets that can easily be fixed to the frame or cabinet and make the cable termination more comfortable.	
CONNECTION SYSTEM	Cable:	LSA Plus punch down contacts
	Socket:	Shielded RJ45 connector (Cat.6, 250 MHz)
APPLICABLE STANDARDS	IEC 60603-7-5 (Cat.6 shielded, 250 MHz) ISO/IEC 11801:2002 / Amd.2:2010 EN 50173-1:2011 TIA/EIA 568-B.2-10:2008	
TERMINATION	Wire termination in accordance with TIA-A and TIA-B, colour coded	
GENERAL PROPERTIES	 EMC shielded  Cat./Class Cat 6 / Class E	

Article No.	Description	Colour (similar)	PU
418006	Patch panel CSP 24/8 Cat.6 shielded	grey, RAL 7035	1 pc.
on request	Patch panel CSP 24/8 Cat.6 shielded	black, RAL 9005	1 pc.

Article No.	Accessories/Description	PU
1401624	Patch panel termination aid (1 set = 2 angular sheets)	1 set
185896	IDC termination tool 110 (recommended for outlets CSD, patch panels CSP and CUP, and for KS modules)	1 pc.
1401609	LSA Plus termination tool for LSA punch down contacts	1 pc.

Additional assembly tools / accessories can be found in the chapter System Accessories

RJ45 Keystone Coupler shielded

Cat.6 Link/Class E, 180 degree, straight



RJ45 Keystone Coupler (RJ45-RJ45), 180°, straight

PRODUCT INFORMATION

APPLICATION

Suitable for setting up Consolidation Points and cross-connect wirings.
For the transmission of all digital and analogue applications up to Cat.6 (Link) / Class E in accordance with ISO/IEC 11801, EN 50173-1 and EIA/TIA 568-B.2-10.

DESCRIPTION

Compact zinc die casting housing
Small depth
Straight design (180 degrees)
With keystone fixing applicable e.g. in patch panel KS 24x

STANDARDS

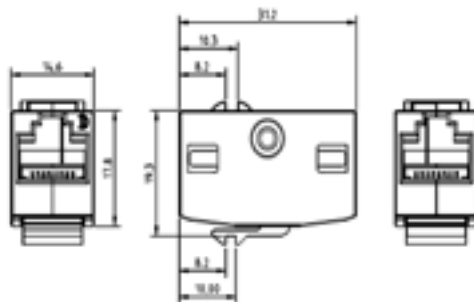
IEC 60603-7-5 (Cat.6 shielded, 250 MHz)
ISO/IEC 11801:2002 / Amd.2:2010
EN 50173-1:2011
TIA/EIA 568-B.2-10:2008

GENERAL CHARACTERISTICS

 M Modular
 Cat./Class Cat 6 / Class E

DIMENSIONS

Straight design (180 degrees)



Article No.	Description	Colour	PU
418056	RJ45 Keystone Coupler, Cat.6 Link/Class E, 180°, straight	metal	1 pc.

Please find an up-to-date matrix showing which patch panels and outlets are suitable for the insertion of the respective Datwyler module on our homepage www.datwyler.com.

Subject to technical modification.

RJ45 Feed-trough coupler shielded
 Cat.6 Link/Class E, 90 degree, angled, and 180 degree, straight



Side 1:
MS fitting

Side 2:
Keystone fitting



Side 1:
MS fitting



Side 2:
Keystone fitting

PRODUCT INFORMATION

APPLICATION

Suitable for setting up Consolidation Points and Cross-Connect wirings.
 For the transmission of all digital and analogue applications up to Cat.6 (Link) / Class E in accordance with ISO/IEC 11801, EN 50173-1 and EIA/TIA 568-B.2-10.


DESCRIPTION

Compact zinc die casting housing.
 Angled model with small depth.
 Two types of mounting in one coupling:
 side 1 with MS fixing (straight model e.g. for usage in patch panel MPS 24x),
 side 2 with Keystone fixing (straight model e.g. for usage in patch panel KS 24x).
 Manufacturer: BTR.

STANDARDS

IEC 60603-7-5 (Cat.6 shielded, 250 MHz)
 ISO/IEC 11801:2002 / Amd.2:2010
 EN 50173-1:2011
 TIA/EIA 568-B.2-10:2008

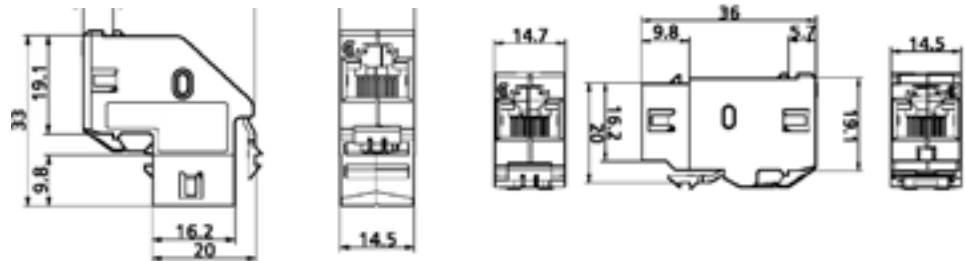
GENERAL CHARACTERISTICS

 M Modular
 Cat./Class Cat.6 (Link) / Class E

DIMENSIONS

Angled design (90 degrees)

Straight design (180 degrees)



Article No.	Description	Colour	PU
417445	RJ45 feed-trough coupler Cat.6 Link/Class E, 90°, angled	metal	1 pc.
417446	RJ45 feed-trough coupler Cat.6 Link/Class E, 180°, straight	metal	1 pc.

Please find an up-to-date matrix showing which patch panels and outlets are suitable for the insertion of the respective Datwyler module on our homepage www.datwyler.com.

Subject to technical modification.

RJ45 module shielded Cat.5e

Module KS-T 5 1/8 tool-less Cat.5e for 1GBase-T



Module KS-T 5 1/8 tool-less Cat.5e shielded

PRODUCT INFORMATION

APPLICATION

KS-T 5 1/8 tool-less is a module that is designed to shorten the termination and installation time. For the transmission of digital and analogue voice, video and data signals. Applicable for the transmission of all applications up to Class D (e.g. 1GBase-T).

DESCRIPTION

Solid zinc die casting housing with mounting clip for installation in Keystone panels and outlets. Contact spring with phosphor bronze alloy, plated with gold. For connecting the wires a wire manager is used in combination with two integrated moveable housing wings for tool-less IDC connections. Only for cutting the wires a plane wire cutter is necessary. The 360° metal shield ensures a durable fully shielded environment, protects the module and guarantees stable electric performance. Strain relief via cable tie. The module is re-usable.



MECHANICAL PROPERTIES

Solid copper wire	0.50 mm (AWG 24) to 0.65 mm (AWG 22)
Re-connection	for AWG 22, AWG 23 and AWG 24 when using the same or bigger wire diameter
Stranded copper wire	AWG 26/7, re-usable once
Diameter over insulation	0.7 mm to 1.4 mm (1.6 mm)
Temperature range	storing: -40°C to +70°C
	during installation: -10°C to +60°C
	in operation: -10°C to +60°C

STANDARDS

IEC 60603-7-3 (Cat.5 shielded, 100 MHz)
ISO/IEC 11801:2002 / Amd.2:2010
EN 50173-1:2011
TIA/EIA 568-B.2-10:2008

GENERAL CHARACTERISTICS

Termination	Wire guides with colour coding in accordance with T568-A or T568-B
 M	Modular
 Cat./Class	Cat.5/5e / Class D

Article No.	Description	Colour	PU
418055	RJ45 module KS-T 5 1/8 tool-less Cat.5e shielded	metal	10 pcs.

Please find an up-to-date matrix showing which patch panels and outlets are suitable for the insertion of the respective Datwyler module on our homepage www.datwyler.com.

Subject to technical modification.



RJ45 Module KU-T 1/8 tool-less unshielded Cat.6 or Cat.5e, in white or black

PRODUCT INFORMATION

APPLICATION	For the transmission of digital and analogue voice, video and data signals. Suitable for all Class D applications respectively Class E Channels in accordance with ISO/IEC 11801, EN 50173-1 and TIA/EIA 568-B.2-10.	
DESCRIPTION	Housing made of high-impact, flame retardant compound, UL94V-0 rated, with Keystone mounting clip. Contact spring with phosphor bronze alloy, plated with gold. IDC made of phosphor bronze alloy.	
	Information: Suitable for the same faceplates and surface mount boxes as Datwyler's shielded Keystone Modules (KS-T).	
MECHANICAL PROPERTIES	Solid copper wire Re-connection	0.40 mm (AWG 26) to 0.65 mm (AWG 22) for AWG 22, AWG 23 and AWG 24 when using the same or bigger wire diameter
	Stranded copper wire Diameter over insulation Temperature range	AWG 26 (with 7 bare stranded wires), re-usable once 0.70 mm to 1.40 mm (1.60 mm) storing: -40°C to +70°C during installation: -10°C to +60°C in operation: -20°C to +60°C
STANDARDS	IEC 60603-7-2 (Cat.5 unshielded, 100 MHz) IEC 60603-7-4 (Cat.6 unshielded, 250 MHz) ISO/IEC 11801:2002/ Amd.2:2010 EN 50173-1:2011 TIA/EIA 568-B.2-10:2008	
GENERAL CHARACTERISTICS	Termination ■ Cat./Class ■ Cat./Class	Wire guides with colour coding in accordance with T568-A and B, clearly marked on the wire manager Cat.5e / Class D Cat.6 / Class E

Article No.	Description	Colour	PU
418070	RJ45 module KU-T 1/8 Cat.6, unshielded, tool-less	white	10 pcs.
418071	RJ45 module KU-T 1/8 Cat.6, unshielded, tool-less	black	10 pcs.
418072	RJ45 module KU-T 1/8 Cat.5e, unshielded, tool-less	white	10 pcs.
418073	RJ45 module KU-T 1/8 Cat.5e, unshielded, tool-less	black	10 pcs.

Please find an up-to-date matrix showing which patch panels and outlets are suitable for the insertion of the respective Datwyler module on our homepage www.datwyler.com.

Subject to technical modification.

RJ45 module unshielded Cat.6

Module MU 1/8 Cat.6



RJ45 module MU 1/8 Cat.6 unshielded



Parallel pliers for easy termination

PRODUCT INFORMATION

APPLICATION For the transmission of digital and analogue voice, video and data signals. Especially suitable for all Class E applications in accordance with ISO/IEC 11801, EN 50173-1.

DESCRIPTION Compact plastic housing.
Very easy termination due to a wire manager and IDC connections.
Integrated strain relief (cable tie - not included).
High packing density due to very small dimensions.


Information:
Suitable for the same faceplates and surface mount boxes as Datwyler's shielded MS modules.

MECHANICAL PROPERTIES

Solid copper wire	0.40 mm (AWG 26) to 0.65 mm (AWG 22)
Stranded copper wire	AWG 26/7 (with 7 bare stranded wires)
Re-connection	for AWG 22, AWG 23 and AWG 24 when using the same or bigger wire diameters
Diameter over insulation	0.70 mm to 1.40 mm (1.60 mm)
Temperature range	storing: -40°C to +70°C
	during installation: -10°C to +60°C
	in operation: -10°C to +60°C

STANDARDS IEC 60603-7-4 (Cat.6 unshielded, 250 MHz)
ISO/IEC 11801:2002/ Amd.2:2010
EN 50173-1:2011
TIA/EIA 568-B.2-10:2008

GENERAL CHARACTERISTICS

Termination	Colour code for wire termination in accordance with T568-A or B, clearly marked on cable manager
 Cat./Class	Cat.6 / Class E

Article No.	Description	Colour	PU
185750	RJ45 module MU 1/8 Cat.6, unshielded, colour code T568-A	white	10 pcs.
185751	RJ45 module MU 1/8 Cat.6, unshielded, colour code T568-B	white	10 pcs.


Please find an up-to-date matrix showing which patch panels and outlets are suitable for the insertion of the respective Datwyler module on our homepage www.datwyler.com.

Subject to technical modification.



Patch panel CU 24/8 Cat.6, unshielded

PRODUCT INFORMATION

APPLICATION	For the transmission of digital and analogue voice, video and data signals. Especially suited for all Class E applications in accordance with EN 50173-1 and ISO/IEC 11801. Applicable for Power over Ethernet (PoE) / PoE+ in accordance with IEEE 802.3at.	
CONSTRUCTION	Housing:	Solid metal, front black, similar RAL 9005
	Boards:	4 base boards, each with 6 LSA Plus terminal blocks and 6 RJ45 sockets unshielded
	Strain-relief:	with tie wrap
	Dimensions:	19" / 1 U , depth 114 mm
	A termination aid is available as an optional accessory. This consists of two angular sheets that can easily be fixed to the frame or cabinet and make the cable termination more comfortable.	
CONNECTION SYSTEM	Cable:	LSA Plus punch down contacts for copper wires AWG26 up to AWG22, contacts re-connectable 50 times at the minimum
	Socket:	Unshielded RJ45 connector (Cat.6, 250 MHz), flexible circuit board, made of Polyamid, with mechanical spring elements (patented)
APPLICABLE STANDARDS	IEC 60603-7-4 (Cat.6 unshielded, 250 MHz) ISO/IEC 11801:2002/ Amd.2:2010 EN 50173-1:2011 TIA/EIA 568-B.2-10:2008	
TERMINATION	Wire termination in accordance with TIA-A and TIA-B, colour coded	
GENERAL PROPERTIES	 Cat./Class	Cat 6 / Class E

Article No.	Description	Colour (similar)	PU
414727	Patch panel CU 24/8 with 24x RJ45 jack unshielded	RAL 9005	1 pc.

Article No.	Accessories/Description	PU
1401624	Patch panel termination aid (1 set = 2 angular sheets)	1 set
1401609	LSA Plus termination tool for LSA punch down contacts	1 pc.

Additional assembly tools / accessories can be found in the chapter System Accessories

Patch panel CUP 24/8 unshielded Cat.6 with 24 RJ45 jacks



Patch panel CUP 24/8 Cat.6, unshielded

PRODUCT INFORMATION

APPLICATION

For the transmission of digital and analogue voice, video and data signals. Especially suited for all Class E applications in accordance with EN 50173-1 and ISO/IEC 11801. Applicable for Power over Ethernet (PoE) / PoE+ in accordance with IEEE 802.3at.

CONSTRUCTION

Housing: Solid metal, black, similar to RAL 9005
Boards: Three base boards each with LSA plus terminal blocks and 8 x RJ45 sockets unshielded
Strain relief: with tie wrap
Dimensions: 19" / 1 U
W x D x H = 482 mm x 96 mm x 44 mm

A termination aid is available as an optional accessory. This consists of two angular sheets that can easily be fixed to the frame or cabinet and make the cable termination more comfortable.

CONNECTION SYSTEM

Cable: LSA Plus punch down contacts
Socket: Shielded RJ45 connector (Cat.6, 250 MHz)

APPLICABLE STANDARDS

IEC 60603-7-4 (Cat.6 unshielded, 250 MHz)
ISO/IEC 11801:2002/ Amd.2:2010
EN 50173-1:2011
TIA/EIA 568-B.2-10:2008

TERMINATION

Wire termination in accordance with TIA-A and TIA-B, colour coded

GENERAL PROPERTIES

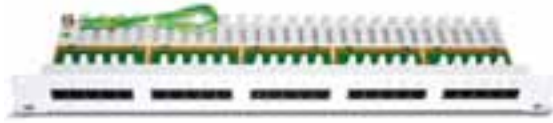
 Cat./Class Cat 6 / Class E

Article No.	Description	Colour (similar)	PU
418005	Patchpanel CUP 24/8 Cat.6 unshielded	black, RAL 9005	1 pc.

Article No.	Accessories/Description	PU
1401624	Patch panel termination aid (1 set = 2 angular sheets)	1 set
185896	IDC termination tool 110 (recommended for outlets CSD, patch panels CSP and CUP, and for KS modules)	1 pc.
1401609	LSA Plus termination tool for LSA punch down contacts	1 pc.

Additional assembly tools / accessories can be found in the chapter System Accessories.

Phone panels CU 25/4 and CU 50/4 unshielded Cat.3 with 25 or 50 RJ45 jacks



Phone panel CU 25/4 Cat.3



Phone panel CU 50/4 Cat.3

PRODUCT INFORMATION

APPLICATION

For the transmission of digital (ISDN) and analogue voice signals. Especially suitable for all Class C applications in accordance with EN 50173-1 and ISO/IEC 11801. The patch panels support cables up to 50 or 100 pairs (telephone cables). A maximum of four wires may be connected to one RJ45 socket.

A termination aid is available as an optional accessory. This consists of two angular sheets that can easily be fixed to the frame or cabinet and make the cable termination more comfortable. For more accessories see below.

CONSTRUCTION

Housing: Metal, grey, similar to RAL 7035
Dimensions: 19" / 1 U, W x D x H = 482 mm x 129 mm x 44 mm

CONNECTION SYSTEM

Cable: IDC termination
Socket: Unshielded RJ45 connector (EN 60603-7)

APPLICABLE STANDARDS

IEC 60603-7 (RJ45 basic standard, unshielded)
ISO/IEC 11801:2002 / Amd.2:2010
EN 50173-1:2011
TIA/EIA 568-B.2-10:2008

TERMINATION

2-pairs to PIN 3-6, 4-5

ACCESSORIES

Cable duct for easy handling of cable pairs (slotted)



Article No.	Description	Colour (similar)	PU
418000	Phone panel CU 25/4 with 25x RJ45 jacks, Cat.3, metal chassis	grey, RAL 7035	1 pc.
418001	Phone panel CU 50/4 with 50x RJ45 jacks, Cat.3, metal chassis	grey, RAL 7035	1 pc.
418002	Phone panel CU 25/4 with 25x RJ45 jacks, Cat.3, metal chassis	black, RAL 9005	1 pc.
418003	Phone panel CU 50/4 with 50x RJ45 jacks, Cat.3, metal chassis	black, RAL 9005	1 pc.

Article No.	Accessories/Description	PU
1401624	Patch panel termination aid (1 set = 2 angular sheets)	1 set
1401609	LSA Plus termination tool for LSA punch down contacts	1 pc.
185896	IDC termination tool 110	1 pc.
418012	Cable duct for easy handling of cable pairs (slotted)	1 pc.

COPPER FACEPLATES

UP-K Faceplate 1x, 2x, 3x

flush / duct mounted

for 1, 2 or 3 RJ45 modules with Keystone fitting, angled outlet

 GERMAN STANDARD



1-port faceplate, angled outlet



2-port faceplate, angled outlet



3-port faceplate, angled outlet

Similar figures

PRODUCT INFORMATION

DESCRIPTION

Faceplates applicable for the installation of 1, 2 or 3 modules with Keystone fitting. The modules are easily fitted into the faceplates. Integrated dust shutters. The central plate has a labelling field with transparent cover. Delivered without modules.

Suitable for the following Datwyler modules:




- PS-GG45 7_A 4P shielded
- RJ45 module KS-T Plus 1/8 shielded
- RJ45 module KS-TS 1/8 shielded
- RJ45 module KS-T 1/8 shielded
- RJ45 module KU-T 1/8 unshielded

DIMENSIONS

Faceplates	German standard
Mounting plate	70 x 70 mm
Central plate	50 x 50 mm
Cover frame	80 x 80 mm

COLOUR

similar RAL 9010, white

Article No.		Description	Colour (similar)	PU
185866		UP-K Faceplate for 1 module with Keystone snap-in fitting, angled	white, RAL 9010	1 pc.
185867		UP-K Faceplate for 2 modules with Keystone snap-in fitting, angled	white, RAL 9010	1 pc.
185869		UP-K Faceplate for 3 modules with Keystone snap-in fitting, angled	white, RAL 9010	1 pc.

UP Faceplate 2x
flush mounted

for 2 RJ45 modules with Keystone fitting, straight outlet

 GERMAN STANDARD

2-port faceplate with straight outlet



Blank cover for unused openings

Similar figures

PRODUCT INFORMATION

DESCRIPTION

German standard faceplate for wall mounting.
The snap-in modules are easily fitted into the faceplate.
The central plate has a labelling field with transparent cover.
Easy to assemble.
Delivered without Keystone modules.

Suitable for the following Datwyler modules:


- PS-GG45 7_A 4P shielded
- RJ45 module MS-K Plus 1/8 shielded
- RJ45 module KS-T Plus 1/8 shielded
- RJ45 module KS-TS 1/8 shielded
- RJ45 module KS-T 1/8 shielded
- RJ45 module KU-T 1/8 unshielded

DIMENSIONS

Faceplates	German standard
Central plate	50 x 50 mm
Cover frame	80 x 80 mm

COLOUR

similar RAL 9010, white

Article No.	Description	Colour (similar)	PU
185861 	UP Faceplate for 2 RJ45 Keystone modules, straight (delivery without modules)	white, RAL 9010	1 pc.

Article No.	Accessories/Description	Colour (similar)	PU
418010	Blank cover for Keystone openings	white	10 pcs.

COPPER FACEPLATES

UP-K Faceplate 2x, 3x duct mounted & floor boxes

for 2 and 3 RJ45 modules MS-K, angled

 GERMAN STANDARD



Faceplate RAL 1013
for 2 or 3 modules MS-K 1/8,
with central plate, without cover frame



Faceplate RAL 9010
for 2 or 3 modules MS-K 1/8,
with central plate, without cover frame



Fig.5
cover frame 1-fold
for faceplates

PRODUCT INFORMATION

DESCRIPTION

Faceplates for the installation of 2 and 3 RJ45 modules MS-K 1/8 Cat.6/E_A shielded.

Suitable for the flush and duct mounting and for floor box systems.

In case of an installation in a flush mounted cup please use the 2-port faceplates (Figure 1 and 3)!

Mounting frame made of zinc die casting - offers possibility for connection to equipotential bonding.

The snap-in modules are easily fitted into the faceplates.

Unused ports are covered with blank covers (metal) that can be removed.

The central plate has a labelling field with transparent cover.

The pure white versions (Figure 3 and 4) are supplied with pure white dust shutters to enable the replacement of the grey shutters at the installed modules.

The mounting frames of the 2-port faceplates (Figure 1 and 3) can be used together with all customary TAE central plates (for multiple designs).


Delivery without modules.

Suitable for the following Datwyler modules:

- RJ45 module MS-K Plus 1/8 shielded
- RJ45 module KS-TS 1/8 shielded

DIMENSIONS

Faceplates	
Mounting dimension	60 mm
Central plate	50 x 50 mm
Cover frame	80 x 80 mm

Article No.	Fig.	Description	Colour (similar)
440012		- UP-K Faceplate for 2x MS-K 1/8, angled (delivery without central plate, cover frame, modules)	
440013		- UP-K Faceplate for 3x MS-K 1/8, angled (delivery without central plate, cover frame, modules)	
440027		3 UP-K Faceplate for 2x MS-K 1/8, angled, with central plate and 2 dust shutters (without cover frame, modules)	pure white, RAL 9010
440015		1 UP-K Faceplate for 2x MS-K 1/8, angled, with central plate (delivery without cover frame, modules)	oyster white, RAL 1013
440017		2 UP-K Faceplate for 3x MS-K 1/8, angled, with central plate (delivery without cover frame, modules)	oyster white, RAL 1013
440028		4 UP-K Faceplate for 3x MS-K 1/8, angled, with central plate and 3 dust shutters (without cover frame, modules)	pure white, RAL 9010

Article No.	Fig.	Accessories/Description	Colour (similar)
440001	-	RJ45 module MS-K 1/8 Cat.6/E _A shielded	
1400830	5	Cover frame 1-fold	pure white, RAL 9010
1401630	5	Cover frame 1-fold	oyster white, RAL 1013
1403924	-	Cover frame 2-fold	pure white RAL 9010
1403700	-	Cover frame 2-fold	oyster white RAL 1013

MS-K-Anschlussdose 0412/e

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

UP Faceplate 2x
flush mounted

for 2 RJ45 modules, straight outlet

 GERMAN STANDARD



2-port faceplate with mounting frame and central plate, without cover frame



Cover frame 80 x 80 mm



Example: Faceplate complete with central plate, cover frame and one module

Similar figures

PRODUCT INFORMATION

DESCRIPTION

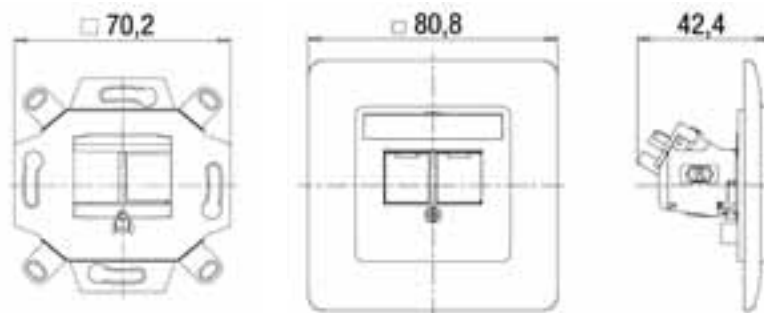
Ideally suitable for flush mounting with constricted space, for instance in a flush mount cup. The mounting frame consists of zinc die casting. The snap-in modules are easily fitted into the faceplates. Unused ports are covered with blanking elements (metal) that can be removed. The central plate has a labelling field with transparent cover. The mounting frame can be used together with all customary TAE central plates (for multiple designs). The modules are not part of the delivery.

Suitable for the following Datwyler Modules:

- RJ45 module MS-K Plus 1/8 shielded
- RJ45 module KS-T Plus 1/8 shielded
- RJ45 module KS-TS 1/8 shielded
- RJ45 module KS-T 1/8 shielded
- RJ45 module KU-T 1/8 unshielded

DIMENSIONS

Faceplate	German standard
Central plate	50 x 50 mm
Cover frame	80 x 80 mm



COLOUR

similar RAL 9010, white

Article No.	Description	Colour (similar to)	PU
440020 	UP Faceplate for 2x RJ45 module, straight (delivery without modules)	white, RAL 9010	1 pc.
1400830	Cover frame 80 x 80 mm	white, RAL 9010	1 pc.

Article No.	Accessories/Description	Colour (similar)
417985	Dust shutters MS-K for reparation (1 set = 25 pcs.)	grey
417986	Dust shutters MS-K for reparation (1 set = 25 pcs.)	white, RAL 9010

MSK-Anschlussdose 0412/e

COPPER FACEPLATES

AP Surface Mount Box 2x, 4x, 6x surface mounted

for 2, 4 or 6 modules with Keystone fitting, straight



Surface Mount Box
for 2 or 4 Keystone modules
without dust shutters

Mounting plate

Blank cover for
unused ports

Surface Mount Box
for 2, 4 or 6 Keystone modules
with dust shutters

PRODUCT INFORMATION

DESCRIPTION

Surface Mount Box series made of plastic for fast surface mounted installations of up to 2, 4 or 6 modules with Keystone fitting.

All boxes have a labelling field.

The version 2x and 4x are available with or without integrated dust shutters.

All shielded and unshielded Keystone modules tool-less as well as the PS-GG45 7_A module (with clip) are easily fitted into the boxes. When mounting the tool-less modules a cutout in the bottom of the box must be removed.

Delivery without modules.

Suitable for the following Datwyler modules:

- PS-GG45 7_A 4P shielded
- RJ45 module KS-T Plus 1/8 shielded
- RJ45 module KS-TS 1/8 shielded
- RJ45 module KS-T 1/8 shielded
- RJ45 module KU-T 1/8 unshielded

DIMENSIONS

Surface Mount Box for 2 modules: 68 x 65 x 30 mm

Surface Mount Box for 4 modules: 118 x 85 x 30 mm

Surface Mount Box for 6 modules: 173 x 85 x 30 mm

COLOUR

similar RAL 9010, white

ACCESSORIES

Mounting plate 65 x 42 mm, galvanised sheet,
with cable ties to fix the plate
and with adhesive strip to fix the AP box.

Article No.	Description	Colour (similar to)	PU
418035	AP Surface Mount Box for 2 Keystone modules (delivery without modules)	RAL 9010	1 pc.
418036	AP Surface Mount Box for 4 Keystone modules (delivery without modules)	RAL 9010	1 pc.
418037	AP Surface Mount Box for 2 Keystone modules with dust shutters (delivery without modules)	RAL 9010	1 pc.
418038	AP Surface Mount Box for 4 Keystone modules with dust shutters (delivery without modules)	RAL 9010	1 pc.
418039	AP Surface Mount Box for 6 Keystone modules with dust shutters (delivery without modules)	RAL 9010	1 pc.

Article No.	Accessories/Description	Colour (similar)	PU
418010	Blank cover for Keystone openings (1 set = 10 pcs.)	white	1 set
417486	Mounting plate for AP Surface mount boxes with adhesive strip and cable ties		1 pc.

Faceplate French Standard

for 1 or 2 Keystone modules

straight or angled



FRENCH STANDARD

Cover frame French Standard
80 x 80 mmBezel 1 port
45 x 45 mmBezel 1 port slim
45 x 22,5 mmBezel 2 ports angled
45 x 4 5 mm

PRODUCT INFORMATION

DESCRIPTION

Faceplate for the installation in Module 45 Systems, e.g. for standard Legrand inserts (bezels) with straight outlet.

Compatible with all Datwyler Keystone modules.

All Datwyler Keystone modules (FTP, UTP) are easily fitted into the inserts.

Made of flame retardant material.

With integrated dust shutters and labelling fields.

Delivery without modules.

Suitable for the following Datwyler modules:

- PS-GG45 7_A 4P shielded
- RJ45 module KS-T Plus 1/8 shielded
- RJ45 module MS-C6_A 1/8 180°-K (Keystone) shielded
- RJ45 module KS-TS 1/8 shielded

DIMENSIONS

1 Port	45 x 45 mm	(French Standard)
1 Port (slim)	45 x 22,5 mm	(French Standard)
2 Ports	45 x 45 mm	(French Standard)

COLOUR

bright white

APPLICATIONS



Article No.	Description	Colour (similar)	PU
418030	Keystone Bezel 1 Port 45 x 45 mm straight	bright white	1 pc.
418031	Keystone Bezel 1 Port slim 45 x 22,5 mm straight	bright white	1 pc.
418032	Keystone Bezel 2 Ports 45 x 45 mm straight	bright white	1 pc.
418033	Keystone Bezel 2 Ports, 45 x 45 mm angled	bright white	1 pc.
418034	Faceplate French Standard for Bezel 45 x 45 mm	bright white	1 pc.

COPPER FACEPLATES

UP-K Faceplate 1x, 2x

flush / duct mounted

for 1 or 2 RJ45 modules with Keystone fitting, angled outlet

 BRITISH STANDARD

Similar figures



1-port faceplate, angled outlet



2-port faceplate, angled outlet

PRODUCT INFORMATION

DESCRIPTION

Applicable for the installation of 1 respectively 2 Keystone modules Cat.6 or Cat.5e, screened or unshielded.
The Keystone modules are easily fitted into the faceplates.
Integrated dust shutters.
The central plate has a labelling field with transparent cover.
Delivered without Keystone modules.

Suitable for the following Datwyler Modules:



- PS-GG45 7_A 4P shielded
- RJ45 module KS-T Plus 1/8 shielded
- RJ45 module KS-TS 1/8 shielded
- RJ45 module KS-T 1/8 shielded
- RJ45 module KU-T 1/8 unshielded

DIMENSIONS

Faceplates British standard
Cover frame 86 x 86 mm

COLOUR

similar RAL 9010, white

Article No.		Description	Colour (similar to)	PU
185862		UP-K Faceplate for 1x RJ45 Keystone module, angled (delivery without module)	white, RAL 9010	1 pc.
185863		UP-K Faceplate for 2x RJ45 Keystone module, angled (delivery without modules)	white, RAL 9010	1 pc.

**UP Faceplate 1x, 2x
flush mounted**

for 1 or 2 RJ45 modules with Keystone fitting, straight outlet



1-port faceplate with straight outlet



2-port faceplate with straight outlet

Similar figures

PRODUCT INFORMATION

DESCRIPTION

Applicable for the installation of 1 respectively 2 Keystone modules, screened or unshielded. The Keystone modules are easily fitted into the faceplates. Fitted with integrated dust shutters. Supplied with labelling strips. Delivered without Keystone modules.

Suitable for the following Datwyler modules:

- PS-GG45 7_A 4P shielded
- RJ45 module KS-T Plus 1/8 shielded
- RJ45 module KS-TS 1/8 shielded
- RJ45 module KS-T 1/8 shielded
- RJ45 module KU-T 1/8 unshielded

DIMENSIONS

Faceplates	British standard
Central plate	50 x 50 mm (2 x 25 x 50 mm)
Cover frame	86 x 86 mm

COLOUR

similar RAL 9010, white

Article No.	Description	Colour (similar to)	PU
185864	UP Faceplate for 1x RJ45 Keystone module, straight (delivery without module)	white, RAL 9010	1 pc.
185865	UP Faceplate for 2x RJ45 Keystone module, straight (delivery without modules)	white, RAL 9010	1 pc.

COPPER FACEPLATES

UP-K Faceplate 2x, 3x

duct mounted & floor boxes

for 2 or 3 RJ45 modules 180° MS or MS-C6_A

 GERMAN STANDARD



Fig. 1: 2-port faceplate
for 2 modules (without cover frame)



Fig. 2: 3-port faceplate
for 3 modules (without cover frame)



Fig. 3: Cover frame
80 x 80 mm

PRODUCT INFORMATION

DESCRIPTION

German standard faceplate 2x and 3x, angled, for the installation of 2 or 3 RJ45 modules MS or MS-C6_A (rotated 180°).

Duct mounted installation or installation in floor boxes.

Due to the modular design these faceplates can be used in combination with many faceplate design families.

The snap-in modules can be easily fitted into the faceplates.

Integrated dust shutters.

The central plate has a labelling field with transparent cover.





Delivery without cover frame and without modules.





Suitable for the following Datwyler modules:

- RJ45 module MS 1/8 Cat.6/E_A shielded
- RJ45 module MU 1/8 Cat.6 unshielded
- RJ45 module MS-C6_A 1/8 Cat. 6_A shielded

DIMENSIONS

Faceplates	
Mounting frame	70 x 70 mm
Central plate	50 x 50mm
Cover frame	80 x 80mm

Article No.	Fig.	Description	Colour (similar)	PU
1411748	 1	UP-K Duct mounted faceplate for 2 modules MS/MU 1/8 (delivery without cover frame, modules)	pure white, RAL 9010	1 pc.
1411747	 -	UP-K Duct mounted faceplate for 2 modules MS/MU 1/8 (delivery without cover frame, modules)	oyster white, RAL 1013	1 pc.
1411750	 2	UP-K Duct mounted faceplate for 3 Modules MS/MU 1/8 (delivery without cover frame, modules)	pure white, RAL 9010	1 pc.
1411749	 -	Dush mounted faceplate for 3 modules MS/MU 1/8 (delivery without cover frame, modules)	oyster white, RAL 1013	1 pc.

Article No.	Fig.	Accessories/Description	Colour (similar)	PU
185700	-	RJ45 module MS 1/8 Cat.6/E _A shielded T568-A	metal	10 pcs.
1414227	-	RJ45 module MS 1/8 Cat.6/E _A shielded T568-B	metal	10 pcs.
309250	-	RJ45 module MS-C6 _A 1/8 Cat.6 _A (IEC) 180° - K (Keystone)	metal	10 pcs.
1400830	 3	Cover frame 1-port 80 x 80 mm	pure white, RAL 9010	1 pc.
1401630	 -	Cover frame 1-port 80 x 80 mm	oyster white, RAL 1013	1 pc.
1403924	 -	Cover frame 2-port 150 x 80 mm	pure white, RAL 9010	1 pc.
1403700	 -	Cover frame 2-port 150 x 80 mm	oyster white, RAL 1013	1 pc.

MS Anschlussd. Stand. GS 0412/e

**UP / UP-K Faceplate 2x, 3x
flush / duct mounted**

for 2 or 3 RJ45 modules MS 1/8
design: compatible with Edizio



Fig.1: 2-port faceplate for 2 modules MS 1/8 (with add-on frame 60 x 60 mm without cover frame)



Fig.2: 3-port faceplate for 3 modules MS 1/8 (with add-on frame 60 x 60 mm without cover frame)



Fig.3: Cover frame Edizio due 88 x 88 mm



Fig.4: Dust covers MS

PRODUCT INFORMATION

DESCRIPTION

Swiss standard faceplates 2x and 3x, for the installation of 2 or 3 RJ45 modules MS 1/8. Compatible with Edizio. For flush and duct mounted installation. The snap-in modules can be easily fitted into the faceplates. Integrated dust shutters, which also serve as covers for unused ports. Delivery without cover frame and without modules.

Suitable for the following Datwyler modules:

- RJ45 module MS-C6_A 1/8 Cat.6_A (IEC) shielded
- RJ45 module MS 1/8 Cat.6/E_A shielded
- RJ45 module MU 1/8 Cat.6 unshielded

DIMENSIONS

UP / UP-K Faceplates (Fig. 1 and 2):
Mounting frame 70 x 70 mm
Front plate (central plate with distance frame) 60 x 60 mm



ACCESSORIES

Cover frame Edizio due (Fig. 3):
Dimensions 88 x 88 mm

Article No.	Fig.	Description	Colour (similar)	PU
185688	1	UP-K Duct mounted faceplate, compatible with Edizio for 2 modules MS/MU 1/8 (delivery without cover frame, modules)	white RAL 9016	1 pc.
185691	1	UP-K Duct mounted faceplate, compatible with Edizio for 2 modules MS/MU 1/8 (delivery without cover frame, modules)	white RAL 9016	1 pc.

Article No.	Fig.	Accessories/Description	Colour (similar)	PU
185732	3	Cover frame Edizio due	white RAL 9016	
185715	-	Labeling sheets A4, for UP/AP faceplates	white	
190937	4	Dust cover MS	yellow	10 pcs.
190938	4	Dust cover MS	blue	10 pcs.
190939	4	Dust cover MS	green	10 pcs.
190940	4	Dust cover MS	red	10 pcs.

COPPER FACEPLATES

UP / UP-K Faceplate 2x (round)

flush / duct mounted

for 2 modules MS 1/8 or PS-TERA, round, design: Feller

 SWISS STANDARD



UP Faceplate MPS 2x
(flush mounted)



UP-K Faceplate MPS 2x
(duct mounted)



Blank cover MS

PRODUCT INFORMATION

DESCRIPTION

Modular, round faceplates for the installation of 2 PS-TERA or MS 1/8 modules, comprising central plate, mounting frame and cover frame. Delivery without modules.

APPLICATION



Design: Feller standard

Flush mounted: with cover frame 86 x 86 mm

Duct mounted: with mounting frame 70 x 70 mm (without cover frame)

Suitable for the following Datwyler modules:

- RJ45 module MS-C6_A 1/8 Cat.6_A (IEC) shielded
- RJ45 module MS 1/8 shielded
- RJ45 module MU 1/8 unshielded
- PS-TERA 4P shielded
- Blank cover MS for covering unused openings

Article No.		Description	Colour	PU
185764		UP Flush mounted faceplate, Feller, for 2x PS 1/8 Cat. 7 _A / 2x MS 1/8 Cat.6, with cover frame	white	1 pc.
185765		UP-K Duct mounted faceplate, Feller, for 2x PS 1/8 Cat. 7 _A / 2x MS 1/8 Cat.6 (without cover frame)	white	1 pc.

Article No.	Accessories/Description	Colour	PU
190977	Blank cover for covering unused MS openings	light grey	10 pcs.
309213	Blank cover for covering unused MS openings	white	10 pcs.

Feller-Anschlussdose RA-CHS-0412/e

AP / UP / UP-K Faceplate 2x (Edizio due)

surface / flush / duct mounted

for 2 modules MS 1/8, MS-C6_A or PS-TERA, angled, design: Feller

UP-K faceplate (duct mounted installation without cover frame, with mounting frame 70 x 70 mm)



UP faceplate (flush mounted installation with cover frame 88 x 88 mm)



AP faceplate (surface mounted installation with housing 88 x 88 x 67 mm)



Blank cover MS

PRODUCT INFORMATION

DESCRIPTION

Modular faceplate system Edizio Feller with angled outlets for the installation of up to 2 modules MS 1/8, MS-C6_A or PS-TERA, comprising mounting frame, central plate Edizio with openings, cover frame resp. surface mounted housing. Delivery without modules.

APPLICATION

Design Edizio without 88 x 88 mm cover frame for flush mounted installation in Thealit ducts with blind technology (UP-K).
Design Edizio with 88 x 88 mm cover frame for flush mounted installation (UP).
Design Edizio central plate with openings in 88 x 88 x 67 mm housing on solid mounting frame for wall mounted installation.

Suitable for the following Datwyler modules:

- RJ45 module MS-C6_A 1/8 Cat.6_A (IEC) shielded
- RJ45 module MS 1/8 shielded
- RJ45 module MU 1/8 unshielded
- PS-TERA 4P shielded
- Blank cover MS for covering unused openings

Article No.		Description	Colour (similar)	PU
185761		UP-K Faceplate Edizio due for PS/MS modules, angled (delivery without cover frame, modules)	RAL 9010	1 pc.
185763		UP Faceplate Edizio due for PS/MS modules, angled, with cover frame (delivery without modules)	RAL 9010	1 pc.
185762		AP Wall mounted outlet Edizio 56 mm for PS/MS modules (delivery without modules)	RAL 9010	1 pc.

Article No.	Accessories/Description	Colour	PU
190977	Blank cover for unused MS openings	light grey	10 pcs.
309213	Blank cover for unused MS-openings	white	10 pcs.

COPPER FACEPLATES

AP / UP / UP-K Faceplate 2x

surface / flush / duct mounted

for 2 modules KS or PS-GG45, angled, design: Kallysto

 SWISS STANDARD



Fig. 1: Duct mounted (UP-K) without cover frame, with mounting frame 70 x 70 mm



Fig. 1: Flush mounted (UP) with cover frame, with mounting frame 88 x 88 mm



Fig. 3: Surface mounted (AP) with surface mount box, with mounting frame 88 x 88 x 67 mm



Fig. 4: Duct mounted (UP-K) without cover frame, with mounting frame 70 x 70 mm



Fig. 5: Flush mounted (UP) with cover frame, with mounting frame 88 x 88 mm



Fig. 6: Surface mounted (AP) with surface mount box, with mounting frame 88 x 88 x 67 mm

Solutions with additional distance frame 60 x 60 x 15 mm

Fig. 4: Duct mounted (UP-K) without cover frame, with mounting frame 70 x 70 mm

Fig. 5: Flush mounted (UP) with cover frame, with mounting frame 88 x 88 mm

Fig. 6: Surface mounted (AP) with surface mount box, with mounting frame 88 x 88 x 67 mm

PRODUCT INFORMATION







DESCRIPTION

Modular faceplate system Kallysto Hager with angled outlets, optimized by Datwyler for the installation of 2 modules.
Available with optional distance frame - for the professional, fast installation of greater modules.
All faceplates offer the possibility of colour coding.
Delivery with one blank cover - without modules.

APPLICATION

Suitable for the following Datwyler Modules:

- PS-GG45 7_A 4P shielded
- RJ45 module KS-T Plus 1/8 shielded
- RJ45 module MS-C6A 1/8 180°-K (Keystone) shielded
- RJ45 module KS-TS 1/8 shielded
- RJ45 module KS-T 1/8 shielded
- RJ45 module KU-T 1/8 unshielded

Article No.	Fig.	Description	Colour (similar)	
309199	 1	UP-K Faceplate Kallysto for 2x KS/GG45, angled (delivery without distance frame, cover frame)	RAL 9016	
309200	 2	UP Faceplate Kallysto for 2x KS/GG45, angled, with cover frame (delivery without distance frame)	RAL 9016	
309201	 3	AP Faceplate Kallysto for 2x KS/GG45, angled (delivery without distance frame)	RAL 9016	
309196	 4	UP-K Faceplate Kallysto for 2x KS/GG45, angled, with distance frame (delivery without cover frame)	RAL 9016	
309197	 5	UP Faceplate Kallysto for 2x KS/GG45, angled, with distance frame, with cover frame	RAL 9016	
309198	 6	AP Faceplate Kallysto for 2x KS/GG45, angled, with distance frame	RAL 9016	
Article No.	Accessories/Description		Colour	PU
309203	Coding frame Kallysto KS		white	10 pcs.
309204	Coding frame Kallysto KS		beige	10 pcs.
309205	Coding frame Kallysto KS		brown	10 pcs.
309206	Coding frame Kallysto KS		red	10 pcs.
309207	Coding frame Kallysto KS		yellow	10 pcs.
309208	Coding frame Kallysto KS		green	10 pcs.
309209	Coding frame Kallysto KS		blue	10 pcs.

UP-K/UP/AP Anschlusdose Kallysto KST 0412/e

AP / UP / UP-K Faceplate 2x
surface / flush / duct mounted

for 2 Modules MS 1/8 or MU 1/8, angled, design: Kallysto



Fig.1: Duct mounted (UP-K) without cover frame with mounting frame 70 x 70 mm



Fig.1: Flush mounted (UP) with cover frame with mounting frame 88 x 88 mm



Fig. 3: Surface mounted (AP) with surface mount box 88 x 88 x 67 mm



Solutions with additional distance frame 60 x 60 x 15 mm

Fig. 4: Duct mounted (UP-K) without cover frame with mounting frame 70 x 70 mm



Fig. 5: Flush mounted (UP) with cover frame with mounting frame 88 x 88 mm



Fig. 6: Surface mounted (AP) with surface mount box 88 x 88 x 67 mm

PRODUCT INFORMATION

CRIPTION

Modular faceplate system Kallysto Hager with angled outlets, optimized by Datwyler for the installation of 2 modules.
 Available with optional distance frame - for the professional, fast installation of greater modules.
 Delivery with one blank cover - without modules.

APPLICATION

Suitable for the following Datwyler Modules:

- RJ45 module MS-C6_A 1/8 shielded
- RJ45 module MS 1/8 shielded
- RJ45 module MU 1/8 unshielded

Article No.	Fig.	Description	Colour (similar)
309193	1	UP-K Faceplate Kallysto for 2x MS/MU 1/8 , angled, (delivery without distance frame, cover frame)	RAL 9016
309194	2	UP Faceplate Kallysto for 2x MS/MU 1/8 , angled, with cover frame (delivery without distance frame)	RAL 9016
309195	3	AP Faceplate Kallysto for 2x MS/MU 1/8 , angled (without distance frame)	RAL 9016
309190	4	UP-K Faceplate Kallysto for 2x MS/MU 1/8 , angled, with distance frame (delivery without cover frame)	RAL 9016
309191	5	UP Faceplate Kallysto for 2x MS/MU 1/8 , angled, with distance frame, with cover frame	RAL 9016
309192	6	AP Faceplate Kallysto for 2x MS/MU 1/8 , angled, with distance frame	RAL 9016

Article No.	Accessories/Description	Colour	PU
309202	Blank cover for unused Kallysto faceplate openings	RAL 9016	10 pcs.
309210	Distance frame for Kallysto faceplate 60 x 60 x 15 mm	RAL 9016	1 pc.

COPPER FACEPLATES

AP / UP / UP-K Faceplate 2x (Edizio flat)

surface / flush / duct mounted

for 2 modules, flat outlet, design: Feller

 SWISS STANDARD



Flush mounted flat outlet
Feller Edizio due (UP)



Surface mounted flat outlet
Feller Edizio due (AP)



Side view of
Feller Edizio flat outlet

PRODUCT INFORMATION

DESCRIPTION

Flat outlet covers Feller Edizio due for 2 modules MS 1/8, PS-TERA or PS-GG45. The Feller flat outlet covers enable easy module connections and allow for good bending radii. The flat outlet covers are original Feller products and suit into the Feller modular system. Delivery without modules.

a) suitable for the following Datwyler modules:

- RJ45 module MS-C6_A 1/8 Cat.6_A (IEC) shielded
- RJ45 module MS 1/8 shielded
- PS-TERA 4P shielded
- Blank cover MS for covering unused openings







b) suitable for the following Datwyler module:

- PS-GG45 7_A 4P shielded

DIMENSIONS

Flush / duct mounted	
Mounting frame	70 x 70 mm
flat outlet cover cut-out	60 x 60 mm
flat outlet cover depth	37 mm
Cover frame	88 x 88 mm

Surface mounted	
Mounting frame	70 x 70 mm
long cover cut-out	60 x 60 mm
flat outlet cover (W x H x D)	74 x 74 x 54 / 84 mm

Article No		Suitable for	Description	Colour (similar)
185747		a UP	Flush mounted flat outlet cover Feller Edizio due for 2 modules PS-TERA / MS, with cover frame (delivery without modules)	RAL 9016
185749		a UP-K	Duct mounted flat outlet cover Feller Edizio due for 2 modules PS-TERA / MS, (delivery without cover frame, without modules)	RAL 9016
185748		a AP	Surface mounted flat outlet cover Feller Edizio due for 2 modules PS-TERA / MS (delivery without modules)	RAL 9016
190958		b UP	Flush mounted flat outlet cover Feller Edizio due for 2 modules PS-GG45, with cover frame (without modules)	RAL 9016
190965		b AP	Surface mounted flat outlet cover Feller Edizio due for 2 modules PS-GG45 (delivery without modules)	RAL 9016

Feller-Anschlussdose FA-CHS 0412/e

AP Faceplate 2x
surface mountedfor 2 RJ45 modules 180° MS or MS-C6_A, angledAP Faceplate 2x for 2 modules
with surface mount box 80 x 80 x 40 mm

PRODUCT INFORMATION

DESCRIPTION

Modular surface mounted AP faceplate 2x for the installation of 2 RJ45 modules MS or MS-C6_A (180° rotated).
The snap-in modules are easily fitted into the faceplates.
Integrated dust shutters which also serve as covers for unused ports.
Delivery without modules.

Suitable for the following Datwyler modules:

- RJ45 module MS-C6_A 1/8 Cat.6_A (IEC)
- RJ45 module MS 1/8 shielded
- RJ45 module MU 1/8 unshielded

DIMENSIONS

W x H x D 85 x 85 x 40 mm

COLOUR

similar RAL 9016, pure white

Article No.	Description	Colour (similar)
185694	Faceplate for 2 modules MS/MU 1/8 (delivery without modules, cover frame)	RAL 9016

Article No.	Accessories/Description	Colour
185700	RJ45 module MS 1/8 Cat.6/E _A shielded T568-A	metallic
1414227	RJ45 module MS 1/8 Cat.6/E _A shielded T568-B	metallic
309250	RJ45 module MS-C6 _A 1/8 Cat.6 _A (IEC)	metallic

COPPER FACEPLATES

FLF Faceplate 2x, 3x

doorframe / profile / duct mounted

for 2 or 3 modules

 SWISS STANDARD



Fig. 1: FLF Faceplate 2x
for 2 modules MS/MU



Fig. 2: FLF Faceplate 2x
for 2 modules PS-GG45



Fig. 3: FLF Faceplate 3x
for 3 modules MS/MU, white or black

PRODUCT INFORMATION

DESCRIPTION

FLF faceplate 2x

for the installation of up to 2 modules MS 1/8, MU 1/8, MS-C6_A, PS-TERA or PS-GG45.
Easy screw-less mounting in doorframes, profiles, ducts, control panels etc. due to a catch spring.
Equipped with dust shutters that also serve as covers for unused ports.
Delivery without modules.

Variant with metal clip for a more stable mounting (available for modules MS 1/8 and MU 1/8 only).

Suitable for the following Datwyler modules:

- RJ45 module MS-C6_A 1/8 Cat.6_A (IEC) shielded
- RJ45 module MS 1/8 shielded
- RJ45 module MU 1/8 unshielded
- PS-TERA 4P shielded
- PS-GG45 7_A 4P shielded
- Blank cover MS for covering unused ports

DIMENSIONS

W x H x D 37,5 x 62,5 x 40 mm







DESCRIPTION

FLF faceplate 3x

for the installation of up to 3 modules MS 1/8, MU 1/8 or MS-C6_A.
Easy screw-less mounting in doorframes, profiles, ducts, control panels etc. due to a catch spring.
Equipped with dust shutters that also serve as covers for unused ports.
Delivery without modules.

Suitable for the following Datwyler modules:

- RJ45 module MS-C6_A 1/8 Cat.6_A (IEC) shielded
- RJ45 module MS 1/8 Cat.6/E_A shielded
- RJ45 module MU 1/8 Cat.6 unshielded

Article No.	Fig.	Description	Colour (similar)
309211		2 FLF Faceplate for 2 modules PS-GG45 (delivery without modules)	white, RAL 9016
309212		1 FLF Faceplate for 2 modules MS/MU (delivery without modules)	white, RAL 9016
190916		- FLF Faceplate for 2 modules MS/MU or PS-TERA (delivery without modules)	white, RAL 9010
190905		- FLF Faceplate for 2 modules MS/MU with metal clip (delivery without modules)	white, RAL 9010
185693		3 FLF Faceplate for 3 modules MS/MU (delivery without modules)	white, RAL 9010
190915		3 FLF Faceplate for 3 modules MS/MU 1/8 (delivery without modules)	black, RAL 9005

UP-K Faceplate PS-TERA 2x
duct mounted

for 2 modules PS-TERA 4P, angled

Fig. 1: Faceplate
for 2 modules PS-TERA, angledFig. 2: Example for faceplate
with 2 modules PS-TERA and cover frame

PRODUCT INFORMATION

DESCRIPTION

Modular faceplate PS-TERA 2x for duct mounting (UP-K).
For the installation of 2 modules PS-TERA with angled outlet.
The modules can be easily fitted into the faceplate.
Inscription field with transparent cover.
Delivery without modules.

APPLICATION

The modules PS-TERA 4P enable the installation of multimedia cabling systems up to Class F_A.
At each PS-TERA 4P module the connected 4 pairs can be patched individually, e.g. for transmission of TV, video, data or telephone. Thus, the single pairs in one data cable can be simultaneously used for different applications.

NOTE: The PS-TERA modules can not only be used in this faceplate but also in all Datwyler faceplates, patch panels and floor box solutions with MPS openings.

Article No.	Fig.	Description	Colour (similar)	PU
1408505	1	UP-K Faceplate for 2 modules PS-TERA (delivery without cover frame, modules)	RAL 9010	1 pc.
1400830	(2)	Cover frame 80 x 80 mm	RAL 9010	1 pc.

Article No.	Accessories/Description	Colour	PU
1408502	Module PS-TERA 4P Cat.7 _A /F _A shielded	black	1 pc.

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COPPER PATCH PANEL

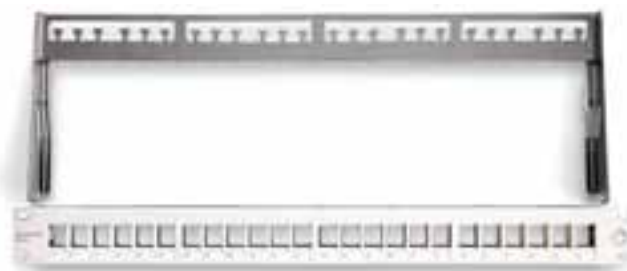
Patch panel KS 24x

for 24 modules with Keystone fitting

shielded



Blank covers,
black and white



Patch panel KS 24x, shielded

PRODUCT INFORMATION

APPLICATION

Shielded patch panel for up to 24 modules with Keystone fitting. Snap-in modules can be easily fitted into the patch panel. Unused ports can be covered with blank covers.

For the modules PS-GG45 7_A Datwyler recommends the patch panel MGK 24x.

DESCRIPTION

Front cover made of flame retardant compound, UL94V-0 rated, in combination with stainless steel and a cable strain relief.

Front in grey, similar to RAL 7035, or in black, similar to RAL 9005.

Strain relief with tie wrap.

Delivery without modules.

Suitable for the following Datwyler modules:

- RJ45 module KS-T Plus 1/8 shielded
- RJ45 module KS-TS 1/8 shielded
- RJ45 module KS-T 1/8 shielded
- RJ45 module KU-T 1/8 unshielded
- RJ45 module MS-C6_A 1/8 180° Keystone shielded

DIMENSIONS

Width	482 mm (19")
Depth	160 mm (including cable strain relief)
Height	44 mm (1U)

Article No.	Description	Colour (similar)	PU
418019	Patch panel KS 24x, 19" 1U , for 24x RJ45 Keystone modules, FTP (delivery without modules)	black, RAL 9005	1 pc.
418020	Patch panel KS 24x, 19" 1U , for 24x RJ45 Keystone modules, FTP (delivery without modules)	grey, RAL 7035	1 pc.

Article No.	Accessories/Description	Colour (similar)	PU
418010	Blank cover for Keystone openings	white	10 pcs.
418011	Blank cover for Keystone openings	black	10 pcs.

Patch panel KS 24x-a angled for 24 modules with Keystone fitting shielded



Blank cover,
black



Shielded patch panel KS 24x-a, angled

PRODUCT INFORMATION

APPLICATION

Shielded angled patch panel for up to 24 modules with Keystone fitting. Snap-in modules can be easily fitted into the patch panel. Unused ports can be closed with blank covers. Due to the angled front it is possible to patch without any cable management panel.

DESCRIPTION

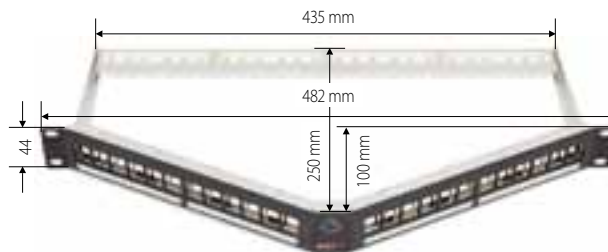
Front cover made of flame retardant compound, UL94V-0 rated, in combination with stainless steel and a cable strain relief. Front colour black, similar to RAL 9005. Strain relief with tie wrap. Delivery without modules.

Suitable for the following Datwyler modules:

- RJ45 module KS-T Plus 1/8 shielded
- RJ45 module KS-TS 1/8 shielded
- RJ45 module KS-T 1/8 shielded
- RJ45 module KU-T 1/8 unshielded
- RJ45 module MS-C6_A 1/8 180° Keystone shielded

DIMENSIONS

Width	482 mm (19")
Depth	250 mm (including cable strain relief)
Height	44 mm (1U)



Article No.	Description	Colour (similar)	PU
4000099	Patch panel KS 24x-a angled, 19" 1U, for 24x RJ45 Keystone modules FTP (without modules)	black, RAL 9005	1 pc.

Article No.	Accessories/Description	Colour (similar)	PU
418011	Blank cover for Keystone openings	black	10 pcs.

COPPER PATCH PANEL

Patch panels MGK 24x and MGK 12x for 24 resp. 12 PS-GG45 7_A and modules with Keystone fitting shielded



Patch panel MGK 24x, shielded



Blank covers,
black and white

Patch panel MGK 12x, shielded

PRODUCT INFORMATION

APPLICATION

Shielded patch panels for up to 24 resp. 12 PS-GG45 7_A modules with Keystone clip or modules with Keystone fitting.
Snap-in modules can be easily fitted into the patch panels.
Unused ports can be covered with blank covers.

DESCRIPTION

Patch panel 19" / 1U or 10" / 1U.
Front stainless steel or (MGK 24x only) light grey, similar to RAL 7035.
Strain relief with tie wrap.
Delivery without modules.

Suitable for the following Datwyler modules:

- PS-GG45 7_A 4P shielded
- RJ45 module KS-T Plus 1/8 shielded
- RJ45 module KS-TS 1/8 shielded
- RJ45 module KS-T 1/8 shielded
- RJ45 module MS-C6A 1/8 180° Keystone shielded

DIMENSIONS

Width	482 mm (19")
Depth	160 mm (including cable strain relief)
Height	44 mm (1U)

Article No.	Description	Colour (similar)	PU
440042	Patch panel MGK 24x, 19" / 1U for 24 modules with Keystone fitting	stainless steel	1 pc.
440043	Patch panel MGK 24x, 19" / 1U for 24 modules with Keystone fitting	grey, RAL 7035	1 pc.
440044	Patch panel MGK 12x, 10" / 1U for 12 modules with Keystone fitting	stainless steel	1 pc.

Article No.	Accessories/Description	Colour (similar)	PU
418010	Blank cover for Keystone openings	white	10 pcs.
418011	Blank cover for Keystone openings	black	10 pcs.

Patch panel MS-K 24x for 24 RJ45 modules MS-K 1/8 shielded



Blank covers,
black and white



Patch panel MS-K 24x, shielded

PRODUCT INFORMATION

APPLICATION

Screened patch panel for up to 24 shielded RJ45 modules MS-K Plus 1/8 Cat.6/E_A.
Snap-in modules can be easily fitted into the patch panel.
Unused ports can be covered with blank covers.

DESCRIPTION

19" / 1U patch panel made of steel.
Front stainless steel or light grey, similar to RAL 7035.
Front imprint with numbers 1 to 24.
Connecting possibility to potential equalisation.
Delivery without modules.

Suitable for the following Datwyler module:

- RJ45 module MS-K 1/8 shielded

DIMENSIONS

Width	482 mm (19")
Depth	110 mm (including cable strain relief)
Height	44 mm (1U)

Article No.	Description	Colour (similar)	PU
440040	Patch panel MS-K 24x , 19"/1U, for 24x RJ45 module MS-K 1/8 (delivery without modules)	front stainless steel	1 pc.
440041	Patch panel MS-K 24x , 19"/1U, for 24x RJ45 module MS-K 1/8 (delivered without modules)	front RAL 7035	1 pc.

Article No.	Accessories/Description	Colour (similar)	
418010	Blank cover for Keystone openings (1 set = 10 pcs.)	white	1 set
418011	Blank cover for Keystone openings (1 set = 10 pcs.)	black	1 set

COPPER PATCH PANEL

Patch panels MPS 12x, 16x, 24x, 32x

for modules MS 1/8 or PS-TERA 4P

shielded



PRODUCT INFORMATION

APPLICATION

Shielded patch panels in tailor-made sizes for up to 12, 16, 24 or 32 modules. The modules can be easily fitted into the patch panels.

DESCRIPTION

19" patch panels made of steel.
Front stainless steel or light grey, similar to RAL 7035.
Front imprint with numbers.
Delivery without modules.


Suitable for the following Datwyler modules:

- PS-TERA 4P shielded
- RJ45 module MS-C6_A 1Cat.6_A (IEC) shielded
- RJ45 module MS 1/8 shielded
- Feed-trough coupler RJ45-RJ45, shielded, 180 degree
- Blank cover MS for unused openings
- other modules with MS adapter

DIMENSIONS

Width 19" or 10"
Height 1U or (MPS 32x only) 2U

Article No.	Description	Colour (similar)	PU
185840	Patch panel MPS 24x, 19" 1U, for 24 modules (delivery without modules)	light grey, RAL 7035	1 pc.
185841	Patch panel MPS 24x, 19" 1U, for 24 modules (delivery without modules)	stainless steel blank	1 pc.
184 099	Patch panel MPS 12x, 10" 1U, for 10 modules (delivery without modules)	light grey, RAL 7035	1 pc.
417444	Patch panel MPS 12x, 10" 1U, for 10 modules (delivery without modules)	stainless steel blank	1 pc.
417480	Patch panel MPS 16x, 19" 1U, for 16 modules (delivery without modules)	light grey, RAL 7035	1 pc.
417481	Patch panel MPS 32x, 19" 2U, for 32 modules (delivery without modules)	stainless steel blank	1 pc.

Article No.	Accessories/Description	Colour	PU
417446	Feed-trough coupling RJ45-RJ45, Cat.6, 180 degree, shielded	metal	10 pcs.
417447	LC-Duplex coupler with MS adapter, MM ceramic		10 pcs.
417448	LC-Duplex coupler with MS adapter, SM ceramic		10 pcs.
185731	 Fastening kit (8 of each: screws, washers and captive nuts)		1 set
190977	Blank cover for unused MS openings	light grey	1 pc.
309213	Blank cover for unused MS openings	white	1 pc.

MPS 24x 0412/e

Patch panel MS 24/8 for 24 modules MS 1/8 and MU 1/8 shielded and unshielded



Patch panel MS 24/8, shielded and unshielded

PRODUCT INFORMATION

APPLICATION Shielded patch panel for up to 24 RJ45 modules shielded and/or unshielded.

DESCRIPTION Aluminium silver anodised, plastic light grey, similar to RAL 7035. Snap-in modules can be easily fitted into the patch panel. The patch panel is supplied with dust shutters and labelling fields. The dust shutters can be individually replaced. Delivery without modules.

Suitable for the following Datwyler modules:


- RJ45 module MS-C6_A Cat.6_A (IEC) shielded
- RJ45 module MS 1/8 shielded
- RJ45 module MU 1/8 unshielded
- Feed-trough coupler RJ45-RJ45, shielded, 180 degree
- other modules with MS adapter

DIMENSIONS Width 19"
Height 1U

ACCESSORIES Dust shutters in various colours.



Article No.	Description	Colour (similar)	PU
185680	Patch panel MS 24/8 Cat.6, 19" 1U, for 24x MS 1/8 Cat.6 (delivery without modules)	light grey, RAL 7035	1 pc.

Article No.	Accessories/Description	Colour	PU
185711	Dust shutter for Patch Panel MS 24/8	yellow	10 pcs.
185712	Dust shutter for Patch Panel MS 24/8	blue	10 pcs.
185713	Dust shutter for Patch Panel MS 24/8	green	10 pcs.
185714	Dust shutter for Patch Panel MS 24/8	red	10 pcs.
190984	Dust shutter for Patch Panel MS 24/8	orange	10 pcs.
190985	Dust shutter for Patch Panel MS 24/8	black	10 pcs.
190986	Dust shutter for Patch Panel MS 24/8	violet	10 pcs.
185717	 Labeling sheets A4 for patch panel MS 24/8	white	10 sheets
185731	Fastening kit (8 of each: screws, washers and captive nuts)		1 set

COPPER PATCH PANEL

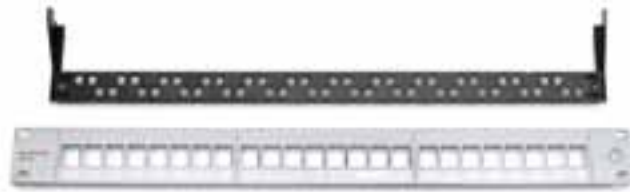
Patch panel KU 24x

for 24 modules KU-T 1/8

unshielded



Blank covers,
black and white



Patch panel KU 24x, unshielded

PRODUCT INFORMATION

APPLICATION

Unshielded patch panel for up to 24 RJ45 Keystone modules KU 1/8 in accordance with Cat.6 or Cat.5e (UTP). Snap-in modules can be easily fitted into the patch panel. Unused ports can be covered with blank covers.

DESCRIPTION

Patch panel made of flame retardant compound, UL94V-0 rated. Front in grey, similar to RAL 7035, or in black, similar to RAL 9005. Strain relief with tie wrap. Delivery without modules.

Suitable for the following Datwyler module:

- RJ45 module KU-T 1/8 unshielded

DIMENSIONS

Width	482 mm (19")
Depth	80 mm (including cable strain relief)
Height	44 mm (1U)

Article No.	Description	Colour (similar)	PU
418021	Patch panel KU 24x, 19" 1U, for 24x RJ45-Keystone Modules, UTP (delivery without modules)	grey, RAL 7035	1 pc.
418022	Patch panel KU 24x, 19" 1U, for 24x RJ45-Keystone Modules, UTP (delivery without modules)	black, RAL 9005	1 pc.

Article No.	Accessories/Description	Colour (similar)	PU
418010	Blank cover for Keystone openings	white	10 pcs.
418011	Blank cover for Keystone openings	black	10 pcs.



Patch panel MU 24x, unshielded

PRODUCT INFORMATION

APPLICATION Unshielded patch panel for up to 24 RJ45 modules MU 1/8 unshielded. The snap in modules can be easily fitted into the patch panel.

DESCRIPTION Front light grey, similar to RAL 7035. Delivery without modules.

Suitable for the following Datwyler module:
- RJ45 module MU 1/8 unshielded

DIMENSIONS

Width	19"
Height	1U

Article No.	Description	Colour (similar)	PU
185842	Patch panel MU 24x, 19" 1U, for 24x RJ45 module MU 1/8 unshielded (delivery without modules)	light grey, RAL 7035	1 pc.

Article No.	Accessories/Description	Colour	PU
185750	RJ45 Module MU 1/8 Cat.6, unshielded, colour code T568-A	white	10 pcs.
185751	RJ45 Module MU 1/8 Cat.6, unshielded, colour code T568-B	white	10 pcs.
185731	Fastening kit (8 of each: screws, washers and captive nuts)		1 set
1409558	Blank cover	white	10 pcs.
1409559	Blank cover	black	10 pcs.

COPPER PATCH PANEL

Subrack 19" / 3U and 10" / 3U

for inserts 7HP / 3U

with up to 6 RJ45 modules



Fig. 1:
Subrack
19"/3U (or 10"/3U)

Fig. 2:
Insert for
6x module MS 1/8

Fig. 3:
Insert for
6x module MS-K 1/8

Fig. 4:
Insert with
6x RJ45 Cat.3

Fig. 5:
Blank cover
7HP / 3U

PRODUCT INFORMATION

APPLICATION & DESCRIPTIONS

Subrack, 19" / 3U (see Fig. 1)
for the insertion of a maximum of 12 inserts 7HP / 3U.
Delivery without fastening kit and without inserts.


Subrack, 10" / 3U (similar to Fig. 1)
for the insertion of a maximum of 5 inserts 7HP / 3U.
Delivery without fastening kit and without inserts.

Inserts for 6 RJ45 modules (see Fig. 2 and 3, selection/types see below)

Insert with 6 RJ45 Cat3 modules (telephony, see Fig. 4)
with LSA Plus IDC termination.

ACCESSORY

Blank cover (see Fig. 5)
for covering the spare places in the subrack that are not occupied by inserts.

Article No.	Fig.	Description	Colour	PU
185682	1	Subrack 19" / 3U	aluminum silver	1 unit / box
185683	-	Subrack 10" / 3U	aluminum silver	1 unit / box
185681	2	Insert for 6x RJ45 module MS or MS-C6, 1/8 (delivery without modules)	aluminum silver	1 unit / box
on request	3	Insert for 6x RJ45 module MS-K Plus 1/8 (delivery without modules)	aluminum silver	1 unit / box
185724	4	Insert 6x RJ45 Cat.3 (telephony) 7HP / 3U	aluminum silver	1 unit / box
185718	5	Blank cover 7HP / 3U	aluminum silver	1 unit / box
185700	-	RJ45 modules MS 1/8 Cat.6a, screened TIA-A	metal	10 pcs.
185716		Labelling sheets A4 for insert for 6x MS	white	10 sheets
185731	-	Fastening kit (8 of each: screws, washers and captive nuts)		1 set

AP Distribution box MS 6x surface mounted for one insert



AP Distribution box MS 6x
with insert and modules
(delivery without insert and modules)



Insert for 6 modules
MS 1/8 shielded or
MS-C6_A 1/8 180° shielded



Insert
with 6 RJ45 jacks Cat.3
(for telephony)

PRODUCT INFORMATION

APPLICATION	Surface mounted distribution box for the insertion of one insert for 6x MS 1/8 or one insert with 6x RJ45 Cat. 3 jacks. Delivery without inserts and without modules.
DESCRIPTION	Distribution box delivered with labelling strip. The box can be equipped with a telephony insert Cat. 3 or with an insert for 6 MS 1/8 Cat.6 (or MS-C6 _A) modules. When MS 1/8 modules are required, the metal insert for 6x MS 1/8 (or MS-C6 _A) is necessary.
Colour	grey, similar to RAL 7035
DIMENSIONS	W x H x D 122 x 41 x 120 mm

Article no.	Description	Colour (similar)	PU
185685	AP distribution box for one insert (delivery without insert)	light grey, RAL 7035	1 unit / box
185727	Insert for 6x module MS 1/8 Cat.6/E _A (delivery without modules)	metal	1 pc.
185729	Insert with 6 RJ45 jacks Cat.3 for telephony	metal	1 pc.

Article no.	Accessories/Description	Colour (similar)	PU
190977	Blank cover for unused MS openings	grey	10 pcs.

Couplers MS

for MS panels and MS data outlets



Blank cover for MS opening



Koax coupler MS
with F jack, IEC jack,
IEC plug



LC Duplex coupler MS

PRODUCT INFORMATION

DESCRIPTION **Blank coupler for MS openings**
For closing unused ports in all MS patch panels, MS data outlets and so on.

DESCRIPTION **Koax couplers for MS openings**
Available for
a) F jack 75 Ohm
b) IEC jack 75 Ohm
c) IEC plug 75 Ohm

DESCRIPTION **LC Duplex couplers for MS openings**
Available for Singlemode (SM) and Multimode (MM)

NOTE: To be able to maintain the permitted bending radius of the fibre optic cable please take care for sufficient spare place (FO cable plus LCD connector) already in the planning phase.

Article No.	Description	Colour	PU
190977	Blank cover MS for covering unused MS openings	light grey	1 pc.
309213	Blank cover MS for covering unused MS openings	white	1 pc.
417447	LC Duplex coupler MS, MM ceramic	light grey	1 pc.
417448	LC Duplex coupler MS, SM ceramic	light grey	1 pc.
on request	Koax coupler MS, type F jack 75 Ohm	light grey	1 pc.
on request	Koax coupler MS, type IEC jack 75 Ohm	light grey	1 pc.
on request	Koax coupler MS, type IEC plug 75 Ohm	light grey	1 pc.

Couplers KS for Keystone panels and Keystone data outlets



Blank cover for Keystone opening,
in white or black



LC Duplex coupler KS
for MM, grey



LC Duplex coupler KS
for SM, blue

PRODUCT INFORMATION

DESCRIPTION

Blank cover for Keystone opening

For closing unused ports in all Keystone patch panels, Keystone data outlets and so on.

DESCRIPTION

LC Duplex coupler for Keystone openings

Available for

- a) Multimode (MM) with ceramic sleeve in grey and with dust protection
- b) Singlemode (SM) with ceramic sleeve in blue and with dust protection

NOTE: To be able to maintain the permitted bending radii of the fibre optic cables please take care for sufficient spare place (FO cable plus LCD connector) already in the planning phase.

Article No.	Description	Colour	PU
418010	Blank cover KS for covering Keystone openings (1 set = 10 pcs.)	white	1 set
418011	Blank cover KS for covering Keystone openings (1 set = 10 pcs.)	black	1 set
418013	LC Duplex coupler KS, MM ceramic (for Keystone panels)	grey	1 pc.
418014	LC Duplex coupler MS, SM ceramic (for Keystone panels)	blue	1 pc.

INDUSTRIAL

RJ45 plug IP20 Cat.6

shielded

field assembly



PRODUCT INFORMATION

APPLICATION Structured premises cablings in the industrial sector, for the transmission of Ethernet protocols.

DESCRIPTION Field assembly 8-pin RJ45 plug, IP20, Cat.6 shielded, with quick connection technology.

Suitable for cables with the following properties:

Solid copper wire	0.40 mm up to 0.64 mm, AWG 24/1 up to AWG 22/1
Stranded copper wire	0.48 mm up to 0.67 mm, AWG 26/7 up to AWG 22/7
Cable sheath diameter	5.5 mm up to 8.5 mm
Protection rating	IP20

Solid housing made of zinc die cast.
Easy on-site assembly without any special tools.
With strain relief - can be installed afterwards for colour coding.

APPLICABLE STANDARDS IEC 60603-7-5 (Cat.6)
ISO/IEC 11801:2002/Amd.1:2008 and Amd.2:2010 (Class E, 250 MHz)
EN 50173-1:2007

Articel No.	Description	Colour (similar)	PU
417522	RJ45 plug IP20 Cat.6 shielded for field assembly	black	1 pc.

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

RJ45 IP20 Cat.6 0412/e



PRODUCT INFORMATION

APPLICATION Structured premises cablings in the industrial sector, for the transmission of Ethernet protocols.

DESCRIPTION Field assembly 8-pin RJ45 plug, IP20, Cat.5e shielded, with quick connection technology.

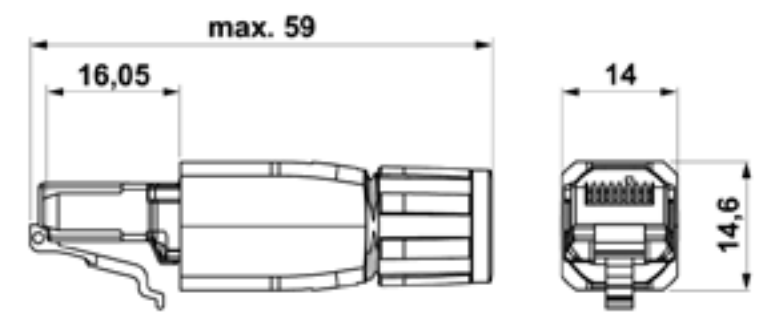
Suitable for cables with the following properties:

Solid copper wire	0.40 mm up to 0.64 mm, AWG 24/1 up to AWG 22/1
Stranded copper wire	0.48 mm up to 0.67 mm, AWG 26/7 up to AWG 22/7
Cable sheath diameter	5.0 mm up to 8.5 mm
Protection rating	IP20

The plug is pre-assembled and therefore allows for easy on-site assembly without any special tools.

APPLICABLE STANDARDS EC 60603-7-3 (Cat.5/5e)
 ISO/IEC 11801:2002/Amd.1:2008 and Amd.2:2010 (Class D, 100 MHz)
 EN 50173-1:2007

DIMENSIONS



Articel No.	Description	Colour (similar)	PU
417521	RJ45 plug IP20 Cat.5/5e screened for field assembly	grey, RAL 7035	1 pc.

INDUSTRIAL

RJ45 plug body IP67 Cat.5e

shielded

field assembly



PRODUCT INFORMATION

APPLICATION Structured premises cabling in the industrial sector, for the transmission of Ethernet protocols.

DESCRIPTION Field-assembly 8-pin RJ45 plug body, IP67, Cat.5e shielded, with quick connection technology.

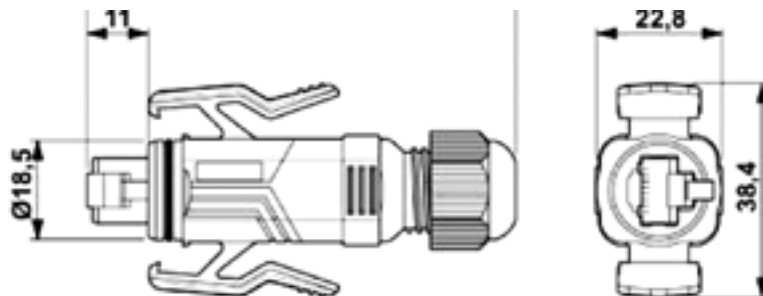
Suitable for cables with the following properties:

Solid copper wire	0.40 mm up to 0.64 mm, AWG 24/1 up to AWG 22/1
Stranded copper wire	0.48 mm up to 0.67 mm, AWG 26/7 up to AWG 22/7
Cable sheath diameter	5.0 mm up to 8.5 mm
Protection rating	IP67

The plug is pre-assembled and therefore allows for easy on-site assembly without any special tools. The easy to handle push-pull interlock protects the connection against shock and vibration and ensures safe data transmissions also in rough industrial environments.

APPLICABLE STANDARDS IEC 60603-7-3 (Cat.5/5e)
ISO/IEC 11801:2002/Amd.1:2008 and Amd.2:2010 (Class D, 100 MHz)
EN 50173-1:2007

DIMENSIONS



Article No.	Description	Colour (similar)	PU
417520	RJ45 plug IP67 Cat.5/5e shielded for field assembly	grey, RAL 7035	1 pc.

RJ45 Geh. IP67 Cat.5/5e-0412/e



Fig. 1:
Data outlet IP67



Fig. 2:
Connector socket IP67



Fig. 3:
Mounting flange IP67



Fig. 4:
RJ45 plug body IP67
to assemble patch cables on-site

PRODUCT INFORMATION

APPLICATION

Structured premises cablings in the industrial sector - components with protection rating IP67 in accordance with EN 50173-2 (draft) and environment classes M3, I3, C3, and E3.

DESCRIPTION

Data outlets IP67 for 1 RJ45 module MS 1/8 (shielded) or MU 1/8 (unshielded) for the transmission of Ethernet protocols in harsh industrial environments in which contaminations may occur:

1. Data outlet IP67 for 1 module MS 1/8 shielded or MU 1/8 unshielded - surface mounted
2. Connector socket IP67 for 1 module MS 1/8 shielded or MU 1/8 unshielded
3. Mounting flange IP67 for 1 module MS 1/8 shielded or MU 1/8 unshielded - for installation in devices
4. RJ45 plug body IP67 - to assemble IP67 patch cables on-site

In order to ensure a secure data transmission, the compatible components offer a large 360° braided connection that results in excellent EMC properties.

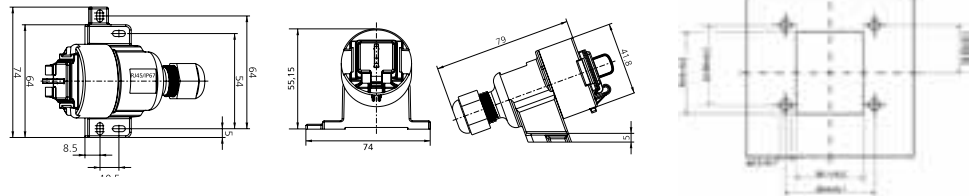
The covers that are permanently attached to the casings prevent water, dust, dirt and other contaminants from entering the RJ45 jack when unmated.

Usable in connection with IP67 or standard RJ45 patch cords in different lengths.

FEATURES

- Fulfill protection rating IP67 when connected to an IP67 plug
- Connection with customary RJ45 plugs possible (without IP rating)
- Plug surface in accordance with IEC 61076-3-106 (option 6)
- Environment classes M3, I3, C3, and E3 in accordance with EN50173-2
- IP67 cover, permanently attached
- Large 360° braided connection, excellent EMC properties
- Add-on surface mounting possibility
- Easy to open modules, reusable
- Add-on unit with an 8-pin RJ45 jack
- Easy and time-saving installation
- Fully shielded modules

DIMENSIONS



Article No.	Fig.	Description	Colour (similar)	PU
185719	1	Data outlet IP67 for 1x MS/MU 1/8 (delivery without module)	grey, RAL 7035	1 pc.
185725	2	Connector socket IP67 for 1x MS/MU 1/8 (delivery without module)	grey, RAL 7035	1 pc.
185726	3	Mounting flange IP67 for 1x MS/MU 1/8 (delivery without module)	grey, RAL 7035	1 pc.
417520	4	RJ45 plug IP67 Cat.5/5e shielded for field assembly	grey, RAL 7035	1 pc.
185700		RJ45 module MS 1/8 Cat.6/E _A , shielded	metallic	10 pcs.
185750		RJ45 module MU 1/8 Cat.6/E _A , unshielded	white	10 pcs.

INDUSTRIAL

AP Outlet IP67

surface mounted
for 2 modules



RJ45 outlet IP67...



MS-K Plus 1/8 Cat.6_A (IEC)

KS-T 1/8 Cat.6/E_A
KS-T 1/8 Cat.5/5e
KS-T Plus 1/8 Cat.6_A tool-less
KS-TS 1/8 Cat. 6/E_A tool-less slimline

PS-GG45 7_A

... for the assembly of 2 shielded
Datwyler modules (see above)

PRODUCT INFORMATION

APPLICATION

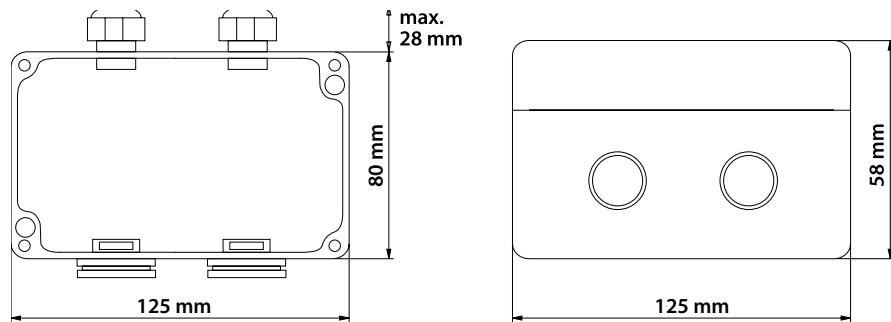
Structured premises cablings in the industrial sector, for the transmission of Ethernet protocols.

DESCRIPTION

Outlet IP67, surface mounted, for 2 modules (types see above).
For information on the properties of the module: see data sheet of the requested module.
Protection rating IP67 when used together with RJ45 patch cords IP67.
Protection rating IP20 when used together with standard RJ45 patch cords.
Gasket for the incoming data cables with PG gland.
Stable housing made of aluminium, grey, similar to RAL 7035.
Wall-/floor mounting by internal screw openings.
Delivery without modules.

DIMENSIONS

W x H x D = 125 x 80 x 58 mm



Article No.	Description	Colour (similar)	PU
417530	AP outlet IP67 for 2 modules (delivery without modules)	grey, RAL 7035	1 pc.

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

Anschlussdose IP67 0412/e

INDUSTRIAL
AP Outlet IP44
surface mounted
 for 2 modules



AP outlet IP44 for 2 modules,
 surface mounted



MS 1/8 Cat.6/E_A, shielded
 MU 1/8 Cat.6, unshielded
 MS-C6_A 1/8 Cat.6_A (IEC), shielded

MS-K 1/8 Cat.6/E_A, shielded
 MS-K Plus 1/8 Cat.6_A (IEC), shielded

KS-T 1/8 Cat.6/E_A, shielded
 KS-T 1/8 Cat.5/5e, shielded
 KU-T 1/8 Cat.6, unshielded
 KU-T 1/8 Cat.5/5e, unshielded
 KS-TS 1/8 Cat.6/E_A tool-less slimline, shielded
 KS-T Plus 1/8 Cat.6_A tool-less, shielded

PS-GG45 7_A, shielded

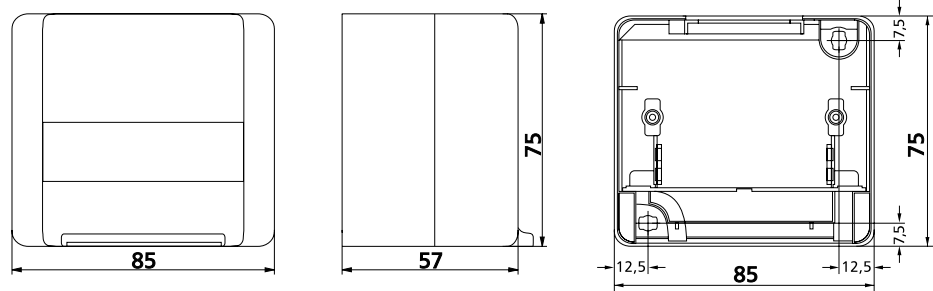
Same box, same insertion element

PRODUCT INFORMATION

APPLICATION Structured premises cablings in the industrial sector, for the transmission of Ethernet protocols.

DESCRIPTION Outlet IP67, surface mounted, for 2 modules (types see above).
 For information on the properties of the module: see data sheet of the requested module.
 Cable entry from the top (one or two cables).
 Shatter-proof, stable housing, grey, similar to RAL 7035.
 Protection rating IP44 when closed only (without patch cords).
 Delivery without modules.

DIMENSIONS W x H x D = 85 x 57 x 75 mm



Article No.	Description	Colour (similar)	PU
185728	AP Outlet IP44 for 2x MS/MU 1/8 (delivery without modules)	grey, RAL 7035	1 pc.
417510	AP Outlet IP44 for 2x modules with Keystone Clip (delivery without modules)	grey, RAL 7035	1 pc.

INDUSTRIAL

AP / UP-K Wall outlet IP44

surface / duct mounted

for 2 modules, with key lock



Surface mounted (AP) version



Duct mounted (UP-K) version

PRODUCT INFORMATION

APPLICATION Structured premises cablings in the industrial sector, for the transmission of Ethernet protocols.

DESCRIPTION Wall outlet IP44, surface or duct mounted, for 2 modules.

Suitable for the following Datwyler modules:

- PS-GG45 7_A, shielded
- RJ45 module MS-K 1/8 Cat.6/E_A, shielded
- RJ45 module MS-K Plus 1/8 Cat.6_A (IEC), shielded
- RJ45 module MS-C6_A 1/8 Cat.6_A (IEC), shielded
- RJ45 module KS-T 1/8 tool-less, shielded
- RJ45 module KS-TS 1/8 tool-less, shielded
- RJ45 module KS-T Plus 1/8 tool-less, shielded

For information on the properties of the module: see data sheet of the requested module.

Lockable outlet with protection rating IP44.
Cover can also be locked with connected patch cords.
One-key system.
Cable entry from the top (one or two cables).
Shatter-proof, stable housing, grey, similar to RAL 7035.
Delivery without modules.

DIMENSIONS

Surface mounted version	W x H x D = about 90 x 93 x 90 mm
Duct mounted version	W x H x D = about 90 x 93 x 32 mm

Article No.	Description	Colour (similar)	PU
417500	UP-K Wall outlet IP44, duct mounted, for 2x MS/MU 1/8 (delivery without modules)	grey, RAL 7035	1 pc.
417501	AP Wall outlet IP44, surface mounted, for 2x MS/MU 1/8 (delivery without modules)	grey, RAL 7035	1 pc.
417503	AP Wall outlet IP44, surface mounted, for 2x Keystone module (delivery without modules)	grey, RAL 7035	1 pc.

NAP / NUP Wall outlet IP55

surface / flush mounted in plumbed rooms

for 2 modules



Flush mounted version, IP55

Surface mounted version, IP55

PRODUCT INFORMATION

APPLICATION

In structured premises cablings in the industrial sector, especially in high-humidity rooms, for the transmission of Ethernet protocols.

DESCRIPTION

Wall outlet IP 55, for high-humidity rooms, surface mounted (NAP) or flush mounted (NUP), for a maximum of 2 modules.

Suitable for the following Datwyler modules:

- PS-GG45 7_A 4P, shielded
- RJ45 module KS-T 1/8 tool-less, shielded
- RJ45 module MS-C6_A 1/8 Cat.6_A (IEC), shielded (Keystone version)

Protection rating IP55 when closed only.
Shatter-proof housing, similar to RAL 9010.
Cable entry from above or from below.
Delivery without modules.

Article No.	Description	Colour (similar)	PU
309242	NAP Wall outlet IP55 for 2 modules (delivery without modules)	RAL 9010	1 pc.
309243	NUP Wall outlet IP55 for 2 modules (delivery without modules)	RAL 9010	1 pc.

INDUSTRIAL

Rail adapter MS IP20 rail mounted

for 1 RJ45 module MS 1/8
or MS 1/8 Cat.6/E_A



Rail adapter for 1 RJ45 module
MS 1/8 or MS-C6_A 1/8

PRODUCT INFORMATION

APPLICATION

Structured premises cabling in the industrial sector, for the transmission of Ethernet protocols.

DESCRIPTION

IP20 protection rating rail adapter for 1 shielded RJ45 module MS 1/8 Cat.6/E_A or MS-C6_A 1/8 Cat.6_A (IEC) - can be fitted onto any 35 mm standard (DIN) rail.

The RJ45 module is protected by a cover against direct contact.

Protection class II without connection to electrical grounding.

When installed as part of a protection class I system, the electrical grounding can be realized by means of an integrated spring via the rail.

Its width allows for installations of up to 12 RJ45 modules in a row in any standard electrical distributor.

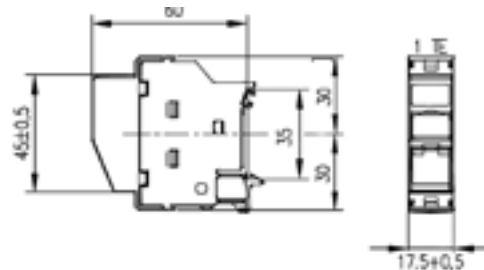
Suitable for the following Datwyler modules:

- RJ45 module MS 1/8 Cat.6/E_A, shielded
- RJ45 module MU 1/8 Cat.6, unshielded
- RJ45 module MS-C6_A 1/8 Cat.6_A (IEC), shielded

FEATURES

- Rail mounted onto TH35 rails (in accordance with DIN EN60715)
- W = 1 width unit (< 18mm) (DIN 43880)
- Integrated grounding spring (removable)
- Colour: light grey, similar to RAL 7035
- Protection class I or II, depending on way of installation
- Protection rating IP20
- Protective window for labelling strips
- Integrated dust shutter

DIMENSIONS



Article No.	Description	Colour (similar)	PU
309188	Rail adapter for 1x MS-C6 _A 1/8 or MS 1/8	light grey, RAL 7035	1 pc.
185700	RJ45 module MS 1/8 Cat.6/E _A , shielded, T568-A	metal	10 pcs.
309250	Module MS-C6 _A 1/8 Cat.6 _A (IEC) 180°	metal	10 pcs.

Hutschienadapter IP20 0612/e

Rail adapter MS-K IP20 rail mounted

for 1 RJ45 module MS-K 1/8 or MS-K Plus 1/8



Rail adapter for 1 RJ45 module
MS-K 1/8 or MS-K Plus 1/8

PRODUCT INFORMATION

APPLICATION

Structured premises cabling in the industrial sector, for the transmission of Ethernet protocols.

DESCRIPTION

IP20 protection rating rail adapter for 1 shielded RJ45 module MS-K 1/8 Cat.6/E_A or MS-K Plus 1/8 Cat.6_A (IEC) - can be fitted onto any 35 mm standard (DIN) rail. The RJ45 module is protected by a cover against direct contact. Protection class II without connection to electrical grounding. Protection class I when installed with connection to electrical grounding. Its width allows for installations of up to 12 RJ45 modules in a row in any standard electrical distributor.

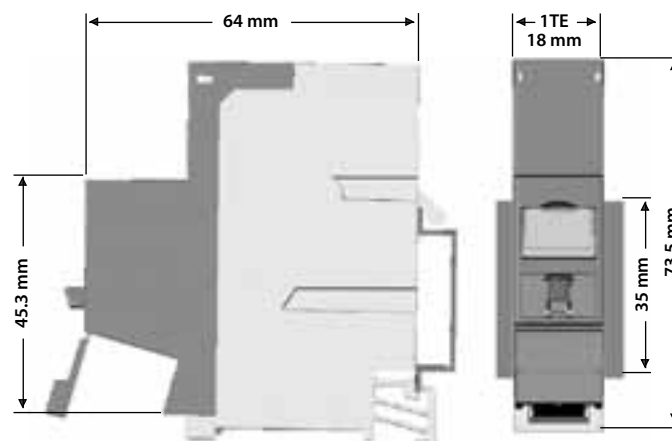
Suitable for the following Datwyler modules:

- RJ45 module MS-K 1/8 Cat.6/E_A, shielded
- RJ45 Module MS-K Plus 1/8 Cat.6_A (IEC), shielded

FEATURES

- Rail mounted onto TH35 rails (in accordance with DIN EN60715)
- W = 1 width unit (18mm) (DIN 43880)
- Colour: light grey, similar to RAL 7035
- Protection class I or II, depending on way of installation
- Protection rating IP20
- Protective window for labelling strips
- Integrated dust shutter

DIMENSIONS



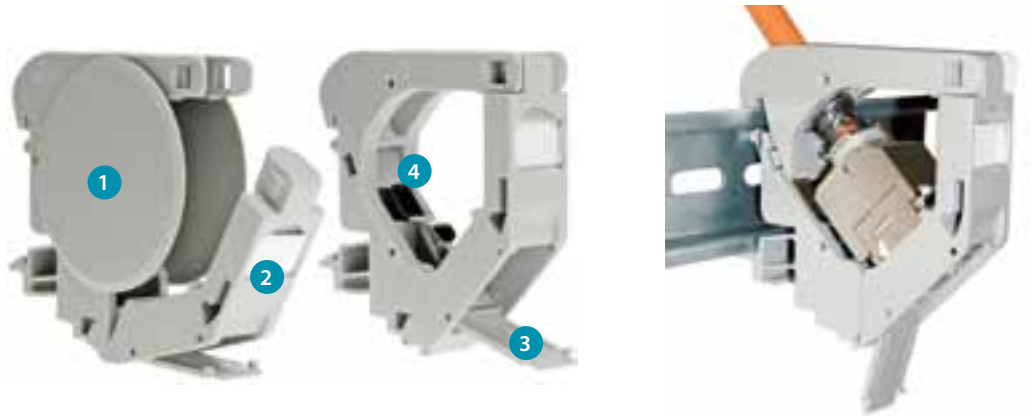
Article No.	Description	Colour (similar)	PU
440018	Rail adapter for 1x MS-K (delivery without module)	light grey, RAL 7035	1 pc.
440004	RJ45 module MS-K Plus 1/8 Cat.6 _A (IEC), with colour code TIA 568-A	metal	10 pcs.

INDUSTRIAL

Rail adapter Keystone IP20

rail mounted

for 1 Keystone module



1 Side cover
2 Labelling field

3 Dust shutter
4 Grounding spring

Rail adapter
for 1 Keystone module (types see below)

PRODUCT INFORMATION

APPLICATION

Structured premises cablings in the industrial sector, for the transmission of Ethernet protocols.

DESCRIPTION

IP20 protection rating rail adapter for 1 shielded or unshielded module with Keystone fitting. Can be fitted onto any 35 mm standard (DIN) rail - there must be a minimum distance of 10 mm between the rail and the back plane for fitting the rail adapter. Plastic housing with labelling field and dust shutter. Electrical grounding realized by means of an integrated grounding spring (via rail). Its width allows for installations of up to 12 modules in a row in any standard electrical distributor. When several rail adapters are fitted in rows two side covers (1.5 mm each) are needed to terminate them and ensure IP20 protection rating. Delivery without module.

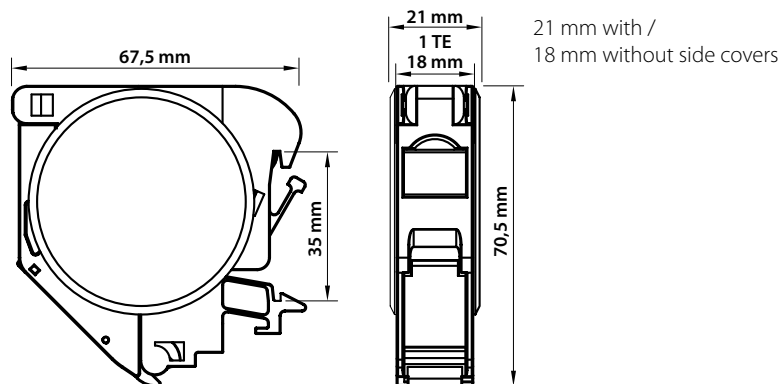
Suitable for the following Datwyler modules:

- PS GG45 7_A, shielded
- RJ45 module KS-T Plus Cat.6_A, shielded
- RJ45 module KS-T Cat.6/E_A, shielded
- RJ45 module KS-TS Cat.6/E_A, shielded
- RJ45 module KS-T Cat.5e, shielded
- RJ45 module KU-T Cat.6, unshielded
- RJ45 module KU-T Cat.5e, unshielded

FEATURES

- Rail mounted onto TH35 rails (in accordance with DIN EN60715)
- W = 1 width unit (18mm) (DIN 43880)
- with integrated labelling field

DIMENSIONS



Article No.	Description	Colour (similar)	PU
418026	Rail adapter Keystone IP20 for 1 module with Keystone fitting (delivery without module)	grey	1 pc.

REG KS IP20 0412/e

Rail adapter Keystone rail-mounted

for 1 RJ45 module KS-T, KS-TS or KU-T



Rail adapter for
1 RJ45 module KS-T, KS-TS or KU-T

PRODUCT INFORMATION

APPLICATION

Structured premises cabling in the industrial sector, for the transmission of Ethernet protocols.

DESCRIPTION

Rail adapter for 1 tool-less RJ45 Keystone module KS-T, KS-TS (Slimline) or KU-T.
Can be fitted onto any 35 mm standard (DIN) rail.
Made of stainless steel, therefore always electrically conducted (via rail) with the building's equipotential bonding.
Its width allows for installations of up to 12 modules in a row in any standard electrical distributor.
Delivery without module.

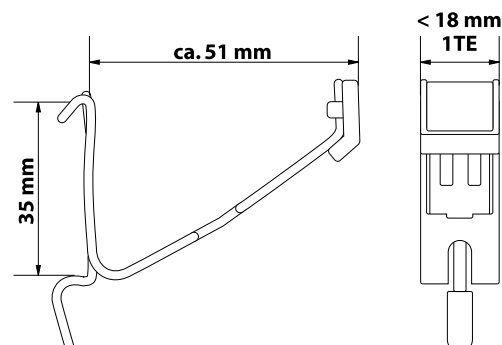
Suitable for the following Datwyler modules:

- RJ45 module KS-T Plus Cat.6_A, shielded
- RJ45 module KS-T Cat.6/E_A, shielded
- RJ45 module KS-TS Cat.6/E_A, shielded
- RJ45 module KS-T Cat.5e, shielded
- RJ45 module KU-T Cat.6, unshielded
- RJ45 module KU-T Cat.5e, unshielded

FEATURES

- Rail mounted onto TH35 rails (in accordance with DIN EN60715)
- W = 1 width unit (< 18mm) (DIN 43880)
- with labelling field

DIMENSIONS



Article No.	Description	Colour (similar)	PU
418025	Rail adapter Keystone for 1x KS-T/KU-T (delivery without module)	metal	1 pc.

COPPER ACCESSORIES

Management panels & cable shelves 19"/1U

in different versions



Management panel 19"/1U,
version made of stainless steel,
with 5 support brackets



19" cable shelf with management panel



19" cable shelf with cable
feedthrough panel and strip

PRODUCT INFORMATION

APPLICATION

Management panels 19"/1U are suitable for the routing of copper and fibre optic cables, particularly suitable for patch cords in racks or cabinets with 19" mounting angles and rails.

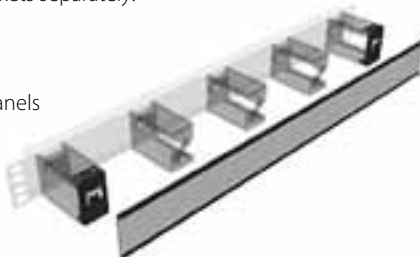
Cable shelves fulfil the same function, particularly for multiple (trunk) cables.

DESCRIPTION

The basic management panels 19"/1U are available in three versions:
a) stainless steel, b) black or c) grey.

These panels come without support brackets.
They can be fitted with 5 support brackets in the required dimension.
Please order the support brackets separately!

There are labelling strips
for complete management panels
with support brackets
available:



Article No.	Description	Colour/Material	PU
1411480	Support bracket 30 mm	plastic, black	1 pc.
1411481	Support bracket 75 mm	metal	1 pc.
1411482	Support bracket 110 mm	metal	1 pc.
1411604	Management panel 19" 1U for 5 support brackets (delivery without brackets)	RAL 7035	1 pc.
1407689	Management panel 19" 1U for 5 support brackets (delivery without brackets)	RAL 9005	1 pc.
418200	Management panel 19" 1U for 5 support brackets (delivery without brackets)	stainless steel, blank	1 pc.
401240	19" blank plate, 1U	RAL 7035	1 pc.
401241	19" blank plate, 1U	RAL 9005	1 pc.
401242	19" blank plate, 1U	stainless steel, blank	1 pc.
401243	19" blank plate, 2U	RAL 7035	1 pc.
401244	19" blank plate, 2U	RAL 9005	1 pc.
401245	19" blank plate, 2U	stainless steel, blank	1 pc.
401247	Cable feedthrough panel with strip 19"/1U	RAL 7035	1 pc.
401248	Cable feedthrough panel with strip 19"/1U	RAL 9005	1 pc.
401249	Cable feedthrough panel with strip 19"/1U	stainless steel, blank	1 pc.
400300	19" cable shelf, depth adjustable due to slide rails (from 520 mm up to 850 mm) (only mountable with a management panel or cable feedthrough panel; rear side 19" fixation necessary)		1 pc.
470033	Labelling strip (for complete management panel with bracket type 1411480)		1 pc.
470034	Labelling strip (for complete management panel with bracket types 1411481, 1411482)		1 pc.

Rangierpanel 1HE 0412/e

Management panels 19"/1U and 2U assembled with 4 support brackets

 SWISS STANDARD


Management panels 19"/1U and 19"/2U

PRODUCT INFORMATION

APPLICATION	Management panels 19"/1U and 19"/2U for the routing of copper and fibre optic patch cords in racks or cabinets with 19" attachments.
DESCRIPTION	The management panels are assembled with 4 support brackets.

Article No.	Description	Material/colour	PU
185735	Management panel 19"/1U with 4 metal brackets	metal / RAL7035	1 pc.
185736	Management panel 19"/2U with 4 metal brackets	metal / RAL7035	1 pc.

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

Rangierpanel 1/2HE 0412/e

COPPER ACCESSORIES

Cover frames and surface mounted box for Datwyler data outlets

 GERMAN STANDARD



Cover frame 1-fold
80 x 80 mm



Cover frame 2-fold
150 x 80 mm



Surface mounted box
for data outlet
height = 40 mm



Spacer frame for
surface mounted box
height = 10 mm

PRODUCT INFORMATION

APPLICATION

For the surface mounting of Datwyler data outlets.

DESCRIPTION

Cover frame 1-fold, 2-fold

The dimensions of the cover frames fully apply with the German standard, that is outer frame size 80 x 80 mm, inner frame size 50 x 50 mm.

Suitable for the following Datwyler outlets:

- Data outlets CSD 2/8-U 2/8 and CSD 2/8-K
- Faceplates 2x and 3x for MS modules
- Faceplates 2x and 3x for MS-K modules
- Faceplate PS-TERA 2x









DESCRIPTION

Surface mounted box for Datwyler data outlets

for copper and fibre optic outlets.

The surface mounted box (80 x 80 mm) comprises a housing and a cover frame (H = 40 mm).

The spacer frame (H = 10 mm) can be used to increase the height from 40 mm to 50 mm.

Article No.	Description	Colour (similar)	PU
1401630 	Cover frame 1-fold 80 x 80 x 5 mm	RAL 1013	1 pc.
1400830 	Cover frame 1-fold 80 x 80 x 5 mm	RAL 9010	1 pc.
1403700 	Cover frame 2-fold	RAL 1013	1 pc.
1403924 	Cover frame 2-fold	RAL 9010	1 pc.
1406274 	Surface mounted box 40 mm with cover frame	RAL 1013	1 pc.
1406276 	Spacer frame 10 mm for surface mounted box	RAL 1013	1 pc.
1406273 	Surface mounted box 40 mm with cover frame	RAL 9010	1 pc.
1406275 	Spacer frame 10 mm for surface mounted box	RAL 9010	1 pc.

Mounting support for cable ducts for Datwyler faceplates



Fig.1 Mounting support for horizontal installation without separator



Fig.2 Mounting support for vertical installation without separator

PRODUCT INFORMATION

APPLICATION

Mounting supports for easy and space-saving mounting of Datwyler faceplates in cable ducts in order to maintain the bending radius as required for copper and FO data cables.

Due to Datwyler's extensive range (see below) one can find a mounting support that fits in almost every cable duct system.

Fixing dimension for the faceplates = 60 mm (horizontal).

Suitable for the following Datwyler faceplates:

- Data outlet CSA Plus 2/8
- Faceplate 2x and 3x for MS modules
- Faceplate 2x and 3x for MS-K modules
- Faceplate 1x, 2x and 3x for KS modules
- Faceplate PS-TERA 2x

DESCRIPTION

There are mounting supports to be used for three different installation methods:

- T-Nut fastening horizontal and vertical, suitable for Thealit and Ackermann-k ducts
- DIN rail mounting (35 mm width) 52 mm overall height, suitable for Niedax, Nowa Plast, Rhönmetall, and Rehnau (Signo series) ducts
- DIN rail mounting (35 mm width) 50 and 55mm overall height, suitable for GGK, Licatec, Stago, and Thorsmann Inka series ducts with adapter TTI-N70 or N215

In order to isolate the parts that are connected to the power supply, the supports can also be delivered with snap-on separator tray.

Article no.	Fig.	Description	PU
185695	1	Mounting support for faceplate T-Nut 50 mm without separator tray	1 pc. / box
185696	-	Mounting support for faceplate T-Nut 50 mm with separator tray	1 pc. / box
185697	-	Mounting support for faceplate T-Nut 55 mm without separator tray	1 pc. / box
185698	-	Mounting support for faceplate T-Nut 55 mm with separator tray	1 pc. / box
185699	2	Mounting support for faceplate T-Nut 50 mm vertical without separator tray	1 pc. / box
185701	-	Mounting support for faceplate T-Nut 50 mm vertical with separator tray	1 pc. / box
185702	-	Mounting support for faceplate T-Nut 55 mm vertical without separator tray	1 pc. / box
185703	-	Mounting support for faceplate T-Nut 55 mm vertical with separator tray	1 pc. / box
185704	-	Mounting support for faceplate DIN rail 50 mm without separator tray	1 pc. / box
185705	-	Mounting support for faceplate DIN rail 50 mm with separator tray	1 pc. / box
185706	-	Mounting support for faceplate DIN rail 52 mm without separator tray	1 pc. / box
185707	-	Mounting support for faceplate DIN rail 52 mm with separator tray	1 pc. / box
185708	-	Mounting support for faceplate DIN rail 55 mm with separator tray	1 pc. / box
185709	-	Mounting support for faceplate DIN rail 55 mm without separator tray	1 pc. / box

COPPER ACCESSORIES

Tools and installation aids

for PS-GG45 modules
for patch panels



Termination tool for PS-GG45



Patch panel termination aid
for 19" racks / cabinets

PRODUCT INFORMATION

DESCRIPTION

Termination tool for PS-GG45 modules

For the assembly of the PS-GG45 module and for connecting the wires at the same time.

DESCRIPTION

Termination aid for Datwyler patch panels

The two angular sheets (brackets) can easily be fixed to the 19" frame or cabinet so that the patch panel is presented at an angle of 45 degrees.

The cable termination is much easier and more comfortable with the panel held in this position.

Article No.	Description	PU
400105	Termination tool for PS-GG45 modules	1 pc.
1401624	Patch panel termination aid (1 set = 2 angular sheets)	1 set

Tools and installation aids for LSA Plus / IDC termination for RJ45 Keystone modules



LSA Plus

110

Termination tools
for LSA Plus and IDC contacts

Installation aid for
RJ45 Keystone modules

PRODUCT INFORMATION

DESCRIPTION

Termination tool for LSA Plus or IDC contacts - cable insulation displacement aid

Suitable for the terminating data cables with solid conductors with LSA Plus or IDC contacts. With the help of these tools the cable can be pushed into the contacts, insulated, connected and cut to the requested length.

DESCRIPTION

Installation aid for RJ45 Keystone modules

The installation aid (hand puck) facilitates the connection of a RJ45 Keystone module with the cable conductors and enables optimum protection against injuries.

Article No.	Description	PU
1401609	LSA Plus termination tool for LSA punch down contacts	1 pc.
185896	IDC termination tool 110 (recommended for outlets CSD, patch panels CSP and CUP, and for KS modules)	1 pc.
185898	Keystone Hand Puck, installation aid for RJ45 Keystone modules, red	1 pc.

COPPER ACCESSORIES

Tools and installation aids

for LSA Plus / IDC termination

for RJ45 Keystone modules and data cables



Cable connector
Cat.7 IP20



Anti-dust cover
for RJ45 modules



Anti-dust cover
for RJ45 plug

PRODUCT INFORMATION

DESCRIPTION

Cable connector Cat.7 IP20

For connection (lengthening) of shielded Cat.5, 6, 6_A and 7/7_A data cables.
Shielded metal housing (IP20),
W x L x H: 37 x 114 x 20.5 mm.

DESCRIPTION

Anti-dust cover for RJ45 modules

DESCRIPTION

Anti-dust cover for RJ45 plug

Provides protection against dust and mechanical damage,
fixed to the cable (undetachable),
can be slipped over plugs that are already fitted.

Article No.	Description	PU
417531	Cable connector Cat.7 IP20	1 pc.
1401628	Anti-dust covers for RJ45 modules	100 pcs.
400305	Anti-dust cover for RJ45 plug	1 pc.

**Tools and installation aids
for data cables
for PS and MS modules**



PS-TERA/MS tool
for easy cable preparation



Parallel pliers for easy cable termination
(for modules PS-TERA 1/8 and MS 1/8)



Cable stripping tool Abi 62

PRODUCT INFORMATION

DESCRIPTION

PS-TERA/MS tool for cable preparation

To remove the overall sheath of the data cable and the foil around the wire pairs when terminating cables with PS-TERA connectors.
With adjustable block to determine the correct wire lengths.

DESCRIPTION

Parallel pliers for the cable termination with MS 1/8 and PS-TERA 1/8 modules

Pliers for easy cable termination with MS and PS-TERA modules.
Serves as a press-down tool for the modules until they snap into place.

DESCRIPTION

Cable stripping tool Abi 62

The outer sheath and the stabilizing element as well as the screen foil of the data cable CU 6702 4P can be quickly and safely removed with this tool.

Article No.	Description	PU
1412330	Parallel pliers for termination of MS 1/8 and PS-TERA 1/8 modules	1 pc.
1409210	PS-TERA/MS tool for easy cable preparation	1 pc.
185640	Cable stripping tool Abi 62 for CU 6702 4P	1 pc.

SUBFLOOR SYSTEMS

Floor box inserts

for RJ45 modules and faceplates

Floor boxes are subfloor connectivity solutions in different shapes and sizes.

As a general rule, the following equipment is used:

rectangular = GES 9 or GES 6
round = GESR 9 or GESR 6

They offer the following capacities:

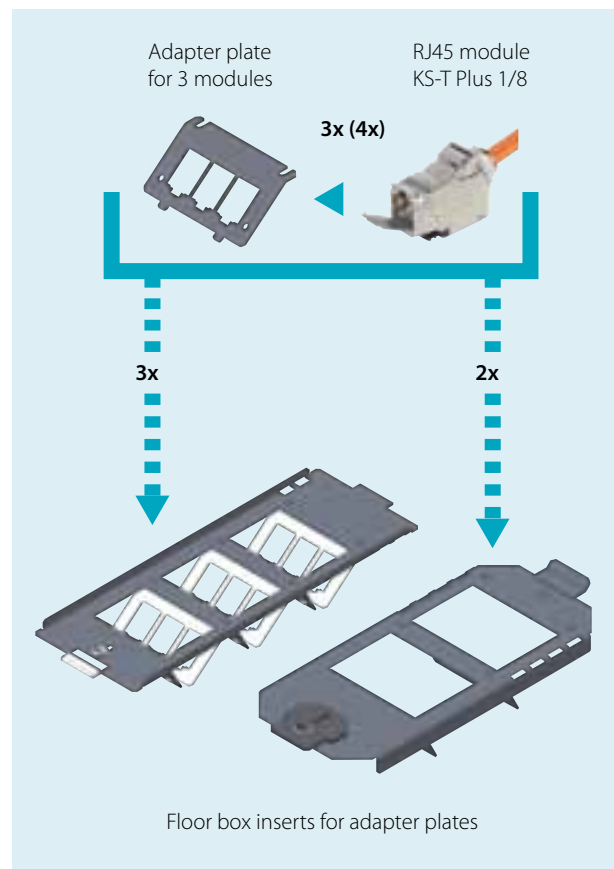
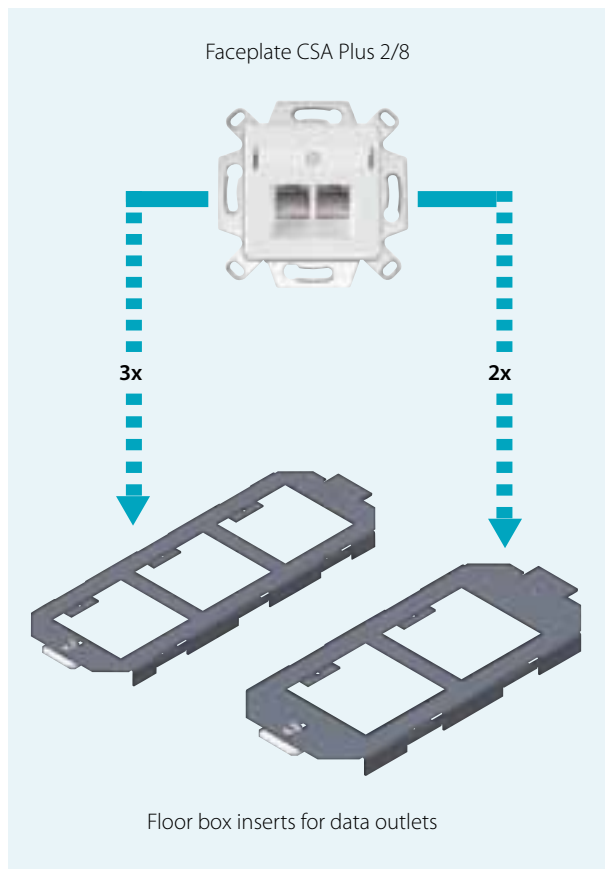
GES 6 / GESR 6 = max. 3 floor box inserts with 2 ports
GES 9 / GESR 9 = max. 3 floor box inserts with 3 ports



GES 6 / GES 9



GESR 6 / GESR 9



Advantages of the floor box inserts and floor box adapter plates

The floor box inserts can be installed in the floor boxes from different manufacturers without the need to use mounting boxes. Either data outlets or adapter plates can be installed in the floor box inserts. Adapter plates are available for all types of Datwyler RJ45 modules.

As the floor box inserts can be installed without mounting boxes, this subfloor connectivity solution offers more space and allows for easier subfloor installation of copper and fibre optic cables.

Unused compartments can be closed with blank plates.

CONFIGURATION EXAMPLE









Floor box inserts for faceplates CSA Plus



Blank plate

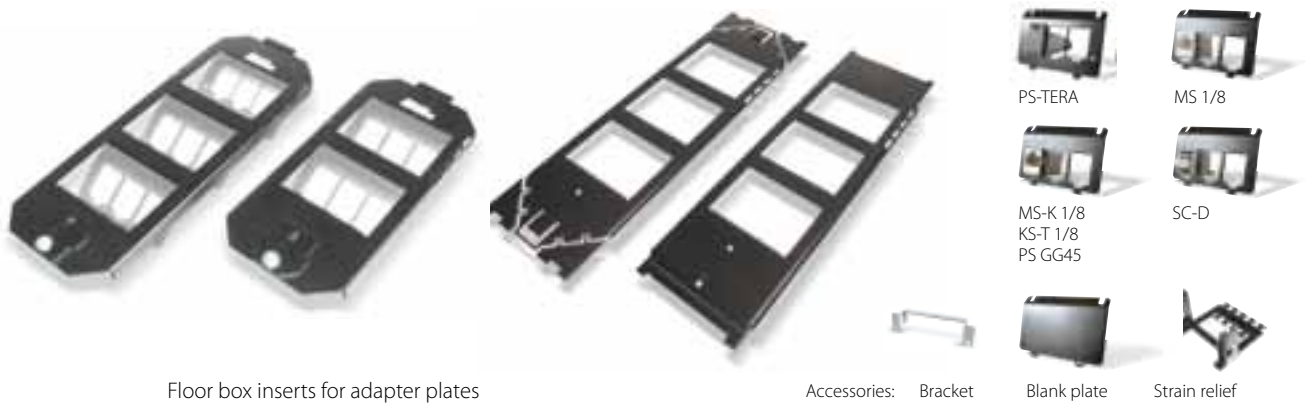
PRODUCT INFORMATION

Floor box solutions

Fig.	Article No.	Description	PU
	417400	Floor box insert for Ackermann GES 9, for 3 faceplates CSA Plus	1 pc.
	417401	Floor box insert for Ackermann GES 6, for 2 faceplates CSA Plus	1 pc.
	417404	Floor box insert for PUK, for 3 faceplates CSA Plus	1 pc.
	417402	Blank plate for floor box inserts, Article Nos. 417400 and 417401	1 pc.

SUBFLOOR SYSTEMS

**Floor box inserts
for diverse modules**



PRODUCT INFORMATION

Floor box solutions

Fig.	Article No.	Description	PU
	417410	Floor box insert for Ackermann System 55 GESR 9, for 3 adapter plates	1 pc.
	417411	Adapter plate for floor box insert System 55, version for 2 modules of type MS 1/8, MS-N 1/8, PS-TERA (fixation with support bracket 417440)	1 pc.
	417412	Adapter plate for floor box insert System 55, version for 3 modules of type MS 1/8, MS-N 1/8, PS-TERA (fixation with support bracket 417440)	1 pc.
	417421	Floor box insert 3x3 for Ackermann GES 9, for 3 adapter plates	1 pc.
	417420	Floor box insert 2x3 for Ackermann GES 6, for 2 adapter plates	1 pc.
	417422	Floor box insert 3x3 for OBO Bettermann GEE 9-12, for 3 adapter plates	1 pc.
	417423	Floor box insert 3x3 for Elektraplan GB 3, for 3 adapter plates	1 pc.
	417424	Floor box insert 3x3 for Van Geel IK-1, for 3 adapter plates	1 pc.
	417428	Floor box insert 3x4 for OBO Bettermann GES 9-12, for 3 adapter plates	1 pc.
	417436	Adapter plate for floor box insert 3x4, with description frame and 2 screw nuts, version for 4 modules with Keystone fitting (MGK)	1 pc.
	417432	Adapter plate for floor box insert, version for blank plate	1 pc.
	417433	Adapter plate for floor box insert, with description frame and 2 screw nuts, version for 3 modules of type MS 1/8, MS-N 1/8	1 pc.
	417434	Adapter plate for floor box insert, with bracket, description frame and 2 screw nuts, version for 3 modules of type PS-GG45, KS-T 1/8, KS 1/8 (delivery with support bracket)	1 pc.
	417440	Support bracket for PS-TERA, for adapter plate Article No. 417430 (see below)	1 pc.
	417435	Adapter plate for floor box insert, with description frame and 2 screw nuts, version for 3 modules of type MS-K 1/8, PS-GG45, KS-T 1/8	1 pc.
	417441	Strain relief 45 mm for floor box insert, steel 1203, RAL 9005 deep black	1 pc.
	417442	Strain relief 64.5 mm for floor box insert, steel 1203, RAL 9005 deep black	1 pc.
	417431	Adapter plate for floor box insert, version for 2 SC Duplex connectors, horizontal, with mounting parts, steel 1203, RAL 9005 deep black	1 pc.
	417430	Adapter plate for floor box insert, with description frame and 2 screw nuts, version for 3 modules of type PS-TERA (support bracket for PS-TERA: see Article No. 417440)	1 pc.

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

Floor box modules for RJ45 modules MS C6_A 1/8, MS 1/8 and MU 1/8



Floor box module (GB 2)
for 3 RJ45 modules MS C6_A 1/8, MS 1/8 and MU 1/8,
expandable to 6 RJ45 modules



Floor box module (GB 3)
for 3 RJ45 modules MS C6_A 1/8, MS 1/8 and MU 1/8,
expandable to 9 RJ45 modules

PRODUCT INFORMATION

APPLICATION

The floor box modules can be installed in all standard floor box systems, e. g. from OBO or Niedax.

DESCRIPTION

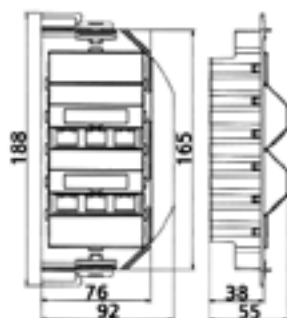
The floor box modules are available in two sizes - corresponding to the mounting box sizes 2 and 3:
The module size 2 comes with one pre-installed insert for 3 RJ45 modules. This floor box module is expandable through one additional insert to 6 RJ45 modules.
The module size 3 comes with one pre-installed insert for 3 RJ45 modules. This floor box module is expandable through two additional inserts to 9 RJ45 modules.

The RJ45 modules can be easily installed in the inserts - while maintaining the minimum bend radius for copper cables.

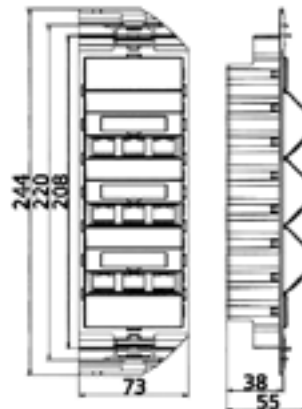
Delivery without modules.

DIMENSIONS

GB 2 (mm)



GB 3 (mm)



Article No.	Description	Colour (similar to)	PU
1411751	Floor box module (GB 2) for 3 RJ45 modules MS C6 _A 1/8, MS 1/8 and MU 1/8 (delivery without modules)	RAL 1013	1 pc.
1412365	Floor box module (GB 3) for 3 RJ45 modules MS C6 _A 1/8, MS 1/8 and MU 1/8 (delivery without modules)	RAL 1013	1 pc.
1411753	Upgrade-Set (for GB 2, 3) for 3 RJ45 modules MS C6 _A 1/8, MS 1/8 and MU 1/8 (delivery without modules)	RAL 1013	1 pc.
185700	RJ45 module MS 1/8 Cat.6/E _u , shielded - colour code T568-A	metal	10 pcs.
185750	RJ45 module MU 1/8 Cat.6, unshielded - colour code T568-A	white	10 pcs.
309250	RJ45 module MS-C6 _A 1/8 Cat.6 _A (IEC) 180°	metal	10 pcs.

(further module configurations on request)

SUBFLOOR SYSTEMS

Consolidation Point box, 12-port for one 12-port front plate



Box base with mounted front plate 12x MGK
(delivery without front plate)



Consolidation Point box, 12-port, with cover
and lock (optional)

PRODUCT INFORMATION

APPLICATION For the termination of data cables in a Consolidation Point (CP), typically installed in raised floors.

DESCRIPTION Box accepts one 12-port front plate
Two-part construction with box base and cover, both made of galvanised metal sheet
Snap-in cover, can be opened and completely removed from the box base without any tools
With strips on front and back
Protection rating IP20

DIMENSIONS W x H x D: 260 x 55 x 190 mm (with lock: H = 57 mm)

Front plate needs to be ordered separately

FRONT PLATE 12x MGK

Suitable for the following Datwyler modules:

- PS-GG45 7_A 4P Cat.7_A shielded
- RJ45 module KS-T Plus 1/8 Cat.6_A shielded
- RJ45 module MS-K Plus 1/8 Cat.6_A shielded
- RJ45 module MS-C6_A 1/8 Cat.6_A 180° K shielded
- RJ45 module KS-T 1/8 Cat.6/E_A shielded
- RJ45 module KS-TS 1/8 Cat.6/E_A shielded
- RJ45 module KU-T 1/8 Cat.6 / Cat.5e unshielded

Article No.	Description	Colour (similar to)	PU
417483	Consolidation Point box, 12-port (delivery without front plate)	metal	1 pc.
417484	Front plate FP 12x MGK for CP box 12-port	metal	1 pc.
417485	Lock for Consolidation Point box, keyed alike	metal	1 pc.

Consolidation Point box, 6-port for one 6-port front plate



Box base with mounted front plate 6x MGK
(delivery without front plate)



Consolidation Point box, 6-port, with cover
and lock (optional)

PRODUCT INFORMATION

APPLICATION For the termination of data cables in a Consolidation Point (CP), typically installed in raised floors.

DESCRIPTION Box accepts one 6-port front plate
Two-part construction with box base and cover, both made of galvanised metal sheet
Snap-in cover, can be opened and completely removed from the box base without any tools
With strips on front and back
Protection rating IP20

DIMENSIONS W x H x D: 156 x 55 x 190 mm (with lock: H = 57 mm)

Front plate needs to be ordered separately

FRONT PLATE 6x MGK **Suitable for the following Datwyler modules:**

- PS-GG45 7_A 4P Cat.7_A shielded
- RJ45 module KS-T Plus 1/8 Cat.6_A shielded
- RJ45 module MS-K Plus 1/8 Cat.6_A shielded
- RJ45 module MS-C6_A 1/8 Cat.6_A 180° K shielded
- RJ45 module KS-T 1/8 Cat.6/E_A shielded
- RJ45 module KS-TS 1/8 Cat.6/E_A shielded
- RJ45 module KU-T 1/8 Cat.6 / Cat.5e unshielded

Article No.	Description	Colour (similar to)	PU
417487	Consolidation Point box 6-port (delivery without front plate)	metal	1 pc.
417488	Front plate FP 6x MGK for CP box 6-port	metal	1 pc.
417485	Lock for Consolidation Point box, keyed alike	metal	1 pc.

Product overview and selection guide for optical fibres

Selection criteria

The Datwyler product portfolio consists of different types of optical fibre.

The following overview lists some of the more important criteria which will help you to decide for the fibre types that meet your specific requirements.

Fibre type	Standard
------------	----------

		Fibre criteria						Transmission				Application																									
		max. attenuation dB/km 850 nm (cabled)		max. attenuation dB/km 1300 /1310 nm (cabled)		max. attenuation dB/km 1383 nm (cabled)		max. attenuation dB/km 1550 nm (cabled)		max. attenuation dB/km 1625 nm (cabled)		max. PMD ps/-/km (cabled)		LED 850/1300 nm (typical: 100 Mbit/s)		VCSEL 850 nm (1 GbE - 10 GbE)		Laser 1310 - 1625 nm		CWDM systems		max. 1 GbE link length 1000Base-SX IEEE 802.3z		max. 10 GbE link length 10GBase-SR/SW IEEE 802.3ae		Fibre-to-the-desk - horizontal cabling (typical: 1 GbE)		Campus / Backbone / Data Centre (typical: 10 GbE)		WAN / National backbone		City / Metro / Access network		Fibre-to-the-home			
Singlemode fibres E9/125																																					
SMF E9/125	G.652.D	0.36	0.36	0.23	0.27	0.2																															
SMF E9/125, bend optimized	G.657.A1	0.36	0.36	0.23	0.27	0.2																															
Multimode fibres G50/125																																					
MMF G50/125	OM2	2.70	0.70																				750	150													
MMF G50/125	OM3	2.70	0.70																				1000	300													
MMF G50/125	OM4	2.70	0.70																				1100	550													
Multimode fibre G62,5/125																																					
MMF G62,5/125	OM1	3.00	0.70																				275	33													

Checklist: Fibre types, applications and maximum link lengths

Link lengths (m)							
Fibre type		Multimode 50 µm			Multimode 62.5 µm	Singlemode	Singlemode
		OM2	OM3	OM4	OM1	OS1/OS2	OS1/OS2
Wavelength		850 nm			850 nm	1310 nm	1550 nm
Modal Bandwidth (MHz.km)		500 OFL	2000 EMB	4700 EMB	200 OFL		
Application Standard	Nominal speed						
IEEE 802.3 series Ethernet							
100BASE-SX	1 Gb/s	550 / 750	860 / 1000	860 / 1100	275 / 300	-	-
10GBASE-S	10 Gb/s	82 / 150	300	400 / 550	33	-	-
10GBASE-L	10 Gb/s	-	-	-	-	10000	-
10GBASE-E	10 Gb/s	-	-	-	-	-	30000 / 40000 ²⁾
40GBASE-SR4	40 Gb/s	-	100 / 140	150 ¹⁾ / 170	-	-	-
40GBASE-LR4	40 Gb/s	-	-	-	-	10000	-
100GBASE-SR10	100 Gb/s	-	100 / 140	150 ¹⁾ / 170	-	-	-
100GBASE-LR4	100 Gb/s	-	-	-	-	10000	-
100GBASE-ER4	100 Gb/s	-	-	-	-	30000 / 40000 ²⁾	-
ANSI - INCITS Fibre Channel							
100-MX-SN-I	1 Gb/s	500	860	860	300	-	-
200-MX-SN-I	2 Gb/s	300	500	500	150	-	-
400-MX-SN	4 Gb/s	150	380	400	70	-	-
800-MX-SN	8 Gb/s	50	150	190	21	-	-
800-MX-SA	8 Gb/s	100	300	300	40	-	-
1200-MX-SN-I	10 Gb/s	82	300	450	33	-	-
1600-MX-SN	16 Gb/s	35	100	125	-	-	-
InfiniBand TA³⁾							
IB-1x-SDR-SX	2.5 Gb/s	250	500	500	125	-	-
IB-4x-SDR-SX	10 Gb/s	125	200	200	75	-	-
IB-8x-SDR-SX	20 Gb/s	125	200	200	75	-	-
IB-12x-SDR-SX	30 Gb/s	125	200	200	75	-	-
IB-1x-DDR-SX	5 Gb/s	125	200	200	65	-	-
IB-4x-DDR-SX	20 Gb/s	75	150	150	50	-	-
IB-8x-DDR-SX	40 Gb/s	75	150	150	50	-	-
IB-12x-DDR-SX	60 Gb/s	75	150	150	50	-	-
IB-1x-QDR-SX	10 Gb/s	82	300	300	33	-	-

¹⁾ 1 dB allocated for connection and splice loss

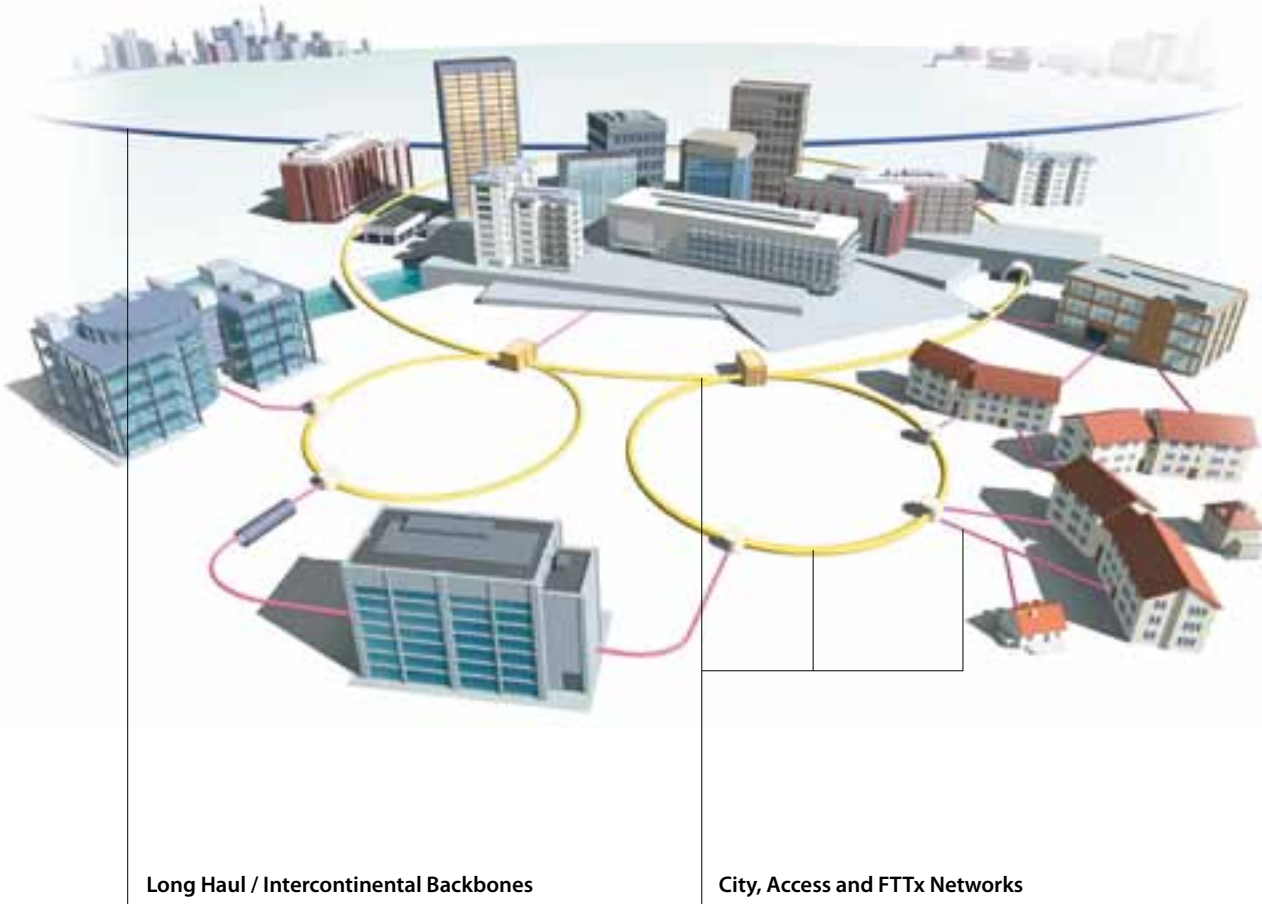
²⁾ 40000 m engineered links

³⁾ InfiniBand TA specification does not mention OM4 - therefore OM4 is treated as OM3 in this table

The **red** values show maximum link lengths for the Ethernet protocols in the case that optical fibres from Datwyler are used, taking into account less fibre and less connector attenuation than stipulated in the standard.

Singlemode fibre

Application areas for different types of Singlemode fibres



Long Haul / Intercontinental Backbones

Singlemode fibre
G.652.D
G.655.D (on request)

City, Access and FTTx Networks

Singlemode fibre
G.652.D
Bend optimized Singlemode fibre
G.657.A and B

Criteria for Singlemode fibre selection

Singlemode fibres are the transmission medium of the future. The convergence of telecommunications is a reality, and the demand for network transmission capacity will continue to rise. Datwyler is specifying its singlemode products – focussing on product design for City and Access networks and for Fibre-to-the-Home applications.

Singlemode fibres used by Datwyler provide

- outstanding optical and mechanical properties
- very small polarisation mode dispersion coefficient
- low Water Peak attenuation
- low microbending and low macrobending sensitivity
- highest guarantee of performance delivery to the customer

Bend optimized Singlemode fibres



FTTx access

G.652.D
G.657.A and B

FTTH in-house

**Bend optimized
Singlemode fibre**
G.657.A and B

For the installation of FTTx networks - including the in-house installation to the local loop - ITU-T defined two singlemode fibre categories, both with two sub-categories that provide different macrobending properties:

ITU-T G.657 Category A

Fibres of this category are compatible with the ITU-T G.652.D fibre, but optimised in terms of reduced macrobending losses (dB) and dimensional specifications. They can be used in the whole FTTx network (access and in-house).

- sub-category ITU-T G.657.A1: suitable for bending radii up to 10 mm
- sub-category ITU-T G.657.A2: suitable for bending radii up to 7.5 mm

ITU-T G.657 Category B

Fibres of this category are compatible with the ITU-T G.657.A fibre, but optimised in terms of further reduced macrobending losses (dB). Thus, they are suitable for even smaller bending radii.

They can be used for distances below 1000 m at the end of the FTTx network, particularly in buildings.

- Sub-category ITU-T G.657.B2: suitable for bending radii up to 7.5 mm
- Sub-category ITU-T G.657.B3: suitable for bending radii up to 5 mm

Overview: Fibre types and macrobending losses

Bend radius	No of windings (turns)	G.652.D (1625 nm)	G.657.A1 (1550 nm)	G.657.A2/B2 (1550 nm)	G.657.B3 (1550 nm)
30 mm	100	≤ 0.1 dB	not specified	not specified	not specified
10 mm	1	not specified	≤ 0.75 dB	≤ 0.1 dB	≤ 0.03 dB
7.5 mm	1	not specified	not specified	≤ 0.5 dB	≤ 0.08 dB
5.0 mm	1	not specified	not specified	not specified	≤ 0.15 dB

Datwyler use category G.657.A1 fibres as a standard fibre for the company's FTTx cables. A1 fibres are fully compatible with standard singlemode fibres (ITU-T G.652.D).

FO cables with other fibre types are available on request.

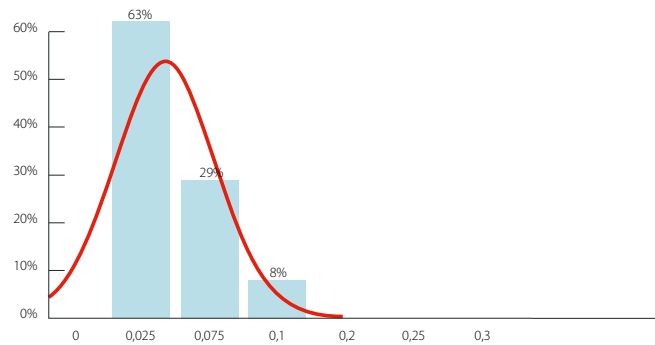
Singlemode fibre

ITU-T G.652.D, low water peak



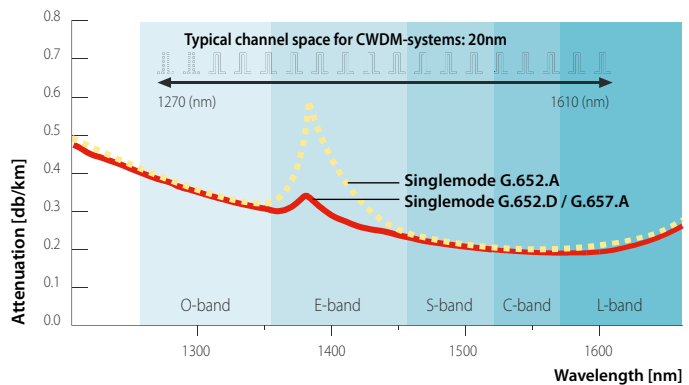
PMD frequency scale of the ITU-T G.652.D fibre

Fibre optic systems with very high bit rates and very low chromatic dispersion must use a singlemode fibre with very low PMD (Polarization Mode Dispersion). The majority of the singlemode fibre G.652.D used by Datwyler provides PMD values that far exceed the limit values stipulated by the standard.



Spectral attenuation of the ITU-T G.652.D fibre

The singlemode fibre G.652.D used by Datwyler is optimised for transmissions of highest data rates at all wavelengths and for all applications. The low water peak attenuation enables CWDM transmissions at the E-Band (1383 nm - 1480 nm). The geometrical, optical and mechanical performance corresponds with the relevant European and international standards.

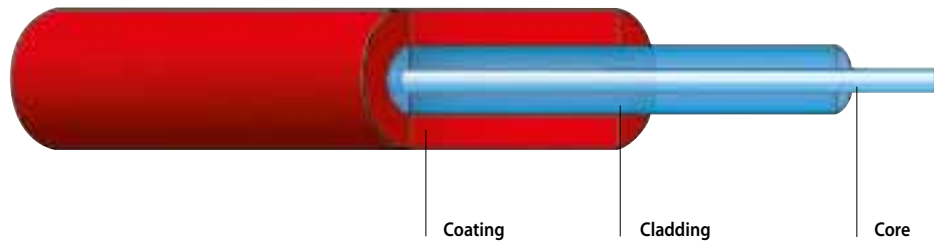


Attenuation of the ITU-T G.652.A-D fibre categories in comparison

	ITU-T G.652.A (OS1)	ITU-T G.652.B (OS1)	ITU-T G.652.C (OS2)	ITU-T G.652.D (OS2)	Datwyler G.652.D (OS2)
Attenuation 1310 nm	≤ 0.5 dB/km	≤ 0.4 dB/km	≤ 0.4 dB/km	≤ 0.4 dB/km	typ. 0.34 dB/km max. 0.36 dB/km
Attenuation 1383 nm			≤ 0.4 dB/km	≤ 0.4 dB/km	typ. 0.34 dB/km max. 0.36 dB/km
Attenuation 1550 nm	≤ 0.4 dB/km	≤ 0,35 dB/km	≤ 0.3 dB/km	≤ 0.3 dB/km	typ. 0.22 dB/km max. 0.24 dB/km
Attenuation 1625 nm		≤ 0.4 dB/km	≤ 0.4 dB/km	≤ 0.4 dB/km	typ. 0.24 dB/km max. 0.25 dB/km
PMD	≤ 0.5 ps/√km	≤ 0.2 ps/√km	≤ 0.5 ps/√km	≤ 0.2 ps/√km	typ. 0.05 dB/√km max. 0.20 dB/√km

Bend optimized Singlemode fibre

E9/125/250 in accordance with ITU-T G.657.A1
compatible with ITU-T G.652.D



PRODUCT INFORMATION

APPLICATION Home connection, FTTH access network, FTTx indoor cabling.

DESCRIPTION Bend optimized singlemode fibre with improved macrobending properties for the home connection and for the cabling in FTTH access networks (Fibre-to-the-home). Full-spectrum singlemode fibre, suitable for the operating wavelengths in all FTTx networks. Fully compatible with (even exceeding) the standards ITU-T G.652.D und ITU-T G.657.A. Permitted bending radius: 15 mm up to 10 mm.

TRANSMISSION CHARACTERISTICS	Wavelength	[nm]	1310	1383	1550	1625
			Maximum Attenuation (cabled)	[dB/km]	0.36	0.36*
			* post hydrogen aging performance			
	Maximum Chromatic Dispersion	[ps/(nm x km)]	3.5		18	22
	Zero Dispersion Wavelength λ_0	[nm]	1304 $\leq \lambda_0 \leq$ 1324			
	Maximum Zero Dispersion Slope S_0	[ps/(nm ² x km)]	0.089			
	Mode-Field Diameter	[μ m]	8.6+/- 0.4		9.8+/- 0.5	
	Maximum Cable Cutoff Wavelength λ_{ccf}	[nm]	1260			
	Maximum Polarization Mode Dispersion (PMD)	[ps/ \sqrt km]	0.2		0.2	
	Refractive index		1.4679		1.4684	

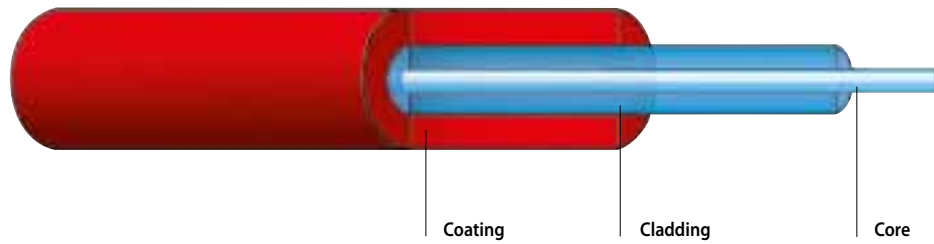
GEOMETRICAL AND MECHANICAL CHARACTERISTICS	Cladding Diameter		[μ m]	125 +/- 0.7
	Maximum Core / Cladding Concentricity Error		[μ m]	0.5
	Maximum Cladding Non-Circularity		[%]	0.7
	Coating Diameter		[μ m]	242 +/- 5
	Maximum Cladding/Coating Concentricity Error		[μ m]	12
	Minimum Fiber Curl Radius		[m]	4.0
	Operating Temperature Range		[°C]	-60 up to +85
	Test Load		[kpsi]	100

MACROBENDING CHARACTERISTICS	Number of windings and bend radius		Wavelength	Max. induced attenuation
	1	turn x 10 mm	1550 nm	\leq 0.50 dB
	1	turn x 10 mm	1625 nm	\leq 1.5 dB
	10	turns x 15 mm	1550 nm	\leq 0.05 dB
	10	turns x 15 mm	1625 nm	\leq 0.3 dB
	100	turns x 30 mm	1625 nm	\leq 0.01 dB

OPTICAL FIBRES

Singlemode fibre

E9/125/250 in accordance with ITU-T G.652.D, IEC 60793-2-50 Type B1.3 equates to EN 50173:2011 OS2



PRODUCT INFORMATION

APPLICATION LAN backbone, data centre, city network, access network, FTTx network, long haul network (WAN).

DESCRIPTION Full-spectrum singlemode fibre in accordance with ITU-T G.652.D with optimised transmission characteristics. Suitable for the operating wavelengths in all FTTx networks. Tight dispersion tolerance to support low-cost upstream transmitters. Superior bending properties allow for easy installation. Backward compatible with installed base of G.652 fibre. Enables a cost-effective FTTx deployment: provides extra distance and margin and reduces field equipment and maintenance costs.

TRANSMISSION CHARACTERISTICS	Wavelength	[nm]	1310	1383	1550	1625
			Maximum Attenuation (cabled)	[dB/km]	0.36	0.36*
				*post hydrogen aging performance		
	Maximum Chromatic Dispersion	[ps/(nm x km)]	3.5		18	23
	Zero Dispersion Wavelength λ_0	[nm]	1310 $\leq \lambda_0 \leq$ 1324			
	Maximum Zero Dispersion Slope S_0	[ps/(nm ² x km)]	0.092			
	Mode-Field Diameter	[mm]	9.2 +/- 0.4	10.4 +/- 0.5		
	Maximum Cable Cut-off Wavelength λ_{ccf}	[nm]	1260			
	Polarisation Mode Dispersion (PMD), maximum PMDq Link Design Value (cabled)	[ps/ $\sqrt{\text{km}}$]	0.20			
	Refractive Index		1.4676	1.4682		

GEOMETRICAL AND MECHANICAL CHARACTERISTICS	Cladding Diameter	[mm]	125.0 +/- 0.7
	Maximum Core/Cladding Concentricity Error	[mm]	0.5
	Maximum Cladding Non-Circularity	[%]	0.7
	Coating Diameter	[mm]	245 +/- 5
	Maximum Cladding/Coating Concentricity Error	[mm]	12
	Minimum Fibre Curl Radius	[m]	4.0
	Operating Temperature Range	[°C]	-60 to +85
	Test Load	[kpsi]	100

Multimode and singlemode fibres

Application areas for different types of Multimode and Singlemode fibres

**Horizontal**

FTTD Fibre to the Desk
FTTO Fibre to the Office

Multimode fibre

G50/125 OM2
1 GbE up to 750 m
10 GbE up to 150 m

G50/125 OM3
1 GbE up to 1000 m
10 GbE up to 300 m

Data Centre**Multimode fibre**

G50/125 OM3
10 GbE up to 300 m
40/100 GbE bis 140 m

G50/125 OM4
10 GbE up to 300 m
40/100 GbE bis 170 m

Singlemode fibre

E9/125 G.652.D OS2

Vertical/Riser (backbone)**Multimode fibre**

G50/125 OM3
10 GbE up to 300 m

G50/125 OM4
10 GbE up to 550 m

Singlemode fibre

E9/125 G.652.D OS2

Campus (backbone)**Multimode fibre**

G50/125 OM3
10 GbE up to 300 m

G50/125 OM4
10 GbE up to 550 m

Singlemode fibre

E9/125 G.652.D OS2
10 GbE up to 10 km

Bend optimized Multimode fibres (G50/125 µm)

With higher bit-rate transmissions (≥ 10 Gbit/s) the attenuation budgets are constantly decreasing. Thus, one has to focus on high-grade products when selecting the fibre optic components. The optical fibres should provide an enhanced transmission reliability and reduce the risks of additional losses that may arise as a result of typical faulty use and of mechanical stress.

This is the reason why Datwyler use the bend optimized G50/125µm fibre for OM2, OM3 and OM4 fibre categories: In case that the minimum bending radius is undercut, this leads not necessarily to failure of a connection. However, too small bending radii should be avoided to extend the lifetime of fibre optic cables (and optical fibres).

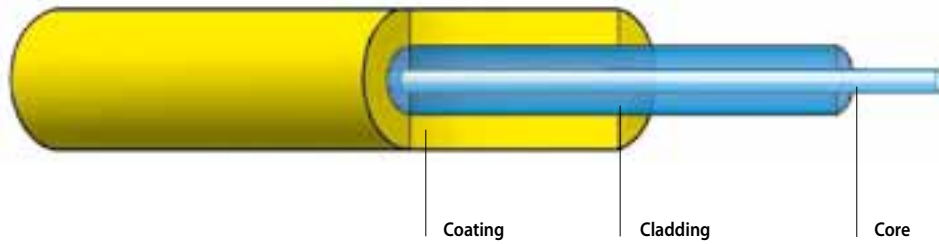
The bend optimized G50/125 µm fibres are fully compatible with "traditional" G50/125 µm fibres as described in the standard.

Bend radius (mm)	No. of windings (turns)	Maximum induced bend attenuation (dB)	
		850 nm	1300 nm
37.5	100	≤ 0.05	≤ 0.15
15	2	≤ 0.1	≤ 0.3
7.5	2	≤ 0.2	≤ 0.5

OPTICAL FIBRES

Multimode fibre G62,5/125/250 OM1

IEC 60793-2-10 Type A1b, ISO/IEC 11801:2010 OM1,
EN 50173:2011 OM1



PRODUCT INFORMATION

APPLICATION In premises cabling e.g. for Fibre to the Desk (FTTD), primarily in existing/legacy installations.

DESCRIPTION Suitable for short transmission distances and medium transmission rates in the 850 nm and 1300 nm wavelengths (typically up to 1 GbE). The geometrical and mechanical characteristics meet all relevant international standards.

TRANSMISSION CHARACTERISTICS	Wavelength	[nm]	850	1300
	Attenuation typical (cabled)		[dB/km]	2.8
Attenuation maximum (cabled)		[dB/km]	3.0	0.7
OFL Bandwidth as per TIA/EIA 455-204 and IEC 60793-1-41		[MHz x km]	200	600
RML Bandwidth as per TIA/EIA 455-204 and IEC 60793-1-41		[MHz x km]	220	
Refractive Index			1.496	1.491

GEOMETRICAL AND MECHANICAL CHARACTERISTICS	Numerical Aperture	
	Core Ø	[µm]
Maximum Core Non-Circularity	[%]	5
Cladding Ø	[µm]	125 +/- 2
Maximum Cladding Non-Circularity	[%]	1.0
Maximum Cladding/Core Concentricity Error	[µm]	1.5
Maximum Coating Concentricity Error	[µm]	12
Coating Ø	[µm]	245 +/- 5
Test Load	[kpsi]	100

MAXIMUM LINK LENGTHS

IEEE 802.3 Serie	Wavelength [nm]	Link length [m]	Explanation
1000 Base-SX IEEE 802.3z	850	275 / 300*	Laser bandwidth RML (Restricted Mode Launch) measurement is used to characterise intermediate performance laser (typically up to 1 GbE) at 850 nm.
1000 Base-LX IEEE 802.3z	1300	550	
10GBase-SR/SW	850	33	Link length is achieved via 1300 nm "CWDM" using 4 channels (lanes) at 2.25 GbE: Lane 0 = 1269.0 - 1282.4 nm, Lane 1 = 1293.5 - 1306.9 nm Lane 2 = 1318.0 - 1331.4 nm, Lane 3 = 1342.5 - 1355.9 nm
10GBase-LX4	1300	300	

* Link lengths of more than 300 m on request.

MMF, OM1 1108/e

Copper

Fibre Optics

Cabinets & Racks

Data Centre

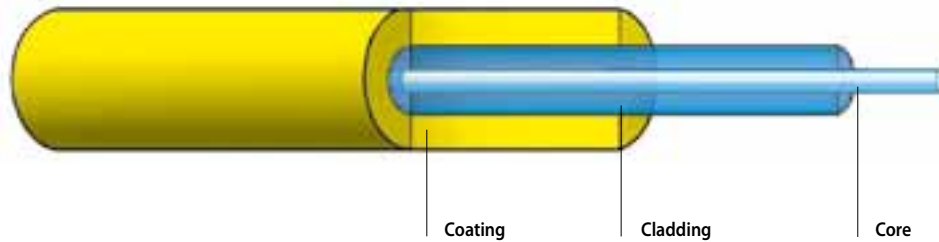
Wireless

Multimedia

General Information

Bend optimized Multimode fibre G50/125/250 OM2

IEC 60793-2-10 Type A1a.1, ISO/IEC 11801:2010 OM2,
EN 50173:2011 OM2



PRODUCT INFORMATION

APPLICATION	In Premises cabling for Vertical/Riser cabling and for Fibre to the Desk (FTTD = horizontal cabling).
DESCRIPTION	Bend optimized fibre with enhanced macrobending features, suitable for medium transmission distances and medium transmission rates in the 850 nm and 1300 nm wavelengths (up to 1 GbE). The geometrical, optical and mechanical specifications meet or exceed all relevant international standards.

TRANSMISSION CHARACTERISTICS	Wavelength [nm]	Product parameters		Standard spec.	
		850	1300	850	1300
Attenuation typical (cabled)	[dB/km]	2.5	0.5		
Attenuation maximum (cabled)	[dB/km]	2.7	0.7	3.5	1.5
OFL Bandwidth per TIA/EIA 455-204 and IEC 60793-1-41	[MHz x km]	700	500	500	500
High-Performance EMB Bandwidth as per TIA/EIA 455-220A and IEC 60793-1-49	[MHz x km]	850		not specified	
Refractive Index		1.480	1.479		
GEOMETRICAL AND MECHANICAL CHARACTERISTICS					
Numerical Aperture		0.200 +/- 0.015			
Core Ø	[µm]	50.0 +/- 2.5			
Maximum Core Non-Circularity	[%]	5			
Cladding Ø	[µm]	125.0 +/- 1.0			
Maximum Cladding Non-Circularity	[%]	1.0			
Maximum Cladding/Core Concentricity Error	[µm]	1.5			
Maximum Coating Concentricity Error	[µm]	12			
Coating Ø	[µm]	245 +/- 5			
Test Load	[kpsi]	100			

MACROBENDING CHARACTERISTICS	Bending radius [mm]	No. of windings (turns)	Max. induced attenuation [dB]	
			850 nm	1300 nm
	37.5	100	≤ 0.05	≤ 0.15
	15	2	≤ 0.1	≤ 0.3
	7.5	2	≤ 0.2	≤ 0.5

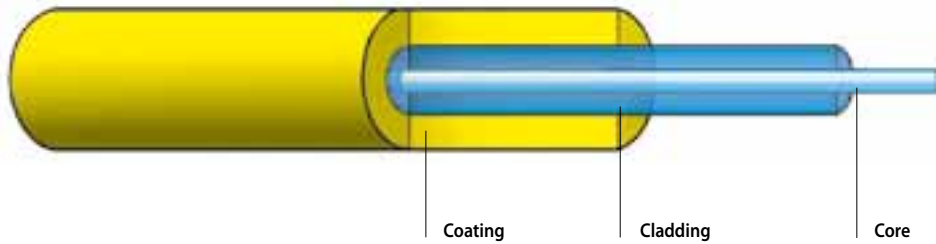
MAXIMUM LINK LENGTHS

IEEE 802.3 series	Wavelength [nm]	Max. link length Datwyler [m]	Link length Standard [m]	Explanation
1000 Base-SX IEEE 802.3z	850	750	550	High-performance laser bandwidth EMB: Datwyler guarantees the EMB bandwidth through the calculated Effective Modal Bandwidth (mEMBc). This is a DMD based method to characterise laser bandwidth over the full range of standard compliant high-performance 850 nm VCSEL lasers.
1000 Base-LX IEEE 802.3z	1300	550	550	This measurement method is used to inspect the laser system for high data rates (up to 100 Gbit/s) in the 850 nm wavelength.
10GBase-SR/SW IEEE 802.3ae	850	150	82	
10GBase-LX4	1300	300	300	Link length is achieved via 1300nm „CWDM“ using 4 channels (lanes): Lane 0 = 1269,0 – 1282,4 nm, Lane 1 = 1293,5 – 1306,9 nm, Lane 2 = 1318,0 – 1331,4 nm, Lane 3 = 1342,5 – 1355,9 nm

OPTICAL FIBRES

**Bend optimized
Multimode fibre G50/125/250 OM3**

IEC 60793-2-10 Type A1a.2, ISO/IEC 11801:2010 OM3,
EN 50173:2011 OM3, TIA/EIA 492AAAC-B



PRODUCT INFORMATION

APPLICATION

In Premises cabling for LAN backbones (Campus and Vertical/Riser cabling), Fibre to the Office and Fibre to the Desk (FTTO, FTTD = horizontal cabling) as well as in data centre cabling.

DESCRIPTION

Bend optimized fibre with enhanced macrobending features, particularly recommended for high-performance transmissions in the 850 nm wavelength like 10 GbE with duplex links or 40/100 GbE with high-speed parallel optic links. The geometrical, optical and mechanical specifications meet or exceed all relevant international standards. This fibre is compatible with standard category OM2 fibres in existing/legacy networks.

TRANSMISSION CHARACTERISTICS	Wavelength [nm]	Product parameters		Standard spec.	
		850	1300	850	1300
Attenuation typical (cabled)	[dB/km]	2.5	0.5		
Attenuation maximum (cabled)	[dB/km]	2.7	0.7	3.5	1.5
OFL Bandwidth as per TIA/EIA 455-204 and IEC 60793-1-41	[MHz x km]	1500	500	1500	500
High-Performance EMB Bandwidth as per TIA/EIA 455-220A and IEC 60793-1-49	[MHz x km]	2000		2000	
Refractive Index		1.480	1.479		
GEOMETRICAL AND MECHANICAL CHARACTERISTICS					
Numerical Aperture		0.200 +/- 0.015			
Core Ø	[µm]	50.0 +/- 2.5			
Maximum Core Non-Circularity	[%]	5			
Cladding Ø	[µm]	125.0 +/- 1.0			
Maximum Cladding Non-Circularity	[%]	1.0			
Maximum Cladding/Core Concentricity Error	[µm]	1.5			
Maximum Coating Concentricity Error	[µm]	12			
Coating Ø	[µm]	242 +/- 5			
Test Load	[kpsi]	100			
MACROBENDING CHARACTERISTICS	Bending radius [mm]	No. of windings turns	Max. induced attenuation [dB]		
			850 nm	1300 nm	
	37.5	100	≤ 0.05	≤ 0.15	
	15	2	≤ 0.1	≤ 0.3	
	7.5	2	≤ 0.2	≤ 0.5	

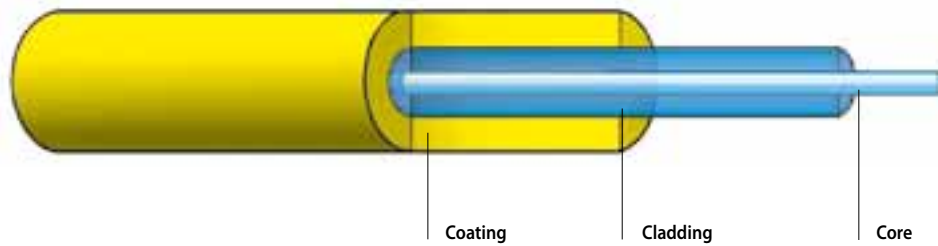
MAXIMUM LINK LENGTHS

IEEE 802.3 series	Wavelength [nm]	Link length Datwyler [m]	Link length Standard [m]	Explanation
1000 Base-SX IEEE 802.3z	850	1000	800	High-performance laser bandwidth EMB: Datwyler guarantees the EMB bandwidth through the calculated Effective Modal Bandwidth (mEMBc). This is a DMD based method to characterise laser bandwidth over the full range of standard compliant high-performance 850 nm VCSEL lasers.
10GBase-SR/SW IEEE 802.3ae	850	300	300	This measurement method is used to inspect the laser system for high data rates up to 100 Gbit/s in the 850 nm wavelength.
40GBase-SR4 IEEE 802.3ba	850	140*	100	
100GBase-SR10 IEEE 802.3ba	850	140*	100	*The enhanced link length is a result of an enhanced dispersion value. The Insertion Loss (IL) of all connectors in the optical channel should not exceed 1.0 dB! (Standard: 1.5 dB)

MMF, OM3 biageoptimiert 0712/e

Bend optimized Multimode fibre G50/125/250 OM4

IEC 60793-2-10 Type A1a.3, ISO/IEC 11801:2010 OM4,
EN 50173:2011 OM4, TIA/EIA 492AAAD



PRODUCT INFORMATION

APPLICATION	In Premises cabling for LAN backbones (Campus and Vertical/Riser cabling) as well as in data centres.
DESCRIPTION	Bend optimized fibre with enhanced macrobending features, particularly recommended for high-performance transmissions in the 850 nm wavelength like 10 GbE with duplex links or 40/100 GbE with high-speed parallel optic links. The geometrical, optical and mechanical specifications meet or exceed all relevant international standards.

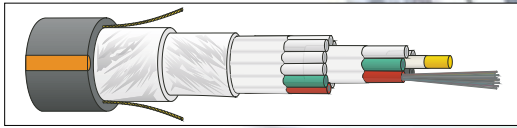
TRANSMISSION CHARACTERISTICS	Wavelength [nm]	Product parameters		Standard spec.	
		850	1300	850	1300
	Attenuation typical (cabled)	[dB/km]	2.5	0.5	
	Attenuation maximum (cabled)	[dB/km]	2.7	0.7	3.5 1.5
	OFL Bandwidth as per TIA/EIA 455-204 and IEC 60793-1-41	[MHz x km]	3500	500	3500 500
	High-Performance EMB Bandwidth as per TIA/EIA 455-220A and IEC 60793-1-49	[MHz x km]	4700		4700
	Refractive Index		1.480	1.479	
GEOMETRICAL AND MECHANICAL CHARACTERISTICS	Numerical Aperture		0.200 +/- 0.015		
	Core Ø	[µm]	50.0 +/- 2.5		
	Maximum Core Non-Circularity	[%]	5		
	Cladding Ø	[µm]	125.0 +/- 1.0		
	Maximum Cladding Non-Circularity	[%]	1.0		
	Maximum Cladding/Core Concentricity Error	[µm]	1.5		
	Maximum Coating Concentricity Error	[µm]	12		
	Coating Ø	[µm]	242 +/- 5		
	Test Load	[kpsi]	100		

MACROBENDING CHARACTERISTICS	Bending radius [mm]	No. of windings (turns)	Max. induced attenuation [dB]	
			850 nm	1300 nm
	37.5	100	≤ 0.05	≤ 0.15
	15	2	≤ 0.1	≤ 0.3
	7.5	2	≤ 0.2	≤ 0.5

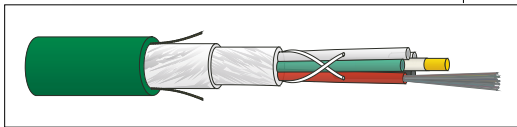
MAXIMUM LINK LENGTHS

IEEE 802.3 series	Wavelength [nm]	Link length Datwyler [m]	Link length Standard [m]	Explanation
1000 Base-SX IEEE 802.3z	850	1100	800	High-performance laser bandwidth EMB: Datwyler guarantees the EMB bandwidth through the calculated Effective Modal Bandwidth (mEMBc). This is a DMD based method to characterise laser bandwidth over the full range of standard compliant high-performance 850 nm VCSEL lasers.
10GBase-SR/SW IEEE 802.3ae	850	550	550	This measurement method is used to inspect the laser system for high data rates (up to 100 Gbit/s) in the 850 nm wavelength.
40GBase-SR4 IEEE 802.3ba	850	170*	150	
100GBase-SR10 IEEE 802.3ba	850	170*	150	*The enhanced link length is a result of an enhanced dispersion value. The Insertion Loss (IL) of all connectors in the optical channel should not exceed 1.0 dB! (Standard: 1.5 dB)

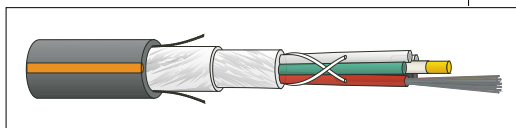
FIBRE OPTIC CABLES - PRODUCT OVERVIEW



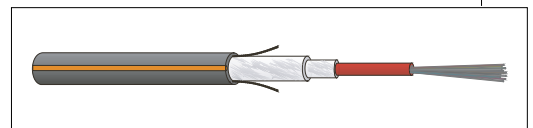
FO Outdoor wbGGT HP / A-DQ(ZN)B2Y
HighP, up to 576 fibres



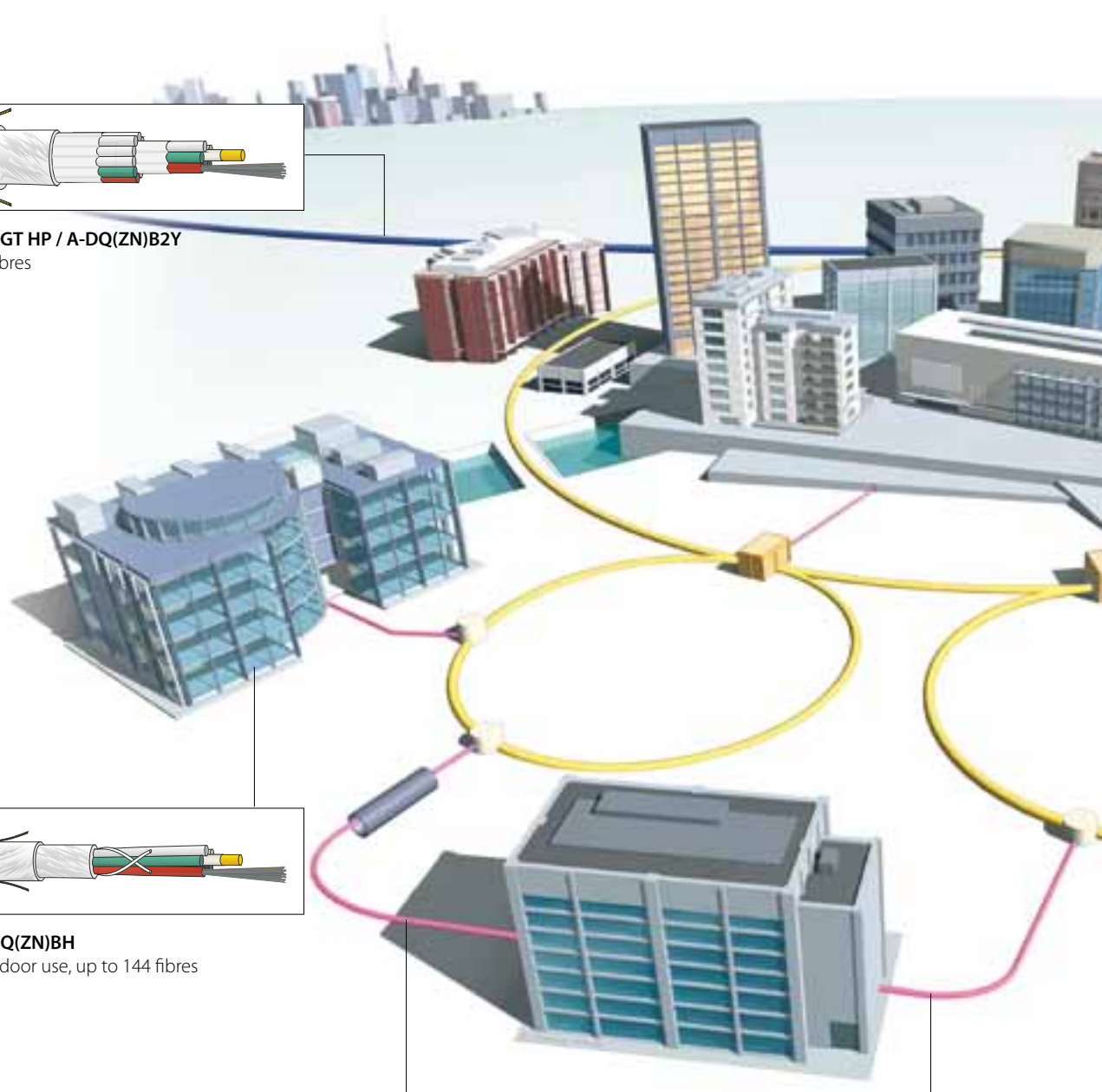
FO Universal U-DQ(ZN)BH
for indoor and outdoor use, up to 144 fibres



FO Universal wbGGFR Easy Blow / U-DQ(ZN)BH
Flame retardant fibre optic cable, up to 288 fibres,
optimised for air blowing



FO Outdoor ZGGT HP / A-DQ(ZN)B2Y
HighP, up to 24 fibres



Copper

Fibre Optics

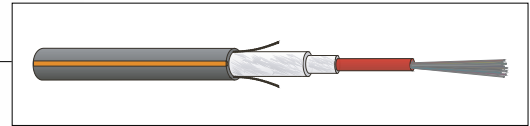
Cabinets & Racks

Data Centre

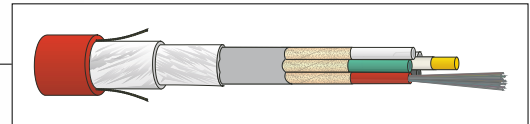
Wireless

Multimedia

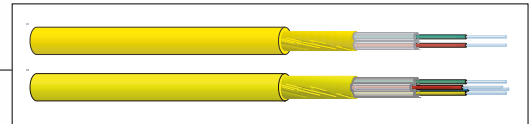
General Information



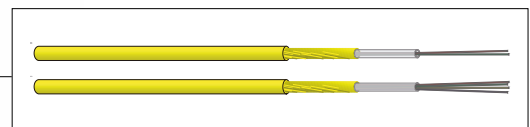
FO Outdoor ZGGT HP / A-DQ(ZN)B2Y
HighP, up to 24 fibres



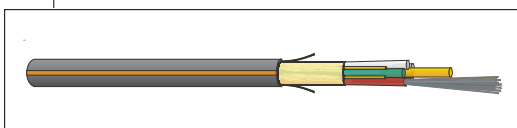
FO Universal wbGGFR Safety / U-DQ(ZN)BH
Safety cable, E30, up to 60 fibres



FO Indoor FTTH TB/ I-V(ZN)H
Tight Buffer, 2 or 4 fibres

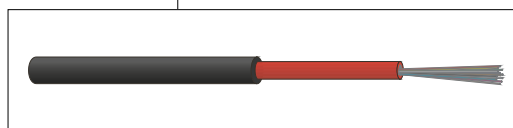


FO Indoor FTTH / I-M(ZN)H
Coating buffer, 2 or 4 fibres



FO Outdoor wbKT Micro / A-DQ(ZN)2Y
Micro cable, up to 144 fibres

FO Outdoor wbKT S-Micro / A-DQ(ZN)2Y
S-Micro cable, up to 216 fibres



FO Outdoor ZT S-Micro / A-D2Y
S-Micro cable, up to 24 fibres

Product overview and selection guide for FO indoor and universal cables

Selection criteria

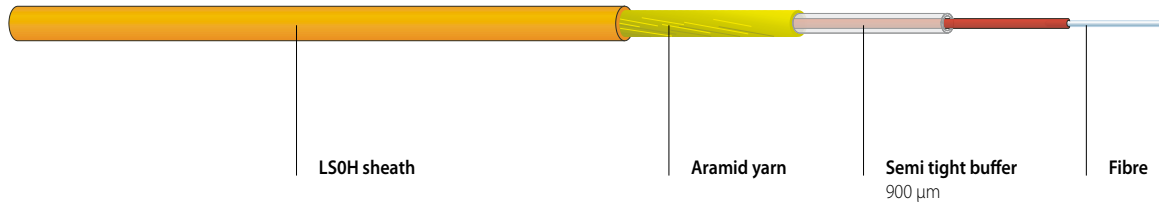
The Datwyler product portfolio consists of many different cable types.

The following overview lists some of the more important criteria which will help you to decide for the cable types that meet your specific requirements.

Cable name / DIN/VDE	Page
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				Cable characteristics										Laying		Application																																																																																																																																																																																																																																																																																																																																																																															
				Maximum number of fibres	Rodent protection	Non metallic (non potential differences)	Longitudinal water blocking	Halogen free sheath	Flame retardant sheath	Functional integrity / Circuit integrity 30 min.	Loose tube	Semi Tight Buffer 0.9 mm	Coating buffer design	Tight buffer tube design 0.9 mm	Tight buffer tube design 0.6 mm	Blowing through thermoplastic ducts	Installation in vertical/riser zone	Laying in trays and on cable platforms	Tunnels / Safety area	Campus / Access networks	LAN: backbone	LAN: Fibre to the desk (FTTD)	LAN: Patch area																																																																																																																																																																																																																																																																																																																																																																								
Fibre optic indoor cables																								FO Indoor Simplex / I-V(ZN)H	2.0 mm / 2.8 mm, LS0H	191	1	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	FO Indoor Mini Zipcord / I-V(ZN)H	1.8 mm, LS0H	192	2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	FO Indoor Zipcord / I-V(ZN)H	2.0 mm / 2.8 mm, LS0H	193	2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	FO Indoor Duplex / I-V(ZN)HH	2.0 mm / 2.8 mm, LS0H	194	2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	FO Indoor FTTH / I-M(ZN)H	2.2 mm, LS0H	196	4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	FO Indoor FTTH TB / I-V(ZN)H	2.8 mm, LS0H	197	4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	FO Indoor BO / I-V(ZN)HH	Breakout, 2.0 mm, FR/LS0H	198	12	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	Fibre optic universal cables																								FO Universal U-DQ(ZN)BH	up to 24 fibres	200	24	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	FO Universal U-DQ(ZN)BH	up to 144 fibres	202	144	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	FO Universal ZGGFR Safety / U-DQ(ZN)BH	Safety cable E30	204	12	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	FO Universal wbGGFR Safety / U-DQ(ZN)BH	Safety cable E30	206	60	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	FO Universal ZGGFR Easy Blow / U-DQ(ZN)BH		208	24	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	FO Universal wbGGFR Easy Blow / U-DQ(ZN)BH		210	144	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	FO Universal wbGGFR Combi / U-DQS(ZN)BH	Combination cable	212	2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
FO Indoor Simplex / I-V(ZN)H	2.0 mm / 2.8 mm, LS0H	191	1	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●																																																																																																																																																																																																																																																																																																																																																																								
FO Indoor Mini Zipcord / I-V(ZN)H	1.8 mm, LS0H	192	2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●																																																																																																																																																																																																																																																																																																																																																																								
FO Indoor Zipcord / I-V(ZN)H	2.0 mm / 2.8 mm, LS0H	193	2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●																																																																																																																																																																																																																																																																																																																																																																								
FO Indoor Duplex / I-V(ZN)HH	2.0 mm / 2.8 mm, LS0H	194	2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●																																																																																																																																																																																																																																																																																																																																																																								
FO Indoor FTTH / I-M(ZN)H	2.2 mm, LS0H	196	4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●																																																																																																																																																																																																																																																																																																																																																																								
FO Indoor FTTH TB / I-V(ZN)H	2.8 mm, LS0H	197	4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●																																																																																																																																																																																																																																																																																																																																																																								
FO Indoor BO / I-V(ZN)HH	Breakout, 2.0 mm, FR/LS0H	198	12	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●																																																																																																																																																																																																																																																																																																																																																																								
Fibre optic universal cables																								FO Universal U-DQ(ZN)BH	up to 24 fibres	200	24	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	FO Universal U-DQ(ZN)BH	up to 144 fibres	202	144	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	FO Universal ZGGFR Safety / U-DQ(ZN)BH	Safety cable E30	204	12	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	FO Universal wbGGFR Safety / U-DQ(ZN)BH	Safety cable E30	206	60	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	FO Universal ZGGFR Easy Blow / U-DQ(ZN)BH		208	24	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	FO Universal wbGGFR Easy Blow / U-DQ(ZN)BH		210	144	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	FO Universal wbGGFR Combi / U-DQS(ZN)BH	Combination cable	212	2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●																																																																																																																																																																																																
FO Universal U-DQ(ZN)BH	up to 24 fibres	200	24	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●																																																																																																																																																																																																																																																																																																																																																																								
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FO Universal wbGGFR Combi / U-DQS(ZN)BH	Combination cable	212	2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●																																																																																																																																																																																																																																																																																																																																																																								

- Copper
- Fibre Optics
- Cabinets & Racks
- Data Centre
- Wireless
- Multimedia
- General Information



PRODUCT INFORMATION



FEATURES

Thin and flexible fibre optic Simplex cable with semi tight buffer 0.9 mm.
 Easy handling, easy to strip off.
 Flame retardant halogen-free LSOH sheath. Low fire load.

APPLICATION

Suitable for patch cables between terminal distributors and/or end devices.
 For direct termination with connectors.
 Can also be spliced in terminal distributors.

OPTICAL CHARACTERISTICS

The cables are available with different types of optical fibre (see fibre data sheets).

MECHANICAL CHARACTERISTICS

Temperature range in operation: -20 / +60°C IEC 60794-2-10
 -10 / +60°C for assembled patch cords
 Tensile performance: IEC 60794-1-2 E1 A
 Crush resistance: IEC 60794-1-2 E3
 Impact: IEC 60794-1-2 E4
 Repeated bending: IEC 60794-1-2 E6
 Torsion: IEC 60794-1-2 E7
 Bend: IEC 60794-1-2 E11 A

GENERAL CHARACTERISTICS

Sheath colour: E9/125 yellow or green
 G50/125 OM2 orange
 G50/125 OM3/OM4 turquoise
 G62.5/125 OM1 grey

Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation»
 «no. of fibres» «fibre type» «add. text» «batch no.» «meter marks»

Zero halogen, non corrosive gases IEC 60754-1/-2, EN 50267-2-1/-2-2, VDE 0482-267-2-1/-2-2
 Flame retardant IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
 Minimum smoke emission IEC 61034-1/-2, EN 61034-1/-2 (EN 50268-1/-2), VDE 0482-1034-1/-2 (VDE 0482-268-1/-2)

Description	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance	Fire load
I-V(ZN)H	mm	kg/km	mm	N	short term N	kWh/km MJ/km
EF 2.0 Simplex	2.0	4.1	50	100	500	31 111
EF 2.8 Simplex	2.8	7.1	70	100	500	35 124

VERSIONS

I-V(ZN)H	Fibres	Article No.	Article No.	Article No.	Article No.	Article No.	Article No.	Article No.	Article No.
Description	number	E9/125 G.657.A1 sheath colour green	E9/125 G.657.A1 sheath colour yellow	E9/125 G.652.D sheath colour green	E9/125 G.652.D sheath colour yellow	G50/125 OM2	G50/125 OM3	G50/125 OM4	G62.5/125 OM1
EF 2.0 Simplex	1	192138	192126	191874	191876	191877	191878	on request	191879
EF 2.8 Simplex	1	on request	on request	192085	192086	192087	192088	on request	192089

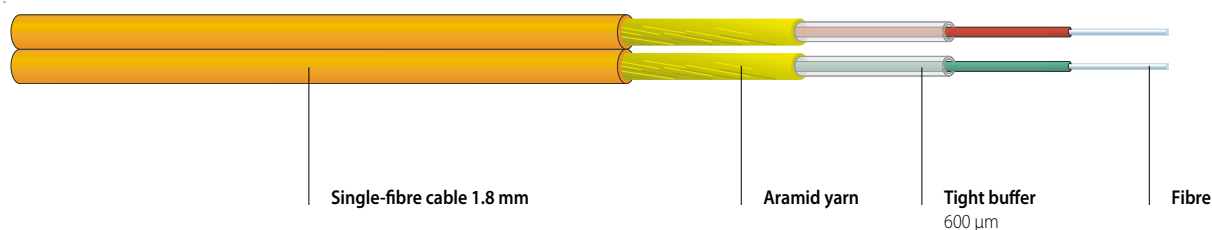
FIBRE OPTIC INDOOR CABLES

FO Indoor Mini Zipcord / I-V(ZN)H

1.8 mm, LSOH

tight buffer

flame retardant - IEC 60332.1



PRODUCT INFORMATION



FEATURES

Very thin and flexible Mini Zipcord with tight buffer 0.6 mm.
The ends can easily be split into two parts.
Flame retardant halogen-free LSOH sheath.
Very low fire load.

APPLICATION

Suitable for patch cables between terminal distributors and/or end devices.
For direct termination with Simplex or Duplex connectors.

OPTICAL CHARACTERISTICS

The cables are available with different types of optical fibre (see fibre data sheets).

MECHANICAL CHARACTERISTICS

Temperature range in operation: -20 / +60°C IEC 60794-2-10
-10 / +60°C for assembled patch cords
Tensile performance: IEC 60794-1-2 E1 A
Crush resistance: IEC 60794-1-2 E3
Impact: IEC 60794-1-2 E4
Repeated bending: IEC 60794-1-2 E6
Torsion: IEC 60794-1-2 E7
Bend: IEC 60794-1-2 E11 A

GENERAL CHARACTERISTICS

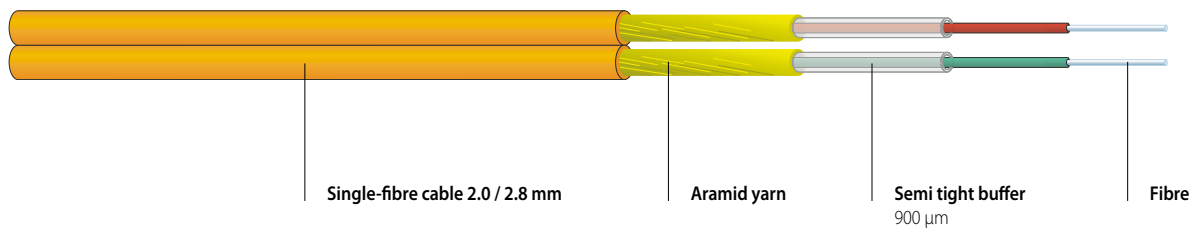
Sheath colour: E9/125 yellow or green
G50/125 OM2 orange
G50/125 OM3/OM4 turquoise
G62.5/125 OM1 grey
Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation»
«no. of fibres» «fibre type» «add. text» «batch no.» «meter marks»

- Zero halogen, non corrosive gases IEC 60754-1/-2, EN 50267-2-1/-2-2, VDE 0482-267-2-1/-2-2
- Flame retardant IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
- Minimum smoke emission IEC 61034-1/-2, EN 61034-1/-2 (EN 50268-1/-2), VDE 0482-1034-1/-2 (VDE 0482-268-1/-2)

Description	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance	Fire load
I-V(ZN)H	mm	kg/km	mm	N	short term N	kWh/km MJ/km
Mini Zipcord 1.8	3.7 x 1.8	4.8	50	150	800	52 187

VERSIONS

I-V(ZN)H	Fibres	Article No.	Article No.	Article No.	Article No.	Article No.	Article No.
Description	number	E9/125 G.652.D	E9/125 G.652.D	G50/125 OM2	G50/125 OM3	G50/125 OM4	G62.5/125 OM1
		sheath colour green	sheath colour yellow				
Mini Zipcord 1.8	2	190247	190306	186367	186038	on request	186368



PRODUCT INFORMATION



FEATURES

Very thin and flexible Zipcord with semi tight buffer 0.9 mm.
 The ends can easily be split into two parts.
 Flame retardant halogen-free LS0H sheath.
 Very low fire load.

APPLICATION

Suitable for patch cables between terminal distributors and/or end devices.
 For direct termination with Simplex or Duplex connectors.

OPTICAL CHARACTERISTICS

The cables are available with different types of optical fibre (see fibre data sheets).

MECHANICAL CHARACTERISTICS

Temperature range in operation: -20 / +60°C IEC 60794-2-10
 -10 / +60°C for assembled patch cords
 Tensile performance: IEC 60794-1-2 E1 A
 Crush resistance: IEC 60794-1-2 E3
 Impact: IEC 60794-1-2 E4
 Repeated bending: IEC 60794-1-2 E6
 Torsion: IEC 60794-1-2 E7
 Bend: IEC 60794-1-2 E11 A

GENERAL CHARACTERISTICS

Sheath colour: E9/125 yellow or green
 G50/125 OM2 orange
 G50/125 OM3/OM4 turquoise
 G62.5/125 OM1 grey
 Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation»
 «no. of fibres» «fibre type» «add. text» «batch no.» «meter marks»

Zero halogen,
 non corrosive gases IEC 60754-1/-2, EN 50267-2-1/-2-2, VDE 0482-267-2-1/-2-2
 Flame retardant IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
 Minimum smoke emission IEC 61034-1/-2, EN 61034-1/-2 (EN 50268-1/-2),
 VDE 0482-1034-1/-2 (VDE 0482-268-1/-2)

Description	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance	Fire load	
I-V(ZN)H	mm	kg/km	mm	N	short term N	kWh/km	MJ/km
Zipcord 2.0	4.0 x 2.0	8.0	50	200	1000	62	225
Zipcord 2.8	5.6 x 2.8	11.0	70	200	1000	82	295

VERSIONS

I-V(ZN)H	Fibres	Article No.	Article No.	Article No.	Article No.	Article No.	Article No.
Description	number	E9/125 G.652.D	E9/125 G.652.D	G50/125 OM2	G50/125 OM3	G50/125 OM4	G62.5/125 OM1
		sheath colour green	sheath colour yellow	sheath colour orange	sheath colour turquoise		sheath colour grey
Zipcord 2.0	2	191797	191294	192147	192146	on request	191799
Zipcord 2.8	2	on request	on request	191798	on request	on request	on request

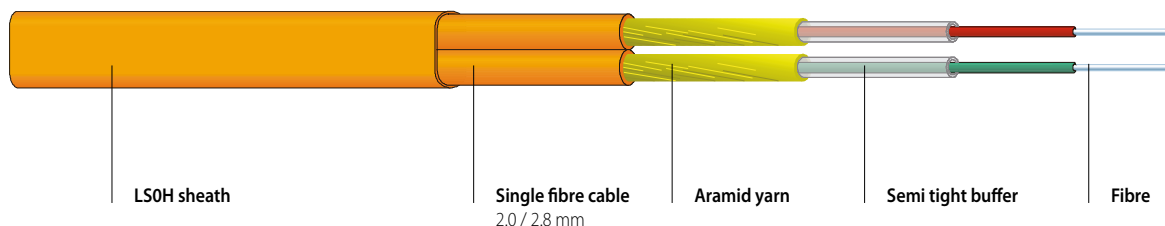
FIBRE OPTIC INDOOR CABLES

FO Indoor Duplex / I-V(ZN)HH

2.0 mm / 2.8 mm, L50H

semi tight buffer

flame retardant - IEC 60332.1



PRODUCT INFORMATION



FEATURES

Robust and flexible fibre optic Duplex cable, based on 2 single-fibre cables 2.0 / 2.8 mm with semi tight buffer 0.9 mm in a common sheath.
 Easy handling, easy to strip off.
 Flame retardant halogen-free L50H sheath.
 Low fire load.

APPLICATION

Suitable for patch cables between terminal distributors and/or end devices.
 For direct termination with connectors.
 Can also be spliced in terminal distributors.

OPTICAL CHARACTERISTICS

The cables are available with different types of optical fibre (see fibre data sheets).

MECHANICAL CHARACTERISTICS

Temperature range in operation: -20 / +60°C IEC 60794-2-10
 -10 / +60°C for assembled patch cords
 Tensile performance: IEC 60794-1-2 E1 A
 Crush resistance: IEC 60794-1-2 E3
 Impact: IEC 60794-1-2 E4
 Repeated bending: IEC 60794-1-2 E6
 Torsion: IEC 60794-1-2 E7
 Bend: IEC 60794-1-2 E11 A

GENERAL CHARACTERISTICS

Sheath colour: E9/125 yellow or green
 G50/125 OM2 orange
 G50/125 OM3/OM4 turquoise
 G62.5/125 OM1 grey
 Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation»
 «no. of fibres» «fibre type» «add. text» «batch no.» «meter marks»

- Zero halogen, non corrosive gases IEC 60754-1/-2, EN 50267-2-1/-2-2, VDE 0482-267-2-1/-2-2
- Flame retardant IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
- Minimum smoke emission IEC 61034-1/-2, EN 61034-1/-2 (EN 50268-1/-2), VDE 0482-1034-1/-2 (VDE 0482-268-1/-2)

PRODUCT INFORMATION

Description	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance	Fire load
Duplex I-V(ZN)HH	mm	kg/km	mm	N	short term N	kWh/km MJ/km
Duplex	4.8 x 3.2	21	50	200	3000	100 360
Duplex	6.6 x 4.0	25	70	200	3000	120 432

VERSIONS

I-V(ZN)H	Fibres	Article No.	Article No.	Article No.	Article No.	Article No.	Article No.	Article No.	Article No.
Description	number	E9/125 G.657.A1	E9/125 G.657.A1	E9/125 G.652.D	E9/125 G.652.D	G50/125 OM2	G50/125 OM3	G50/125 OM4	G62.5/125 OM1
		sheath colour green	sheath colour yellow	sheath colour green	sheath colour yellow				
Duplex 2.0 mm	2	192 139	on request	192090	192091	192092	19293	192184	192094
Duplex 2.8 mm	2	on request	on request	192095	192096	192097	192098	on request	192099

FIBRE OPTIC INDOOR CABLES

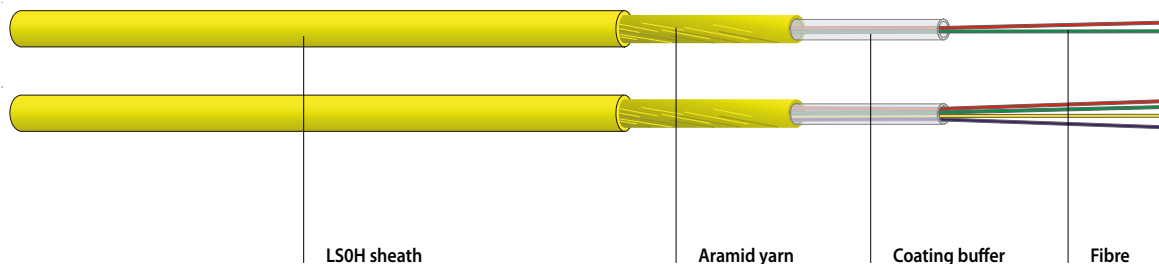
FO Indoor FTTH / I-M(ZN)H

2.2 mm, LSOH

Coating buffer

flame retardant - IEC 60332.1

in accordance with IEC 60794-2-20



PRODUCT INFORMATION



FEATURES

Easy handling fibre optic cable with 2 or 4 optical fibres.
 Very small outer diameter (2.2 mm) due to innovative coating buffer.
 Flame retardant halogen-free LSOH sheath. Very low fire load.
 Robust sheath for easy installation into tube systems occupied by other cables.

APPLICATION

Indoor cabling for Fibre to the Home (FTTH) applications.
 Indoor cabling for data network and building automation applications.
 Connection cable between building entry point (BEP) and FO data outlet.
 Suitable for laying in cable trays, ducts and vertical shafts.
 Can be spliced in wall mounted distribution boxes and in FO data outlets.

OPTICAL CHARACTERISTICS

The cables are available with the ITU G.657.A1 optical fibre.

MECHANICAL CHARACTERISTICS

Temperature range in operation: -20 / +60°C IEC 60794-1-2 F1
 Tensile performance: IEC 60794-1-2 E1
 Crush resistance: IEC 60794-1-2 E3
 Impact: IEC 60794-1-2 E4
 Repeated bending: IEC 60794-1-2 E6
 Torsion: IEC 60794-1-2 E7
 Bend: IEC 60794-1-2 E11

GENERAL CHARACTERISTICS

Sheath colour: yellow, RAL 1021
 Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation»
 «no. of fibres» «fibre type» «add. text» «batch no.» «meter marks»

- Zero halogen, non corrosive gases IEC 60754-1/-2, EN 50267-2-1/-2-2, VDE 0482-267-2-1/-2-2
- Flame retardant IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
- Minimum smoke emission IEC 61034-1/-2, EN 61034-1/-2 (EN 50268-1/-2), VDE 0482-1034-1/-2 (VDE 0482-268-1/-2)

Description	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance	Fire load
I-M(ZN)H	mm	kg/km	mm	N	short term N	kWh/km
FO Indoor FTTH 2.2, LSOH 1 x 2	2.2	4.0	25	400	500	23
FO Indoor FTTH 2.2, LSOH 1 x 4	2.2	4.0	25	400	500	23

VERSIONS

I-M(ZN)H	Fibres	Article No.
Description	number	ITU G.657 .A1
FO Indoor FTTH 2.2, LSOH 1 x 2	2	191801
FO Indoor FTTH 2.2, LSOH 1 x 4	4	191800

GF-2320 FTTH 2.2 0712/e

Copper

Fibre Optics

Cabinets & Racks

Data Centre

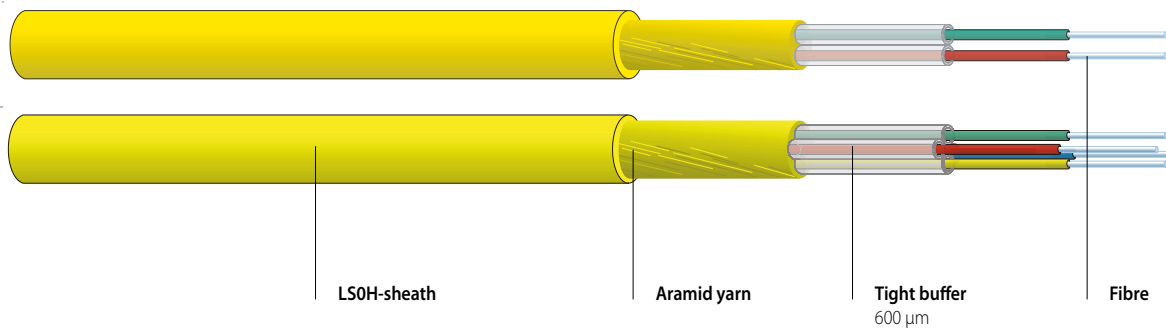
Wireless

Multimedia

General Information

FIBRE OPTIC INDOOR CABLES
FO Indoor FTTH TB / I-V(ZN)H
2.8 mm, LSOH

Tight buffer
 flame retardant - IEC 60332.1
 in accordance with IEC 60794-2-20



PRODUCT INFORMATION



FEATURES

Easy handling fibre optic cable with 2 or 4 optical fibres.
 Very small outer diameter (2.8 mm) due to innovative construction with 0.6 mm tight buffer.
 Flame retardant halogen-free LSOH sheath. Very low fire load.
 Robust sheath for easy installation into tube systems occupied by other cables.

APPLICATION

Indoor cabling for Fibre to the Home (FTTH) applications.
 Indoor cabling for data network and building automation applications.
 Connection cable between building entry point (BEP) and FO data outlet.
 Suitable for laying in cable trays, ducts and vertical shafts.
 For direct termination with FO connectors.

OPTICAL CHARACTERISTICS

The cables are available with the ITU G.657.A1 optical fibre.

MECHANICAL CHARACTERISTICS

Temperature range in operation: -20 / +60°C IEC 60794-1-2 F1
 Tensile performance: IEC 60794-1-2 E1
 Crush resistance: IEC 60794-1-2 E3
 Impact: IEC 60794-1-2 E4
 Repeated bending: IEC 60794-1-2 E6
 Torsion: IEC 60794-1-2 E7
 Bend: IEC 60794-1-2 E11

GENERAL CHARACTERISTICS

Sheath colour: yellow, RAL 1021
 Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation»
 «no. of fibres» «fibre type» «add. text» «batch no.» «meter marks»

- Zero halogen, non corrosive gases IEC 60754-1/-2, EN 50267-2-1/-2-2, VDE 0482-267-2-1/-2-2
- Flame retardant IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
- Minimum smoke emission IEC 61034-1/-2, EN 61034-1/-2 (EN 50268-1/-2), VDE 0482-1034-1/-2 (VDE 0482-268-1/-2)

Description	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance	Fire load
I-V(ZN)H	mm	kg/km	mm	N	short term N	kWh/km
FO Indoor FTTH 2.8, LSOH 2 x 1	2.8	7.5	25	400	500	41
FO Indoor FTTH 2.8, LSOH 4 x 1	2.8	8.0	25	400	500	43

VERSIONS

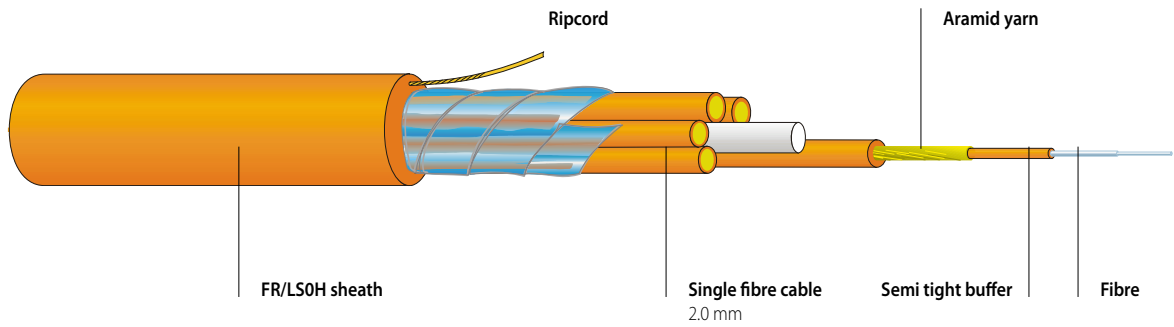
I-V(ZN)H	Fibres	Article No.
Description	number	ITU G.657 .A1
FO Indoor FTTH 2.8, LSOH 2 x 1	2	191803
FO Indoor FTTH 2.8, LSOH 4 x 1	4	191802

FIBRE OPTIC INDOOR CABLES

FO Indoor BO / I-V(ZN)HH

Breakout, 2.0 mm, FR/LSOH

semi tight buffer, flame retardant
in accordance with IEC 60332.1 and IEC 60332.3 C



PRODUCT INFORMATION



FEATURES

Robust and flexible fibre optic breakout cable, based on 2 up to 12 single-fibre cables 2.0 mm with semi tight buffer 0.9 mm in a common sheath.
Easy handling, easy to strip off.
Flame retardant halogen-free FR/LSOH sheath.
Very low fire load.

APPLICATION

LAN backbone.
Connection cable between the building distributors and/or floor distributors.
Suitable for laying in cable trays, ducts and vertical shafts.
For direct termination with FO connectors.
Can also be spliced in FO distributors.

OPTICAL CHARACTERISTICS

The cables are available with different types of optical fibre (see fibre data sheets).

MECHANICAL CHARACTERISTICS

Temperature range in operation: -20 / +60°C IEC 60794-2-20
Tensile performance: IEC 60794-1-2 E1 A
Crush resistance: IEC 60794-1-2 E3
Impact: IEC 60794-1-2 E4
Repeated bending: IEC 60794-1-2 E6
Torsion: IEC 60794-1-2 E7
Bend: IEC 60794-1-2 E11 A

GENERAL CHARACTERISTICS

Sheath colour: E9/125 yellow or green
G50/125 orange
G50/125 OM3 turquoise
G62.5/125 grey
Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation»
«number of fibres» «fibre type» «additional text» «batch number»
~ ~ «meter marks» ~ ~

- Zero halogen, non corrosive gases IEC 60754-1/-2, EN 50267-2-1/-2-2, VDE 0482-267-2-1/-2-2
- Flame retardant IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
- Fire resistant (no flame propagation) IEC 60332.3 C, EN 50266-2-4, VDE 0482-266-2-4
- Minimum smoke emission IEC 61034-1/-2, EN 61034-1/-2 (EN 50268-1/-2), VDE 0482-1034-1/-2 (VDE 0482-268-1/-2)

FIBRE OPTIC INDOOR CABLES
FO Indoor BO / I-V(ZN)HH

Breakout, 2.0 mm, L50H
 semi tight buffer, flame retardant
 in accordance with IEC 60332.1 and IEC 60332.3 C

PRODUCT INFORMATION

Description	I-V(ZN)HH	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance		Fire load	
						mm	kg/km	mm	N
Breakout	2 x 1	7.0	48	105	1000	1000	3000	110	396
Breakout	4 x 1	7.0	48	105	1000	1000	3000	120	432
Breakout	6 x 1	9.0	83	135	1000	1000	3000	165	594
Breakout	8 x 1	9.0	83	135	1000	1000	3000	181	652
Breakout	12 x 1	12.0	138	180	1000	1000	3000	323	116

VERSIONS

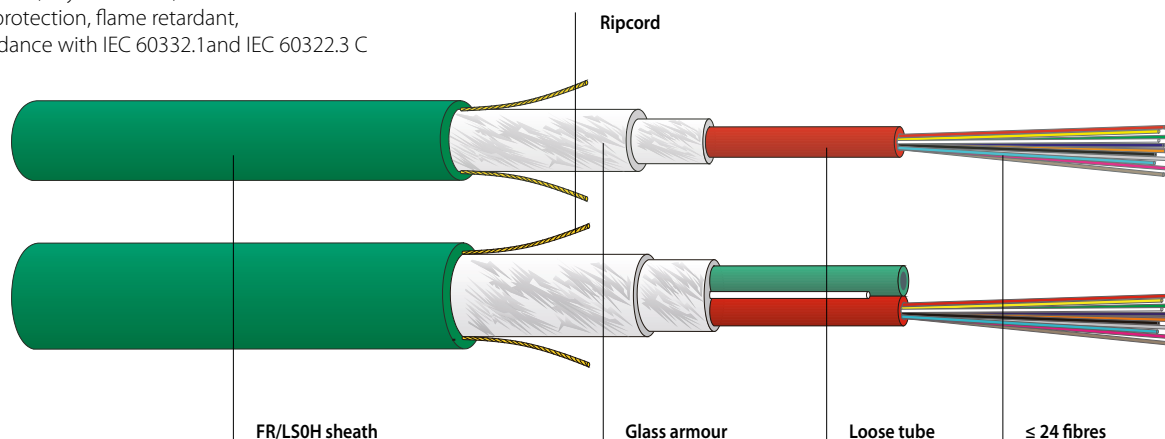
I-V(ZN)HH	Fibres	Article No.	Article No.	Article No.	Article No.
description	number	E9/125 G.652.D	G50/125 OM2	G50/125 OM3	G62.5/125 OM1
		sheath yellow/green	sheath colour orange	sheath colour turquoise	sheath colour grey
Breakout	2 x 1	309262	309265	309294	309268
Breakout	4 x 1	309263	309266	309295	309293
Breakout	6 x 1	309290	309292	309428	on request
Breakout	8 x 1	309291	on request	on request	on request
Breakout	12 x 1	309264	309267	on request	on request

FIBRE OPTIC UNIVERSAL CABLES

FO Universal U-DQ(ZN)BH

for indoor and outdoor use, up to 24 fibres

non metallic, dry interstices,
rodent protection, flame retardant,
in accordance with IEC 60332.1 and IEC 60322.3 C



PRODUCT INFORMATION



FEATURES

Robust, non metallic fibre optic outdoor and indoor cable with one or two central loose-tubes. High crush resistance for high transmission reliability. Easy handling due to cable construction with dry interstices. Non metallic rodent protection. The two coloured ripcords are easy to identify and enable the safe opening of the cable sheath. Flame retardant halogen-free FR/LSOH sheath.

APPLICATION

LAN backbone, access and riser zone. Connection cable between the building distributors and/or floor distributors. Suitable for laying in cable trays, ducts and vertical shafts. Can also be spliced in all FO distributors and joints.

OPTICAL CHARACTERISTICS

The cables are available with different types of optical fibre (see fibre data sheets).

MECHANICAL CHARACTERISTICS

Temperature range	storage:	-25 / +70°C	EN 60794-1-2 F1
	during installation:	-10 / +50°C	
	in operation:	-25 / +60°C	
Tensile performance:	IEC 60794-1-2 E1		
Crush resistance:	IEC 60794-1-2 E3		
Impact:	IEC 60794-1-2 E4		
Repeated bending:	IEC 60794-1-2 E6		
Torsion:	IEC 60794-1-2 E7		
Bend:	IEC 60794-1-2 E11		
Water penetration:	IEC 60794-1-2 F5		

GENERAL CHARACTERISTICS

Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation» «number of fibres» «fibre type» «additional text» «batch number» ~ ~ «meter marks» ~ ~

- Zero halogen, non corrosive gases IEC 60754-1/-2, EN 50267-2-1/-2-2, VDE 0482-267-2-1/-2-2
- Flame retardant IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
- Fire resistant (no flame propagation) IEC 60332.3 C, EN 50266-2-4, VDE 0482-266-2-4
- Minimum smoke emission IEC 61034-1/-2, EN 61034-1/-2 (EN 50268-1/-2), VDE 0482-1034-1/-2 (VDE 0482-268-1/-2)

FO Universal U-DQ(ZN)BH

for indoor and outdoor use, up to 24 fibres

non metallic, dry interstices,
rodent protection, flame retardant,
in accordance with IEC 60332.1 and IEC 60322.3 C

PRODUCT INFORMATION

Description	No. of fibres	Loose tubes	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance		Fire load	
U-DQ(ZN)BH n x m	max.	max.	mm	kg/km	mm	N	continuous N	short term N	kWh/km	MJ/km
FO Universal 1 x 12	12	1	7.6	68	115	1000	2000	5000	275	990
FO Universal 2 x 12	24	2	9.5	96	140	1000	2000	5000	430	1548
FO Universal 1 x 24	24	1	8.2	79	125	1000	2000	5000	336	1210

VERSIONS

U-DQ(ZN)BH n x m	Fibres	Article No.	Article No.	Article No.	Article No.	Article No.
Bezeichnung	number	E9/125 G.652.D	G50/125 OM2	G50/125 OM3	G50/125 OM4	G62.5/125 OM1
FO Universal 1 x 4	4	190203	185938	185989	192712	185590
FO Universal 1 x 6	6	190204	186459	190112	-	186355
FO Universal 1 x 8	8	190205	186300	185959	187363	185934
FO Universal 1 x 12	12	190077	185935	186350	191251	186005
FO Universal 2 x 12	24	190071	186356	186432	191252	186487
FO Universal 1 x 24	24	187354	186595	191755	192713	191753
FO Universal-Hybrid 1x 12 E9 + 1x 12 G50*24	-	190378	190137	192724	-	-

* 12 fibres E9 in the red loose tube, 12 fibres G50 in the green loose tube

FIBRE OPTIC UNIVERSAL CABLES

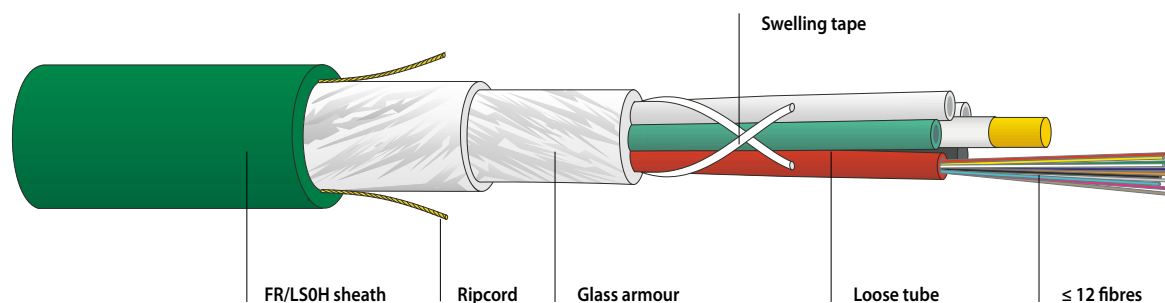
FO Universal U-DQ(ZN)BH

for indoor and outdoor use, up to 144 fibres

non metallic, dry interstices,

rodent protection, flame retardant,

in accordance with IEC 60332.1 and IEC 60322.3 C



PRODUCT INFORMATION



FEATURES

Robust, non metallic fibre optic outdoor and indoor cable with stranded loose tubes.
 High crush resistance for high transmission reliability.
 Easy handling due to cable construction with dry interstices.
 Non metallic rodent protection.
 The two coloured ripcords are easy to identify and enable the safe opening of the cable sheath.
 Flame retardant halogen-free FR/LSOH sheath.

APPLICATION

LAN backbone, access and riser zone.
 Connection cable between the building distributors and/or floor distributors.
 Suitable for laying in cable trays, ducts and vertical shafts.
 Can also be spliced in all FO distributors and joints.

OPTICAL CHARACTERISTICS

The cables are available with different types of optical fibre (see fibre data sheets).

MECHANICAL CHARACTERISTICS

Temperature range	storage:	-25 / +70°C	IEC 60794-1-2 F1
	during installation:	-10 / +50°C	
	in operation:	-25 / +60°C	
Tensile performance:	IEC 60794-1-2 E1		
Crush resistance:	IEC 60794-1-2 E3		
Impact:	IEC 60794-1-2 E4		
Repeated bending:	IEC 60794-1-2 E6		
Torsion:	IEC 60794-1-2 E7		
Bend:	IEC 60794-1-2 E11		
Water penetration:	IEC 60794-1-2 F5		

GENERAL CHARACTERISTICS

Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation»
 «number of fibres» «fibre type» «additional text» «batch number»
 ~ ~ «meter marks» ~ ~

Zero halogen, non corrosive gases	IEC 60754-1/-2, EN 50267-2-1/-2-2, VDE 0482-267-2-1/-2-2
Flame retardant	IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
Fire resistant (no flame propagation)	IEC 60332.3 C, EN 50266-2-4, VDE 0482-266-2-4
Minimum smoke emission	IEC 61034-1/-2, EN 61034-1/-2 (EN 50268-1/-2), VDE 0482-1034-1/-2 (VDE 0482-268-1/-2)

FO Universal U-DQ(ZN)BH

for indoor and outdoor use, up to 144 fibres

non metallic, dry interstices,
rodent protection, flame redardant,
in accordance with IEC 60332.1 and IEC 60322.3 C

PRODUCT INFORMATION

Description	No. of fibres	Loose tube	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance		Fire load	
U-DQ(ZN)BH n x m	max.	max.	mm	kg/km	mm	N	continuous N	short term N	kWh/km	MJ/km
FO Universal 5 x 12	60	5	11.4	148	175	6000	3000	5000	616	2218
FO Universal 6 x 12	72	6	12.2	164	185	6000	3000	5000	681	2452
FO Universal 8 x 12	96	8	13.5	198	205	6000	3000	5000	808	3200
FO Universal 10 x 12	120	10	14.8	230	225	6000	3000	5000	936	3369
FO Universal 12 x 12	144	12	16.3	272	245	6000	3000	5000	1075	3870

VERSIONS

U-DQ(ZN)BH n x m	Fibres	Article No.	Article No.	Article No.	Article No.	Article No.
Description	number	E9/125 G.652.D	G50/125 OM2	G50/125 OM3	G50/125 OM4	G62.5/125 OM1
FO Universal 3 x 12	36	190207	186434	auf Anfrage	192678	186488
FO Universal 4 x 12	48	190208	187291	186486	191278	187292
FO Universal 5 x 12	60	190209	190618	186642	on request	on request
FO Universal 6 x 12	72	190210	187344	186539	on request	on request
FO Universal 8 x 12	96	186747	on request	186540	192714	on request
FO Universal 10 x 12	120	190211	on request	186536	on request	on request
FO Universal 12 x 12	144	190212	186616	191710	192715	on request

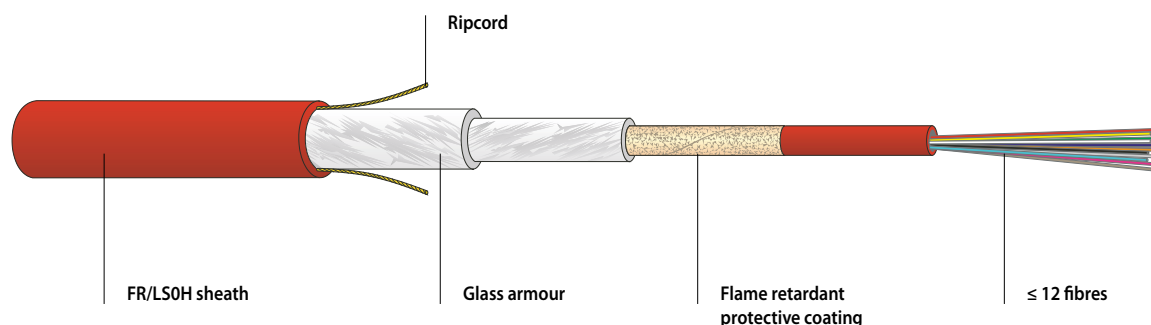
FIBRE OPTIC UNIVERSAL CABLES

FO Universal ZGGFR Safety / U-DQ(ZN)BH

Safety cable E30

non metallic, water resistant, rodent protection,
in accordance with IEC 60332.1 and IEC 60332.3 C

30 minutes system circuit integrity according to DIN 4102-12



PRODUCT INFORMATION



FEATURES

Non metallic fibre optic safety cable with one central loose tube, up to 12 fibres.
The optimal combination of flame retardant fibre coating and flame-inhibiting stabilizing elements ensures enhanced functional integrity (system circuit integrity) in case of fire for 30 minutes.

APPLICATION

Safety applications in tunnels, underground railways, banks, insurance companies, large scale industry.
LAN backbone.
Indoor and outdoor cabling.
Can be installed in cable platforms, trays, ducts and vertical shafts.
Can be spliced in FO distributors.

OPTICAL CHARACTERISTICS

The cables are available with different types of optical fibre (see fibre data sheets).

MECHANICAL CHARACTERISTICS

Temperature range	storage:	-25 / +70°C	IEC 60794-1-2 F1
	during installation:	-10 / +50°C	
	in operation:	-25 / +60°C	
Tensile performance:	IEC 60794-1-2 E1		
Crush resistance:	IEC 60794-1-2 E3		
Impact:	IEC 60794-1-2 E4		
Repeated bending:	IEC 60794-1-2 E6		
Torsion:	IEC 60794-1-2 E7		
Bend:	IEC 60794-1-2 E11		
Water penetration:	IEC 60794-1-2 F5		

GENERAL CHARACTERISTICS

Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation»
«number of fibres» «fibre type» «additional text» «batch number»
~ ~ «meter marks» ~ ~

- Zero halogen, non corrosive gases IEC 60754-1/-2, EN 50267-2-1/-2-2, VDE 0482-267-2-1/-2-2
- Flame retardant IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
- Fire resistant (no flame propagation) IEC 60332.3 C, EN 50266-2-4, VDE 0482-266-2-4
- Minimum smoke emission IEC 61034-1/-2, EN 61034-1/-2 (EN 50268-1/-2), VDE 0482-1034-1/-2 (VDE 0482-268-1/-2)
- Circuit Integrity (FE180) IEC 60331, VDE 0472 part 814, EN 50200, EN 50362, VDE 0482-200, VDE 0482-362
- System Circuit Integrity E30* according to DIN 4102 part 12
*System Circuit Integrity E30 is dependent on installation method

ACCESSORIES

You can find the necessary, E30-tested and certified fire safety system components in our catalogue "System Circuit Integrity" and on our homepage.

FO Universal ZGGFR Safety / U-DQ(ZN)BH

Safety cable E30

non metallic, water resistant, rodent protection,
in accordance with IEC 60332.1 and IEC 60332.3 C
30 minutes system circuit integrity according to DIN 4102-12

PRODUCT INFORMATION

Description	No. of fibres	Loose tube	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance		Fire load	
U-DQ(ZN)BH 1 x m	max.		mm	kg/km	mm	N	continuous N	short term N	kWh/km	MJ/km
ZGGFR Safety 1 x 12	12	1	7.8	72	120	1000	2000	5000	301	1084

VERSIONS

U-DQ(ZN)BH 1 x m	Fibres	Article No.	Article No.	Article No.	Article No.
Description	number	E9/125 G.652.D	G50/125 OM2	G50/125 OM3	G62.5/125 OM1
ZGGFR Safety 1 x 4	4	187288	186363	190604	186638
ZGGFR Safety 1 x 6	6	191867	186639	191851	190792
ZGGFR Safety 1 x 8	8	on request	190621	on request	on request
ZGGFR Safety 1 x 12	12	190719	187293	191796	187305

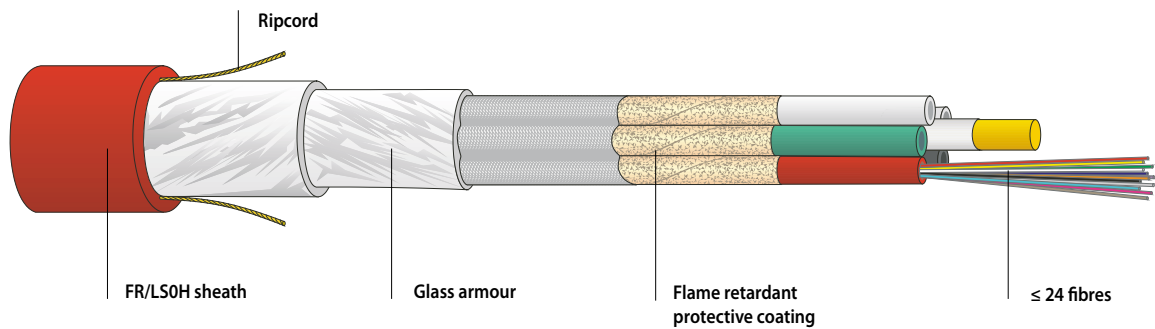
FIBRE OPTIC UNIVERSAL CABLES

FO Universal wbGGFR Safety / U-DQ(ZN)BH

Safety cable E30

non metallic, water resistant, rodent protection,
in accordance with IEC 60332.1 and IEC 60332.3 C

30 minutes system circuit integrity according to DIN 4102-12



PRODUCT INFORMATION



FEATURES

Non metallic fibre optic safety cable with multiple loose tubes, up to 60 fibres.
The optimal combination of flame retardant fibre coating and flame-inhibiting stabilizing elements ensures enhanced functional integrity (system circuit integrity) in case of fire for 30 minutes.

APPLICATION

Safety applications in tunnels, underground railways, banks, insurance companies, large scale industry.
LAN backbone.
Indoor and outdoor cabling.
Can be installed in cable platforms, trays, ducts and vertical shafts.
Can be spliced in FO distributors.

OPTICAL CHARACTERISTICS

The cables are available with different types of optical fibre (see fibre data sheets).

MECHANICAL CHARACTERISTICS

Temperature range	storage:	-25 / +70°C	IEC 60794-1-2 F1
	during installation:	-10 / +50°C	
	in operation:	-25 / +60°C	
Tensile performance:	IEC 60794-1-2 E1		
Crush resistance:	IEC 60794-1-2 E3		
Repeated bending:	IEC 60794-1-2 E6		
Torsion:	IEC 60794-1-2 E7		
Bend:	IEC 60794-1-2 E11		
Water penetration:	IEC 60794-1-2 F5		

GENERAL CHARACTERISTICS

Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation»
«number of fibres» «fibre type» «additional text» «batch number»
~ ~ «meter marks» ~ ~

- Zero halogen, non corrosive gases IEC 60754-1/-2, EN 50267-2-1/-2-2, VDE 0482-267-2-1/-2-2
- Flame retardant IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
- Fire resistant (no flame propagation) IEC 60332.3 C, EN 50266-2-4, VDE 0482-266-2-4
- Minimum smoke emission IEC 61034-1/-2, EN 61034-1/-2 (EN 50268-1/-2), VDE 0482-1034-1/-2 (VDE 0482-268-1/-2)
- Circuit Integrity (FE180) IEC 60331, VDE 0472 part 814, EN 50200, EN 50362, VDE 0482-200, VDE 0482-362
- System Circuit Integrity E30* according to DIN 4102 part 12

*System Circuit Integrity is dependent on installation method

ACCESSORIES

You can find the necessary E30-tested and certified fire safety system components in our catalogue "System Circuit Integrity" and on our homepage.

FO Universal wbGGFR Safety / U-DQ(ZN)BH

Safety cable E30

non metallic, water resistant, rodent protection,
in accordance with IEC 60332.1 and IEC 60332.3 C

30 minutes system circuit integrity according to DIN 4102-12

PRODUCT INFORMATION

Description	No. of fibres	Loose tubes	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance		Fire load	
U-DQ(ZN)BH n x m	max.	max.	mm	kg/km	mm	N	continuous N	short term N	kWh/km	MJ/km
wbGGFR Safety 2 x 12	24	2	12.5	166	190	6000	3000	5000	733	2639
wbGGFR Safety 3 x 12	36	3	12.5	168	190	6000	3000	5000	733	2639
wbGGFR Safety 4 x 12	48	4	12.5	170	190	6000	3000	5000	733	2639
wbGGFR Safety 5 x 12	60	5	12.5	166	190	6000	3000	5000	733	2639

VERSIONS

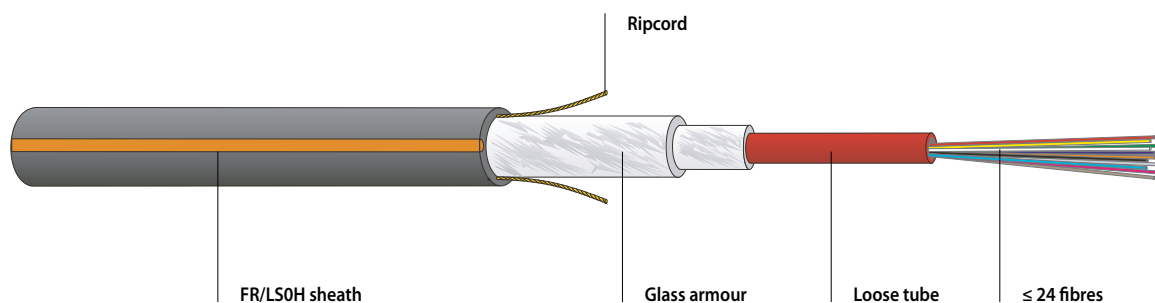
U-DQ(ZN)BH n x m	Fibres	Article No.	Article No.	Article No.	Article No.
Description	number	E9/125 G.652.D	G50/125 OM2	G50/125 OM3	G62.5/125 OM1
wbGGFR Safety 2 x 12	24	190223	187294	187360	on request
wbGGFR Safety 3 x 12	36	190224	on request	on request	on request
wbGGFR Safety 4 x 12	48	190225	192119	191191	on request
wbGGFR Safety 5 x 12	60	190226	on request	190605	on request

FIBRE OPTIC UNIVERSAL CABLES

FO Universal ZGGFR Easy Blow / U-DQ(ZN)BH

Fire resistant, optimized for blowing through thermoplastic ducts

non metallic, rodent protection,
in accordance with IEC 60332.1 and IEC 60332.3 C



PRODUCT INFORMATION



FEATURES

Robust, non metallic fibre optic outdoor and indoor cable with one central loose tube. Optimized for blowing through thermoplastic ducts: Its good greasing characteristics, smooth and strong sheath surface and good internal strength provide for an axial linear motion and reduced friction (in comparison with standard indoor/outdoor cables). Therefore a blowing length of up to 2000 m is possible. Non metallic rodent protection. Flame retardant and fire resistant sheath with very low fire load. The coloured ripcords are easy to identify and enable the safe opening of the cable sheath.

APPLICATION

For blowing through thermoplastic ducts with blowing lengths of up to 2000 m. In Premises cabling for LAN backbones (Campus and Vertical/Riser cabling) as well as for tunnels.

OPTICAL CHARACTERISTICS

The cables are available with different types of optical fibre (see fibre data sheets).

MECHANICAL CHARACTERISTICS

Temperature range	storage:	-25 / +70°C	IEC 60794-1-2 F1
	during installation:	-10 / +50°C	
	in operation:	-25 / +60°C	
Tensile performance:	IEC 60794-1-2 E1		
Crush resistance:	IEC 60794-1-2 E3		
Impact:	IEC 60794-1-2 E4		
Repeated bending:	IEC 60794-1-2 E6		
Torsion:	IEC 60794-1-2 E7		
Bend:	IEC 60794-1-2 E11		
Water penetration:	IEC 60794-1-2 F5		

GENERAL CHARACTERISTICS

Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation» «number of fibres» «fibre type» «additional text» «batch number» ~ ~ «meter marks» ~ ~

- Zero halogen, non corrosive gases IEC 60754-1/-2, EN 50267-2-1/-2-2, VDE 0482-267-2-1/-2-2
- Flame retardant IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
- Fire resistant (no flame propagation) IEC 60332.3 C, EN 50266-2-4, VDE 0482-266-2-4
- Minimum smoke emission IEC 61034-1/-2, EN 61034-1/-2 (EN 50268-1/-2), VDE 0482-1034-1/-2 (VDE 0482-268-1/-2)

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

GF-1325 ZGGFR Easy-Blow 0712/e

FO Universal ZGGFR Easy Blow / U-DQ(ZN)BH

Fire resistant, optimized for blowing through thermoplastic ducts

non metallic, rodent protection,
in accordance with IEC 60332.1 and IEC 60332.3 C

PRODUCT INFORMATION

Description	No. of fibres	Loose tube	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance		Fire load	
U-DQ(ZN)BH n x m			mm	kg/km	mm	N	continuous N	short term N	kWh/km	MJ/km
ZGGFR Easy Blow 1 x 12	12	1	8.5	84	140	2500	2000	3000	356	1280
ZGGFR Easy Blow 1 x 24	24	1	9.0	95	145	2500	2000	3000	400	1435

VERSIONS

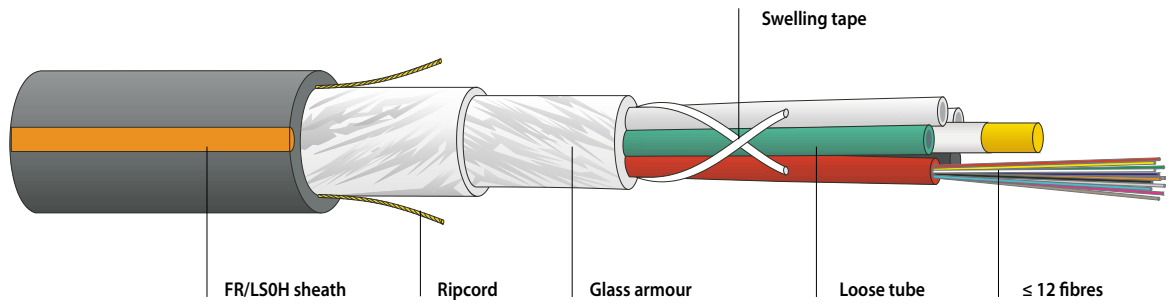
U-DQ(ZN)BH n x m	Fibres	Article No.	Article No.	Article No.	Article No.
Description	number	E9/125 G.652.D	G50/125 OM2	G50/125 OM3	G62.5/125 OM1
ZGGFR Easy Blow 1 x 4	4	190617	191277	191825	190754
ZGGFR Easy Blow 1 x 6	6	190363	on request	on request	on request
ZGGFR Easy Blow 1 x 8	8	190700	on request	on request	on request
ZGGFR Easy Blow 1 x 12	12	190213	on request	on request	on request
ZGGFR Easy Blow 1 x 24	24	190214	on request	on request	on request

FIBRE OPTIC UNIVERSAL CABLES

FO Universal wbGGFR Easy Blow / U-DQ(ZN)BH

Fire resistant, optimized for blowing through thermoplastic ducts

non metallic, dry interstices, rodent protection,
in accordance with IEC 60332.1 and IEC 60332.3 C



PRODUCT INFORMATION



FEATURES

Robust, non metallic fibre optic outdoor and indoor cable with stranded loose tubes.
Optimized for blowing through thermoplastic ducts:
Its good greasing characteristics, smooth and strong sheath surface and good internal strength provide for an axial linear motion and reduced friction (in comparison with standard indoor/outdoor cables). Therefore a blowing length of up to 2000 m is possible.
Non metallic rodent protection.
Flame retardant and fire resistant sheath with very low fire load.
The coloured ripcords are easy to identify and enable the safe opening of the cable sheath.

APPLICATION

For blowing through thermoplastic ducts with blowing lengths of up to 2000 m.
In Premises cabling for LAN backbones (Campus and Vertical/Riser cabling) as well as for tunnels.

OPTICAL CHARACTERISTICS

The cables are available with different types of optical fibre (see fibre data sheets).

MECHANICAL CHARACTERISTICS

Temperature range	storage: -25 / +70°C	IEC 60794-1-2 F1
	during installation: -10 / +50°C	
	in operation: -25 / +60°C	
Tensile performance:	IEC 60794-1-2 E1	
Crush resistance:	IEC 60794-1-2 E3	
Impact:	IEC 60794-1-2 E4	
Repeated bending:	IEC 60794-1-2 E6	
Torsion:	IEC 60794-1-2 E7	
Bend:	IEC 60794-1-2 E11	
Water penetration:	IEC 60794-1-2 F5	

GENERAL CHARACTERISTICS

Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation»
«number of fibres» «fibre type» «additional text» «batch number»
~ ~ «meter marks» ~ ~

Zero halogen, non corrosive gases	IEC 60754-1/-2, EN 50267-2-1/-2-2, VDE 0482-267-2-1/-2-2
Flame retardant	IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
Fire resistant (no flame propagation)	IEC 60332.3 C, EN 50266-2-4, VDE 0482-266-2-4
Minimum smoke emission	IEC 61034-1/-2, EN 61034-1/-2 (EN 50268-1/-2), VDE 0482-1034-1/-2 (VDE 0482-268-1/-2)

FO Universal wbGGFR Easy Blow / U-DQ(ZN)BH

Fire resistant, optimized for blowing through thermoplastic ducts

non metallic, dry interstices, rodent protection,
in accordance with IEC 60332.1 and IEC 60332.3 C

PRODUCT INFORMATION

Description	No. of fibres	Loose tubes	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance		Fire load	
U-DQ(ZN)BH n x m			mm	kg/km	mm	N	continuous N	short term N	kWh/km	MJ/km
wbGGFR5 Easy Blow 5 x 12	60	5	12.0	154	180	9000	3000	5000	627	2257
wbGGFR6 Easy Blow 6 x 12	72	6	12.8	175	195	9000	3000	5000	698	2513
wbGGFR8 Easy Blow 8 x 12	96	8	14.0	208	210	9000	3000	5000	925	3330
wbGGFR10 Easy Blow 10 x 12	120	10	15.4	243	230	9000	3000	5000	1151	4144
wbGGFR12 Easy Blow 12 x 12	144	12	16.9	286	255	9000	3000	5000	1367	4921
wbGGFR12 Easy Blow 12 x 24	288	12	18.8	356	285	9000	3000	5000	1435	5165

VERSIONS

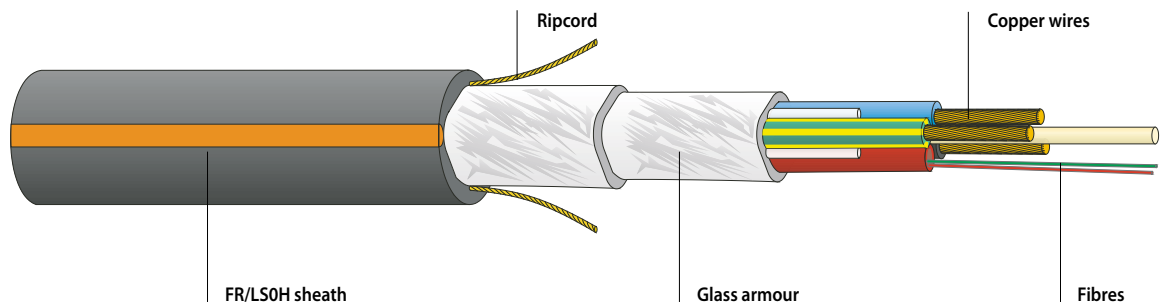
U-DQ(ZN)BH n x m	Fibres number	Article No.	Article No.	Article No.
Description		E9/125 G.652.D	G50/125 OM2	G62.5/125 OM1
wbGGFR5 Easy Blow 1 x 12	12	190602	on request	186756
wbGGFR5 Easy Blow 2 x 12	24	190215	186645	186561
wbGGFR5 Easy Blow 3 x 12	36	190692	187319	on request
wbGGFR5 Easy Blow 4 x 12	48	190216	on request	186757
wbGGFR5 Easy Blow 5 x 12	60	190217	on request	on request
wbGGFR6 Easy Blow 6 x 12	72	190218	on request	190753
wbGGFR8 Easy Blow 8 x 12	96	190219	on request	186758
wbGGFR10 Easy Blow 10 x 12	120	190220	on request	on request
wbGGFR12 Easy Blow 12 x 12	144	190221	on request	on request
wbGGFR12 Easy Blow 12 x 24	288	191701	on request	on request

FIBRE OPTIC UNIVERSAL CABLES

FO Universal wbGGFR Combi / U-DQS(ZN)BH

Combination cable with 3 stranded copper wires, indoor and outdoor use

dry interstices, rodent protection,
in accordance with IEC 60332.1 and IEC 60332.3 .C



PRODUCT INFORMATION



FEATURES

The glass armour provides for a combined non metallic rodent protection and strain relief.
Two ripcords enable the safe opening of the cable sheath.
Dry stranding interstices - easy handling.
Longitudinal water resistance.
Flame retardant, flame resistant cable sheath.

APPLICATION

Camera combi cable in tunnels, underground railroads, large scale industry.
Pulling in or blowing through thermoplastic ducts.
Laying on cable platforms and cable trays.
Direct burial

OPTICAL CHARACTERISTICS

The cables are available with different types of optical fibre (see fibre data sheets).

MECHANICAL CHARACTERISTICS

Temperature range	storage:	-25 / +70°C	IEC 60794-1-2 F1
	during installation:	-10 / +50°C	
	in operation:	-25/ +60°C	
Tensile performance:		IEC 60794-1-2 E1	
Crush resistance:		IEC 60794-1-2 E3	
Impact:		IEC 60794-1-2 E4	
Repeated bending:		IEC 60794-1-2 E6	
Torsion:		IEC 60794-1-2 E7	
Bend:		IEC 60794-1-2 E11	
Water penetration:		IEC 60794-1-2 F5	

GENERAL CHARACTERISTICS

Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation»
«number of fibres» «fibre type» «additional text» «batch number»
~ ~ «meter marks» ~ ~

- Zero halogen, non corrosive gases IEC 60754-1/-2, EN 50267-2-1/-2-2, VDE 0482-267-2-1/-2-2
- Flame retardant IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
- Fire resistant (no flame propagation) IEC 60332.3 C, EN 50266-2-4, VDE 0482-266-2-4
- Minimum smoke emission IEC 61034-1/-2, EN 61034-1/-2 (EN 50268-1/-2), VDE 0482-1034-1/-2 (VDE 0482-268-1/-2)

Description	No. of fibres	Sheath Ø mm	Weight kg/km	Bending radius mm	Tensile load N	Crush resistance short term N
wbGGFR Combi 1 x 2 + 3 x 2.5 mm ²	2	13.0	233	200	3000	3000

VERSIONS

Description	Fibres number	Article No. E9/125 G.652.D	Article No. G50/125 OM2	Article No. G62.5/125 OM1
wbGGFR Combi 1 x 2 + 3 x 2.5 mm ²	2	186358	187348	186366

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

GC-4004-Kamerakombikabel mit BA.0712/e

Product overview and selection guide for fibre optic outdoor cables

Selection criteria

The Datwyler product portfolio consists of many different cable types.

The following overview lists some of the more important criteria which will help you to decide for the cable types that meet your specific requirements.

Cable name / DIN/VDE page

				Cable characteristics										Laying			Application							
				Maximum number of fibres	Robust cable design	Lightweight construction	Rodent protection	Rodent security	Non metallic (non potential differences)	Dry interstices	Longitudinal water blocking	Halogen free sheath	Flame retardant sheath	Functional integrity / Circuit integrity 30 min.	Loose tube	Micro bundle	Installation with cable winches	Blowing trough thermoplastic ducts	Laying in cable trays	WAN / City network	Campus / Access network	Tunnels / Safety area	LAN	
Fibre optic HighP cables																								
FO Outdoor wbKT HP / A-DQ(ZN)B2Y	HighP	214	144	●				●	●	●	●			●		●	●	●	●	●	●			
FO Outdoor ZGGT HP / A-DQ(ZN)B2Y	HighP	216	24	●	●			●	●	●	●			●		●	●	●	●	●	●			
FO Outdoor wbGGT HP / A-DQ(ZN)B2Y	HighP	218	288	●	●			●	●	●	●			●		●	●	●	●	●	●			
FO Outdoor wbGGT HP / A-DQ(ZN)B2Y	HighP, 2-layer	220	576	●	●			●	●	●	●			●		●	●	●	●	●	●			
FO Outdoor wbKWT HP / A-DQ(ZN)(SR)2Y	HighP	222	60	●			●	●	●	●				●		●		●	●	●	●			
Fibre optic Basic Line cables																								
FO Outdoor ZGGT BL / A-DQ(ZN)B2Y	Basic Line	224	24	●	●			●	●	●	●			●			●				●			
FO Outdoor wbGGT BL / A-DQ(ZN)B2Y	Basic Line	226	60	●	●			●	●	●	●			●			●			●				
FO Outdoor ZwbKWT BL / A-DQ(ZN)(SR)2Y	Basic Line	228	24	●	●			●	●	●				●			●	●			●			
Fibre optic Micro cables																								
FO Outdoor ZT S-Micro / A-D2Y	up to 24 fibres	230	24	●				●	●	●	●			●			●			●	●			
FO Outdoor ZKT Micro / A-DQ(ZN)2Y	up to 24 fibres	231	24	●				●	●	●	●			●			●			●	●			
FO Outdoor wbKT Micro / A-DQ(ZN)2Y	up to 144 fibres	232	144	●				●	●	●	●			●			●			●	●			
FO Outdoor wbKT S-Micro / A-DQ(ZN)2Y	up to 216 fibres	234	216	●				●	●	●	●			●			●			●	●			

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

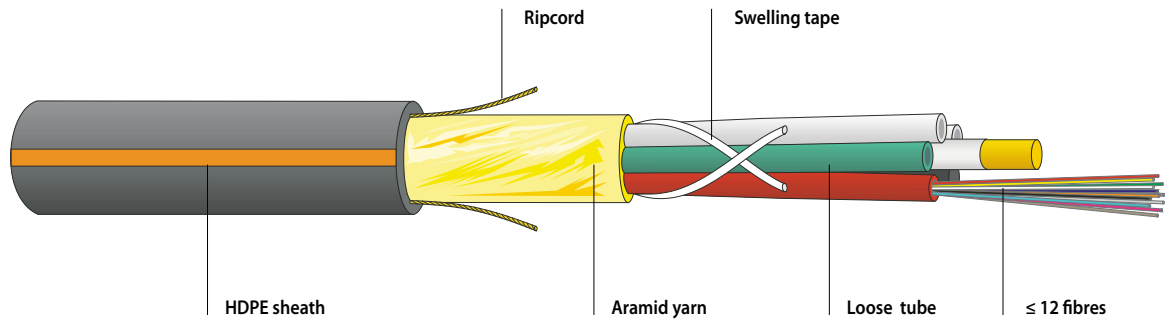
General Information

FIBRE OPTIC OUTDOOR CABLES

FO Outdoor wbKT HP / A-DQ(ZN)B2Y

HighP

non metallic, dry interstices,
non armoured, water resistant



PRODUCT INFORMATION



FEATURES

Compact, non metallic fibre optic outdoor cable with stranded loose tubes.
Water blocking elements in the strand interstices prevent water penetration.
Easy handling due to lightweight construction.
The two coloured ripcords are easy to identify and enable the safe opening of the cable sheath.
HDPE cable sheath, easy to lay.

APPLICATION

For pulling in or blowing through thermoplastic duct systems.
Suitable for laying in cable platforms and cable trays.
Direct burial.


OPTICAL CHARACTERISTICS

The cables are available with different types of optical fibre (see fibre data sheets).

MECHANICAL CHARACTERISTICS

Temperature range	storage:	-40 / +70°C	IEC 60794-1-2 F1
	during installation:	-10 / +50°C	
	in operation:	-40 / +60°C	
Tensile performance:	IEC 60794-1-2 E1		
Crush resistance:	IEC 60794-1-2 E3		
Impact:	IEC 60794-1-2 E4		
Repeated bending:	IEC 60794-1-2 E6		
Torsion:	IEC 60794-1-2 E7		
Bend:	IEC 60794-1-2 E11		
Water penetration:	IEC 60794-1-2 F5		

GENERAL CHARACTERISTICS

Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation»
«number of fibres» «fibre type» «additional text» «batch number»
~ ~ «meter marks» ~ ~
 Zero halogen,
non corrosive gases
IEC 60754-1/-2, EN 50267-2-1/2-2, VDE 0482-267-2-1/-2-2

FIBRE OPTIC OUTDOOR CABLES
FO Outdoor wbKT HP / A-DQ(ZN)B2Y

HighP

non metallic, dry interstices,
 non armoured, water resistant

PRODUCT INFORMATION

Description	No. of fibres		Loose tubes	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance		Fire load	
	max.	max.						mm	kg/km	mm	N
A-DQ(ZN)2Y n x m											
wbKT5 HighP	60	5	10.2	74	155	3000	1000	3000	748	2693	
wbKT6 HighP	72	6	11.0	91	165	3000	1000	3000	843	3035	
wbKT8 HighP	96	8	12.5	121	190	3000	1000	3000	1010	3640	
wbKT10 HighP	120	10	14.0	150	210	3000	1000	3000	1185	4270	
wbKT12 HighP	144	12	15.6	187	235	3000	1000	3000	1390	5004	

VERSIONS

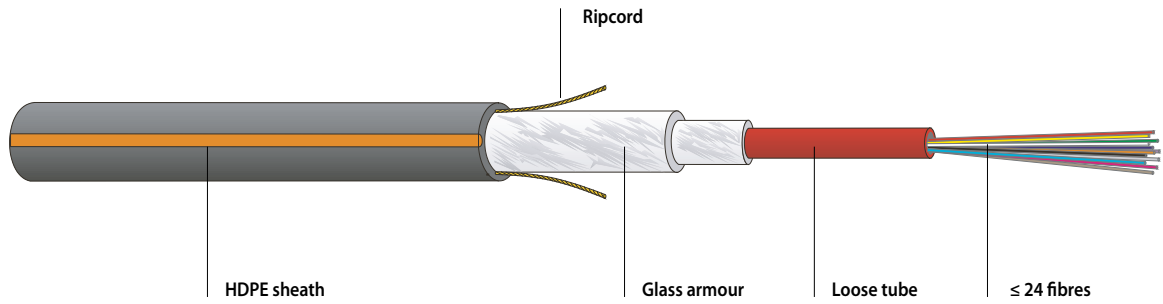
A-DQ(ZN)2Y n x m	Fibres	Article No.
Description	number	E9/125 G.652.D
wbKT5 HighP 1 x 12	12	190661
wbKT5 HighP 2 x 12	24	190662
wbKT5 HighP 4 x 12	48	190160
wbKT5 HighP 5 x 12	60	190161
wbKT6 HighP 6 x 12	72	190162
wbKT8 HighP 8 x 12	96	190163
wbKT12 HighP 10 x 12	120	190164
wbKT12 HighP 12 x 12	144	190165

FIBRE OPTIC OUTDOOR CABLES

FO Outdoor ZGGT HP / A-DQ(ZN)B2Y

HighP

central tube design, non metallic,
water resistant, rodent protection



PRODUCT INFORMATION



FEATURES

Robust, non metallic fibre optic outdoor cable with one central loose tube and up to 24 fibres. High tensile strength and high radial load strength for the highest transmission security. Lightweight and installation friendly cable construction. Non metallic rodent protection. The two coloured ripcords are easy to identify and enable the safe opening of the cable sheath. HDPE cable sheath, easy to lay.

APPLICATION

For pulling in or blowing through thermoplastic duct systems. Suitable for laying in cable platforms, cable shafts and even in very complex cable trays. Direct burial.

OPTICAL CHARACTERISTICS


The cables are available with different types of optical fibre (see fibre data sheet).

MECHANICAL CHARACTERISTICS

Temperature range	storage:	-40 / +70°C	IEC 60794-1-2 F1
	during installation:	-10 / +50°C	
	in operation:	-40 / +60°C	
Tensile performance:	IEC 60794-1-2 E1		
Crush resistance:	IEC 60794-1-2 E3		
Impact:	IEC 60794-1-2 E4		
Repeated bending:	IEC 60794-1-2 E6		
Torsion:	IEC 60794-1-2 E7		
Bend:	IEC 60794-1-2 E11		
Water penetration:	IEC 60794-1-2 F5		

GENERAL CHARACTERISTICS

Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation» «number of fibres» «fibre type» «additional text» «batch number» ~ ~ «meter marks» ~ ~

 Zero halogen,
non corrosive gases

IEC 60754-1/-2, EN 50267-2-1/2-2, VDE 0482-267-2-1/-2-2

- Copper
- Fibre Optics
- Cabinets & Racks
- Data Centre
- Wireless
- Multimedia
- General Information

GF-1310 ZGGT 2500 HighP 0712/e

FO Outdoor ZGGT HP / A-DQ(ZN)B2Y

HighP

central tube design, non metallic,
water resistant, rodent protection

PRODUCT INFORMATION

Description		No. of fibres	Loose tube	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance		Fire load	
A-DQ(ZN)B2Y 1 x m		max.		mm	kg/km	mm	N	continuous N	short term N	kWh/km	MJ/km
ZGGT HighP	1 x 12	12	1	8.5	65	130	2500	6000	10000	558	2009
ZGGT HighP	1 x 24	24	1	9.0	70	135	2500	6000	10000	589	2120

VERSIONS

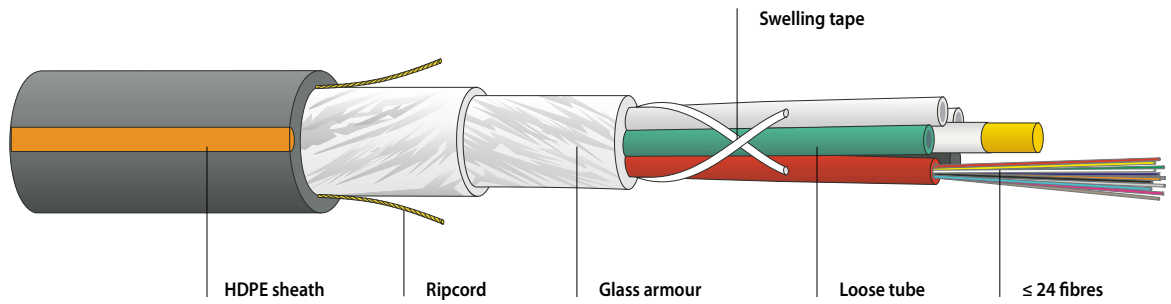
A-DQ(ZN)B2Y 1 x m		Fibres	Article No.	Article No.	Article No.	Article No.
Description		number	E9/125 G.652.D	G50/125 OM2	G50/125 OM3	G62.5/125 OM1
ZGGT HighP	1 x 4	4	190166	186320	191121	186379
ZGGT HighP	1 x 6	6	190167	186481	190747	186483
ZGGT HighP	1 x 8	8	190168	186480	on request	186484
ZGGT HighP	1 x 12	12	190169	185937	186361	185945
ZGGT HighP	1 x 24	24	190149	186660	on request	on request

FIBRE OPTIC OUTDOOR CABLES

FO Outdoor wbGGT HP / A-DQ(ZN)B2Y

HighP

non metallic, dry interstices,
water resistant, rodent protection



PRODUCT INFORMATION



FEATURES

Robust, non metallic fibre optic outdoor cable with stranded loose tubes in one layer.
High crush resistance for high transmission reliability.
Easy handling due to the use of dry strand interstices.
Non metallic rodent protection.
The two coloured ripcords are easy to identify and enable the safe opening of the cable sheath.
HDPE cable sheath, easy to lay.

APPLICATION

For pulling in or blowing through thermoplastic duct systems.
Suitable for laying in cable platforms, cable trays
and even in complex cable trays.
Direct burial.

OPTICAL CHARACTERISTICS


The cables are available with different types of optical fibre (see fibre data sheets).

MECHANICAL CHARACTERISTICS

Temperature range	storage:	-40 / +70°C	IEC 60794-1-2 F1
	during installation:	-10 / +50°C	
	in operation:	-40 / +60°C	
Tensile performance:	IEC 60794-1-2 E1		
Crush resistance:	IEC 60794-1-2 E3		
Impact:	IEC 60794-1-2 E4		
Repeated bending:	IEC 60794-1-2 E6		
Torsion:	IEC 60794-1-2 E7		
Bend:	IEC 60794-1-2 E11		
Water penetration:	IEC 60794-1-2 F5		

GENERAL CHARACTERISTICS

Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation»
«number of fibres» «fibre type» «additional text» «batch number»
~ ~ «meter marks» ~ ~

 Zero halogen,
non corrosive gases

IEC 60754-1/-2, EN 50267-2-1/2-2, VDE 0482-267-2-1/-2-2

- Copper
- Fibre Optics
- Cabinets & Racks
- Data Centre
- Wireless
- Multimedia
- General Information

GF-1312 wbGGT HighP 0712/e

FO Outdoor wbGGT HP / A-DQ(ZN)B2Y

HighP

non metallic, dry interstices,
water resistant, rodent protection

PRODUCT INFORMATION

Description	No. of fibres	Loose tubes	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance			Fire load	
A-DQ(ZN)B2Y n x m			mm	kg/km	mm	N	continuous N	short term N	kWh/km	MJ/km	
wbGGT5 HighP 5 x 12	60	5	12.0	128	180	9000	3000	8000	1040	3744	
wbGGT6 HighP 6 x 12	72	6	12.8	146	195	9000	3000	8000	1137	4093	
wbGGT8 HighP 8 x 12	96	8	14.0	160	210	9000	3000	8000	1305	4699	
wbGGT10 HighP 10 x 12	120	10	15.4	190	230	9000	3000	8000	1491	5365	
wbGGT12 HighP 12 x 12	144	12	16.9	223	255	9000	3000	8000	1707	6145	
wbGGT6 HighP 6 x 24	144	6	13.8	167	205	9000	3000	8000	1291	4655	
wbGGT8 HighP 8 x 24	192	8	15.0	190	225	9000	3000	8000	1583	5704	
wbGGT10 HighP 9 x 24	216	10	17.0	250	255	9000	3000	8000	1993	7175	
wbGGT12 HighP 12 x 24	288	12	18.8	273	285	9000	3000	8000	2453	8832	

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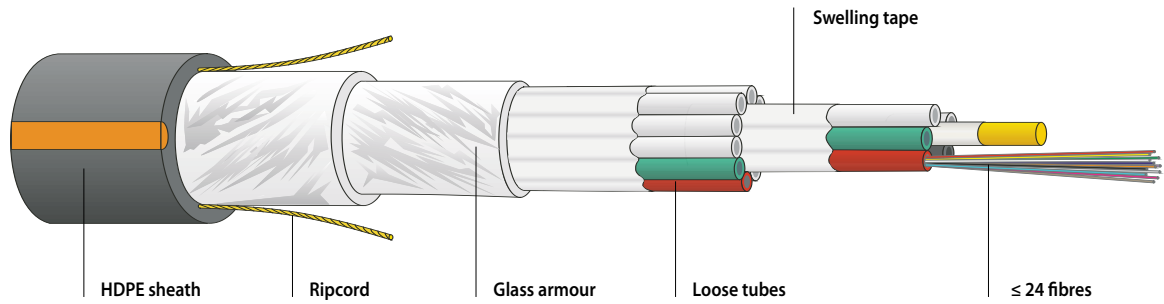
A-DQ(ZN)B2Y n x m	Fibres	Article No.	Article No.	Article No.	Article No
Description	number	E9/125 G.652.D	G50/125 OM2	G50/125 OM3	G62.5/125 OM1
wbGGT5 HighP 1 x 12	12	190059	186627	190651	186455
wbGGT5 HighP 2 x 12	24	186748	186437	190368	186399
wbGGT5 HighP 3 x 12	36	190058	186438	on request	186457
wbGGT5 HighP 4 x 12	48	187385	186439	190369	186458
wbGGT5 HighP 5 x 12	60	190171	on request	on request	191838
wbGGT6 HighP 6 x 12	72	190172	191782	on request	on request
wbGGT8 HighP 8 x 12	96	186760	190372	on request	on request
wbGGT10 HighP 10 x 12	120	190175	on request	192697	on request
wbGGT12 HighP 12 x 12	144	187394	on request	190311	on request
wbGGT6 HighP 6 x 24	144	190764	on request	on request	on request
wbGGT8 HighP 8 x 24	192	191270	on request	on request	on request
wbGGT10 HighP 9 x 24	216	190696	on request	on request	on request
wbGGT12 HighP 12 x 24	288	190325	on request	on request	on request

FIBRE OPTIC OUTDOOR CABLES

FO Outdoor wbGGT HP / A-DQ(ZN)B2Y

HighP, 2-layer

non metallic, dry interstices,
water resistant, rodent protection



PRODUCT INFORMATION



FEATURES

Compact fibre optic outdoor cable with up to 576 fibres for city and access network applications. 2-layer loose tube construction, longitudinally water protected and with dry strand interstices. The glass armour provides for a combined non metallic rodent protection and strain relief. The two coloured ripcords are easy to identify and enable the safe opening of the cable sheath. HDPE cable sheath, easy to lay.

APPLICATION

Optimised for blowing into compact thermoplastic ducts.

OPTICAL CHARACTERISTICS


The cables are available with different types of optical fibre (see fibre data sheets)

MECHANICAL CHARACTERISTICS

Temperature range	storage:	-40 / +70°C	IEC 60794-1-2 F1
	during installation:	-10 / +50°C	
	in operation:	-40 / +60°C	
Tensile performance:	IEC 60794-1-2 E1		
Crush resistance:	IEC 60794-1-2 E3		
Repeated bending:	IEC 60794-1-2 E6		
Torsion:	IEC 60794-1-2 E7		
Bend:	IEC 60794-1-2 E11		
Water penetration:	IEC 60794-1-2 F5		

GENERAL CHARACTERISTICS

Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation» «number of fibres» «fibre type» «additional text» «batch number» ~ ~ «meter marks» ~ ~

 Zero halogen,
non corrosive gases

IEC 60754-1/-2, EN 50267-2-1/2-2, VDE 0482-267-2-1/-2-2

FO Outdoor wbGGT HP / A-DQ(ZN)B2Y

HighP, 2-layer

non metallic, dry interstices,
water resistant, rodent protection

PRODUCT INFORMATION

Description	No. of fibres	Loose tubes	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance		Fire load	
A-DQ(ZN)B2Y n x m	max.	max.	mm	kg/km	mm	N	continuous N	short term N	kWh/km	MJ/km
wbGGT18 HighP	180	18	18.5	285	470	9000	3000	5000	2492	7967
wbGGT18 HighP	216	18	18.5	285	470	9000	3000	5000	2492	7967
woGGT24 HighP	288	24	22.0	375	550	9000	3000	5000	2568	9245
wbGGT18 HighP	432	18	20.6	335	515	9000	3000	5000	3115	11214
woGGT24 HighP	576	24	22.0	643	705	9000	3000	5000	4786	15123

VERSIONS

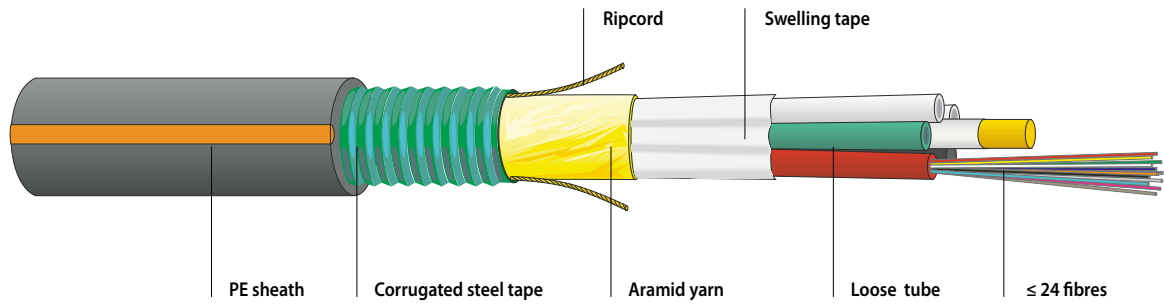
A-DQ(ZN)B2Y n x m		Fibres	Article No.
Description		number	E9/125 G.652.D
wbGGT18 HighP	15 x 12	180	190709
wbGGT18 HighP	16 x 12	192	190699
wbGGT18 HighP	18 x 12	216	190176
wbGGT24 HighP	20 x 12	240	191693
wbGGT24 HighP	24 x 12	288	190399
wbGGT18 HighP	18 x 24	432	190178
wbGGT24 HighP	24 x 24	576	190700

FIBRE OPTIC OUTDOOR CABLES

FO Outdoor wbKWT HP / A-DQ(ZN)(SR)2Y

HighP

dry interstices, water resistant,
corrugated steel tape, rodent proof



PRODUCT INFORMATION



FEATURES

Robust fibre optic outdoor cable with multiple loose tubes.
Installation friendly dry construction.
Optimal rodent protection due to corrugated steel tape.
High tensile strength, easy to lay.
Optimised for installation in and blowing into ducts.

APPLICATION

For pulling in or blowing through ducts.
Suitable for laying in cable platforms, cable shafts and even in complex cable trays, particularly where a reliable rodent protection is required.
Direct burial.

OPTICAL CHARACTERISTICS


The cables are available with different types of optical fibre (see fibre data sheets).

MECHANICAL CHARACTERISTICS

Temperature range	storage:	-40 / +70°C	IEC 60794-1-2 F1
	during installation:	-10 / +50°C	
	in operation:	-40 / +60°C	
Tensile performance:	IEC 60794-1-2 E1		
Crush resistance:	IEC 60794-1-2 E3		
Impact:	IEC 60794-1-2 E4		
Repeated bending:	IEC 60794-1-2 E6		
Torsion:	IEC 60794-1-2 E7		
Bend:	IEC 60794-1-2 E11		
Water penetration:	IEC 60794-1-2 F5		

GENERAL CHARACTERISTICS

Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation»
«number of fibres» «fibre type» «additional text» «batch number»
~ ~ «meter marks» ~ ~

 Zero halogen,
non corrosive gases

IEC 60754-1/-2, EN 50267-2-1/2-2, VDE 0482-267-2-1/-2-2

- Copper
- Fibre Optics
- Cabinets & Racks
- Data Centre
- Wireless
- Multimedia
- General Information

GF-1308 wbKWT HighP 0712/e

FO Outdoor wbKWT HP / A-DQ(ZN)(SR)2Y

HighP

dry interstices, water resistant,
corrugated steel tape, rodent proof

PRODUCT INFORMATION

Description	No. of fibres	Loose tubes	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance		Fire load	
A-DQ(ZN)B2Y n x m	max.	max.	mm	kg/km	mm	N	continuous N	short term N	kWh/km	MJ/km
wbKWT6 HighP	72	5	13.4	150	200	2500	1500	4000	1019	3668
wbKWT6 HighP	144	6	13.6	171	205	2500	1500	4000	1094	3852

VERSIONS

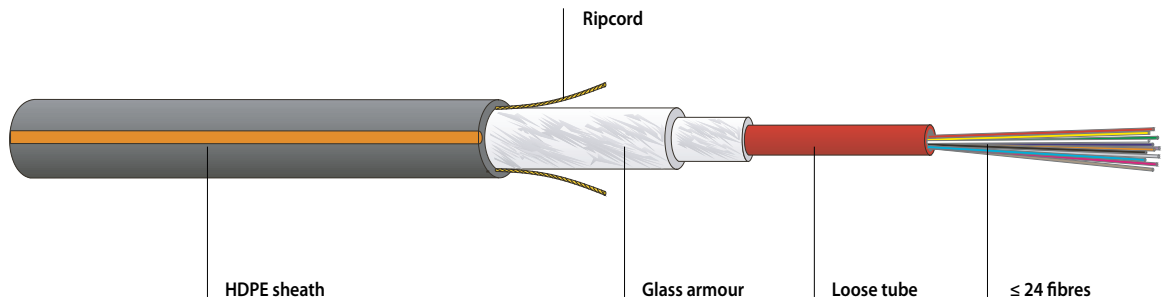
A-DQ(ZN)B2Y n x m	Fibres	Article No.	Article No.	Article No.	Article No.
Description	number	E9/125 G.652D	G50/125 OM2	G50/125 OM3	G62.5/125 OM1
wbKWT5 HighP 2 x 12	24	190184	180761	on request	180172
wbKWT5 HighP 4 x 12	48	190185	on request	on request	181794
wbKWT5 HighP 5 x 12	60	186590	on request	on request	on request
wbKWT6 HighP 6 x 12	72	190650	on request	on request	on request
wbKWT6 HighP 4 x 24	96	191698	on request	on request	on request
wbKWT6 HighP 6 x 24	144	191197	on request	on request	on request

FIBRE OPTIC OUTDOOR CABLES

FO Outdoor ZGGT BL / A-DQ(ZN)B2Y

Basic Line

central loose tube, non metallic,
water resistant, rodent protection



PRODUCT INFORMATION



FEATURES

Non metallic fibre optic outdoor cable with central loose tube, up to 24 fibres.
For the use in cable ducts and for all applications with low mechanical stress.
Non metallic rodent protection.

APPLICATION

For pulling in or blowing through ducts.
Suitable for laying in cable platforms and cable shafts/trays.

OPTICAL CHARACTERISTICS


The cables are available with different types of optical fibre (see fibre data sheets).

MECHANICAL CHARACTERISTICS

Temperature range	storage:	-25 / +70°C	IEC 60794-1-2 F1
	during installation:	-10 / +50°C	
	in operation:	-25 / +60°C	
Tensile performance:	IEC 60794-1-2 E1		
Crush resistance:	IEC 60794-1-2 E3		
Impact:	IEC 60794-1-2 E4		
Repeated bending:	IEC 60794-1-2 E6		
Torsion:	IEC 60794-1-2 E7		
Bend:	IEC 60794-1-2 E11		
Water penetration:	IEC 60794-1-2 F5		

GENERAL CHARACTERISTICS

Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation»
«number of fibres» «fibre type» «additional text» «batch number»
~ ~ «meter marks» ~ ~

 Zero halogen,
non corrosive gases

IEC 60754-1/-2, EN 50267-2-1/2-2, VDE 0482-267-2-1/-2-2

- Copper
- Fibre Optics
- Cabinets & Racks
- Data Centre
- Wireless
- Multimedia
- General Information

GF-1311 ZGGT 1000 BL 0712/e

FIBRE OPTIC OUTDOOR CABLES
FO Outdoor ZGGT BL / A-DQ(ZN)B2Y
Basic Line

central loose tube, non metallic,
water resistant, rodent protection

PRODUCT INFORMATION

Description	No. of fibres	Loose tube	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance		Fire load	
A-DQ(ZN)B2Y 1 x m	max.		mm	kg/km	mm	N	continuous N	short term N	kWh/km	MJ/km
ZGGT Basic Line 1 x 12	12	1	7.3	48	110	1000	2000	5000	418	1505
ZGGT Basic Line 1 x 24	24	1	8.0	55	120	1000	2000	5000	491	1768

VERSIONS

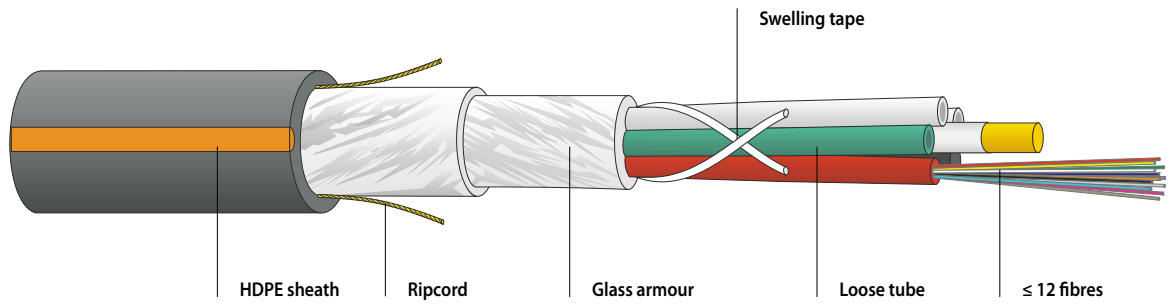
A-DQ(ZN)B2Y 1 x m	Fibres	Article No.	Article No.	Article No.	Article No.
Description	number	E9/125 G.652.D	G50/125 OM2	G50/125 OM3	G62.5/125 OM1
ZGGT Basic Line 1 x 4	4	191292	185557	on request	187364
ZGGT Basic Line 1 x 6	6	191256	191259	191188	186497
ZGGT Basic Line 1 x 8	8	186500	185558	191189	186498
ZGGT Basic Line 1 x 12	12	190192	186499	191190	187350
ZGGT Basic Line 1 x 24	24	190193	186365	on request	186643

FIBRE OPTIC OUTDOOR CABLES

FO Outdoor wbGGT BL / A-DQ(ZN)B2Y

Basic Line

non metallic, dry interstices,
water resistant



PRODUCT INFORMATION



FEATURES Compact non metallic fibre optic outdoor cable with stranded loose tubes, up to 60 fibres.

APPLICATION Pulling in or blowing through thermoplastic ducts and laying in cable platforms, shafts and trays with low mechanical stress.

OPTICAL CHARACTERISTICS The cables are available with different types of optical fibre (see fibre data sheets).

MECHANICAL CHARACTERISTICS	Temperature range	storage:	-25 / +60°C	IEC 60794-1-2 F1
		during installation:	-10 / +40°C	
		in operation:	-25 / +60°C	
	Tensile performance:	IEC 60794-1-2 E1		
	Crush resistance:	IEC 60794-1-2 E3		
	Repeated bending:	IEC 60794-1-2 E6		
	Torsion:	IEC 60794-1-2 E7		
	Bend:	IEC 60794-1-2 E11		
	Water penetration:	IEC 60794-1-2 F5		

GENERAL CHARACTERISTICS Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation» «number of fibres» «fibre type» «additional text» «batch number» ~ ~ «meter marks» ~ ~

Zero halogen, non corrosive gases IEC 60754-1/-2, EN 50267-2-1/2-2, VDE 0482-267-2-1/-2-2

FO Outdoor wbGGT BL / A-DQ(ZN)B2Y

Basic Line

non metallic, dry interstices,
water resistant

PRODUCT INFORMATION

Description	No. of fibres	Loose tubes	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance			Fire load	
A-DQ(ZN)B2Y n x m	max.	max.	mm	kg/km	mm	N	continuous N	short term N/	kWh/km	MJ/km	
wbGGT5 Basic Line 5 x 12	60	5	9.4	68	141	3000	1500	2500	606	2182	

VERSIONS

A-DQ(ZN)B2Y n x m	Fibres	Article No.
Description	number	E9/125 G.652.D
wbGGT5 Basic Line 1 x 12	12	186591
wbGGT5 Basic Line 2 x 12	24	190092
wbGGT5 Basic Line 3 x 12	36	190752
wbGGT5 Basic Line 4 x 12	48	190194
wbGGT5 Basic Line 5 x 12	60	190195

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

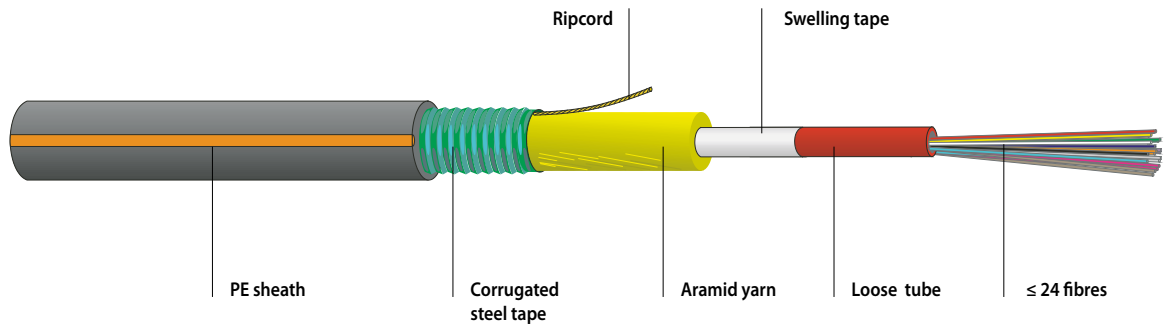
General Information

FIBRE OPTIC OUTDOOR CABLES

FO Outdoor ZwbKWT BL / A-DQ(ZN(SR)2Y

Basic Line

central loose tube, water resistant,
corrugated steel tape, rodent proof



PRODUCT INFORMATION



FEATURES

Fibre optic outdoor cable with corrugated steel tape for optimal rodent protection.
Central loose tube, up to 24 fibres.
Dry construction.
Stable laying characteristics, easy installation in ducts.

APPLICATION

Installation in thermoplastic ducts.
Suitable for laying in cable platforms, cable shafts and even in complex cable trays, particularly where a reliable rodent protection is required.

OPTICAL CHARACTERISTICS

The cables are available with different types of fibre (see fibre data sheets).

MECHANICAL CHARACTERISTICS

Temperature range	storage:	-40 / +70°C	IEC 60794-1-2 F1
	during installation:	-10 / +50°C	
	in operation:	-40 / +60°C	
Tensile performance:	IEC 60794-1-2 E1		
Crush resistance:	IEC 60794-1-2 E3		
Impact:	IEC 60794-1-2 E4		
Repeated bending:	IEC 60794-1-2 E6		
Torsion:	IEC 60794-1-2 E7		
Bend:	IEC 60794-1-2 E11		
Water penetration:	IEC 60794-1-2 F5		

GENERAL CHARACTERISTICS

Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation»
«number of fibres» «fibre type» «additional text» «batch number»
~ ~ «meter marks» ~ ~

Zero halogen,
non corrosive gases IEC 60754-1/-2, EN 50267-2-1/2-2, VDE 0482-267-2-1/-2-2

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

GF-1309 ZwbKWT 0712/e

FO Outdoor ZwbKWT BL / A-DQ(ZN(SR)2Y

Basic Line

central loose tube, water resistant,
corrugated steel tape, rodent proof

PRODUCT INFORMATION

Description	No. of fibres	Loose tube	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance		Fire load	
			mm	kg/km	mm	N	continuous N	short term N	kWh/km	MJ/km
A-DQ(ZN)B2Y 1 x m			mm	kg/km	mm	N	continuous N	short term N	kWh/km	MJ/km
ZwbKWT Basic Line 1 x 12	12	1	8.2	69	120	1000	1500	4000	603	2171
ZwbKWT Basic Line 1 x 24	24	1	8.2	85	120	1000	1500	4000	629	2264

VERSIONS

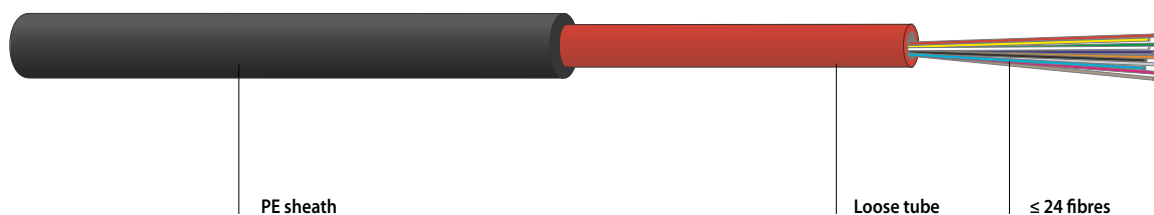
A-DQ(ZN)B2Y 1 x m	Fibres	Article No.	Article No.	Article No.	Article No.	Article No.
Description	number	E9/125 G.652.D	G50/125 OM2	G50/125 OM3	G50/125 OM4	G62.5/125 OM1
ZwbKWT Basic Line 1 x 4	4	190200	180171	on request	on request	178872
ZwbKWT Basic Line 1 x 6	4	187377	184200	187389	on request	178873
ZwbKWT Basic Line 1 x 8	8	190201	178732	190072	on request	178773
ZwbKWT Basic Line 1 x 12	12	190202	180114	191806	192689	176522
ZwbKWT Basic Line 1 x 24	24	190355	186630	on request	on request	186623

FIBRE OPTIC OUTDOOR CABLES

FO Outdoor ZT S-Micro / A-D2Y

S-Micro, up to 24 fibres

non metallic, non armoured, dry interstices, water tightness



PRODUCT INFORMATION



FEATURES Very thin, metal-free fibre optic outdoor cable with up to 24 fibres in one central loose tube. Easily cut back, installation friendly cable construction.

APPLICATION Fibre to the Home. Optimised for injection into microducts of 7 mm diameter.

OPTICAL CHARACTERISTICS The standard version of this cable is available with the single mode fiber according to ITU G.657A.

MECHANICAL CHARACTERISTICS

Temperature range	storage:	-40 / +70°C	IEC 60794-1-2 F1
	during installation:	-15 / +40°C	
	in operation:	-40 / +60°C	
Tensile performance:		IEC 60794-1-2 E1	
Crush resistance:		IEC 60794-1-2 E3	
Repeated bending:		IEC 60794-1-2 E6	
Torsion:		IEC 60794-1-2 E7	
Bend:		IEC 60794-1-2 E11	
Water penetration:		IEC 60794-1-2 F5	

GENERAL CHARACTERISTICS

Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation» «number of fibres» «fibre type» «additional text» «batch number» ~ ~ «meter marks» ~ ~

Recommendation: For the injection we recommend to use special equipment with a soft belt.

Zero halogen, non corrosive gases IEC 60754-1/-2, EN 50267-2-1/2-2, VDE 0482-267-2-1/-2-2

ACCESSORIES Please find the appropriate FTtx accessories in the data sheets on our homepage or in the Datwyler FTTH catalogue.

Description	No. of fibres	Loose tube	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance		Fire load
A-D2Y n x m			mm	kg/km	mm	N	continuous N	short term N	kWh/km
S-Micro 1 x 24	24	1	3,0	7,7	50	100	400	1200	230

VERSIONS

A-D2Y n x m	Fibres	Article No.
Description	number	E9/125 G.657.A
S-Micro 1 x 24	24	192700

FO Micro ZT 24F 0212/e

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

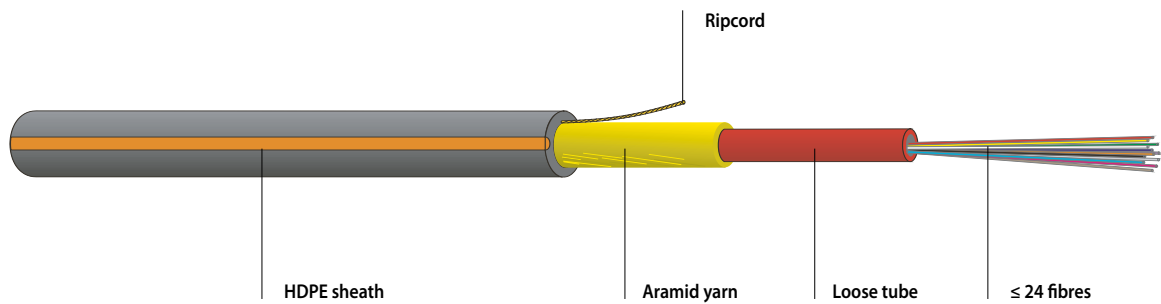
Multimedia

General Information

FO Outdoor ZKT Micro / A-DQ(ZN)2Y

Micro, up to 24 fibres

non metallic, non armoured,
dry interstices, water tightness



PRODUCT INFORMATION



- FEATURES** Very thin, metal-free fiber optic outdoor cable with up to 24 fibres in one central loose tube. Easily cut-back, installation friendly cable construction.
- APPLICATION** Fibre to the Home. Optimised for injection into microducts of 7 mm diameter.
- OPTICAL CHARACTERISTICS** The cables are available with different types of optical fibre (see fibre data sheets).

MECHANICAL CHARACTERISTICS	Temperature range	storage:	-40 / +70°C	IEC 60794-1-2 F1
		during installation:	-15 / +40°C	
		in operation:	-40 / +70°C	
	Tensile performance:	IEC 60794-1-2 E1		
	Crush resistance:	IEC 60794-1-2 E3		
	Repeated bending:	IEC 60794-1-2 E6		
	Torsion:	IEC 60794-1-2 E7		
	Bend:	IEC 60794-1-2 E11		
	Water penetration:	IEC 60794-1-2 F5		

GENERAL CHARACTERISTICS

Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation» «number of fibres» «fibre type» «additional text» «batch number» ~ ~ «meter marks» ~ ~

Zero halogen, non corrosive gases IEC 60754-1/-2, EN 50267-2-1/2-2, VDE 0482-267-2-1/-2-2

ACCESSORIES Please find the appropriate FTTx accessories in the data sheets on our homepage or in the Datwyler FTTH catalogue.

Description	No. of fibres	Loose tubes	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance		Fire load	
A-DQ(ZN)2Y n x m	max.	max.	mm	kg/km	mm	N	continuous N	short term N	kWh/km	MJ/km
Micro ZKT 1 x 24	24	1	4.0	19	100	500	600	1600	165	594

VERSIONS

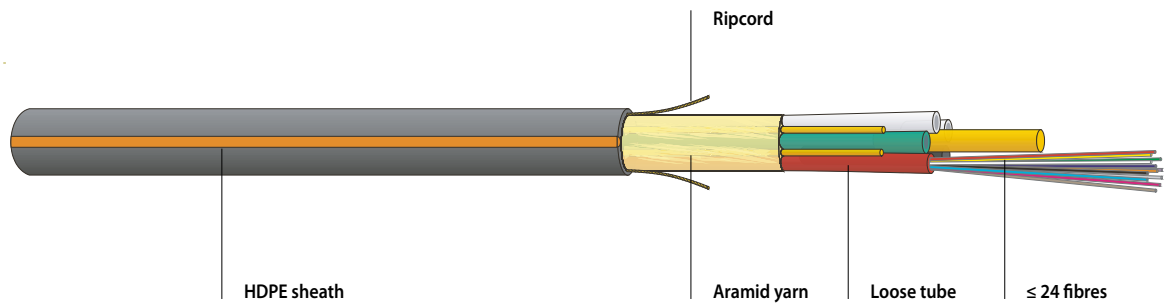
Description	No. of fibres	Article No.	Article No.
A-DQ(ZN)2Y n x m		E9/125 G.652.D	E9/125 G.657.A1
Micro ZKT 1 x 12	12	190227	191349
Micro ZKT 1 x 24	24	191235	191350

FIBRE OPTIC OUTDOOR CABLES

FO Outdoor wbKT Micro / A-DQ(ZN)2Y

Micro, up to 144 fibres

non metallic, non armoured,
dry interstices, water tightness



PRODUCT INFORMATION



FEATURES Very compact, metal-free fibre optic outdoor cable with up to 144 fibres in stranded loose tubes. Easily cut-back, installation friendly cable construction with dry interstices.

APPLICATION Fibre to the Home. Optimised for injection into microducts.

OPTICAL CHARACTERISTICS The cables are available with different types of optical fibre (see fibre data sheets).

MECHANICAL CHARACTERISTICS	Temperature range	storage:	-40 / +70°C	IEC 60794-1-2 F1
		during installation:	-15 / +40°C	
		in operation:	-40 / +70°C	
	Tensile performance:		IEC 60794-1-2 E1	
	Crush resistance:		IEC 60794-1-2 E3	
	Repeated bending:		IEC 60794-1-2 E6	
	Torsion:		IEC 60794-1-2 E7	
Bend:		IEC 60794-1-2 E11		
Water penetration:		IEC 60794-1-2 F5		

GENERAL CHARACTERISTICS Imprint: DATWYLER «cable type» «Datwyler designation» «DIN designation» «number of fibres» «fibre type» «additional text» «batch number» ~ ~ «meter marks» ~ ~

Zero halogen, non corrosive gases IEC 60754-1/-2, EN 50267-2-1/2-2, VDE 0482-267-2-1/-2-2

ACCESSORIES Please find the appropriate FTTx accessories in the data sheets on our homepage or in the Datwyler FTTH catalogue.

- Copper
- Fibre Optics
- Cabinets & Racks
- Data Centre
- Wireless
- Multimedia
- General Information

GF-1404 Micro wbKT 60F 0512/e

FO Outdoor wbKT Micro / A-DQ(ZN)2Y

Micro, up to 144 fibres

non metallic, non armoured,
dry interstices, water tightness

PRODUCT INFORMATION

Description A-DQ(ZN)2Y n x m	No. of fibres	Loose tubes	Sheath Ø	Weight	Bending radius	Tensile load	Crush resistance		Fire load	
			mm	kg/km	mm	N	continuous N	short term N	kWh/km	MJ/km
wbKT Micro 5 x 12	60	5	6.6	30	150	1000	600	1600	247	889
wbKT Micro 6 x 12	72	6	6.5	30	150	1000	600	1600	234	845
wbKT Micro 8 x 12	96	8	7.6	54	250	2500	600	1400	303	1092
wbKT Micro 6 x 24	144	6	8.2	60	250	2500	600	1400	344	1238

VERSIONS

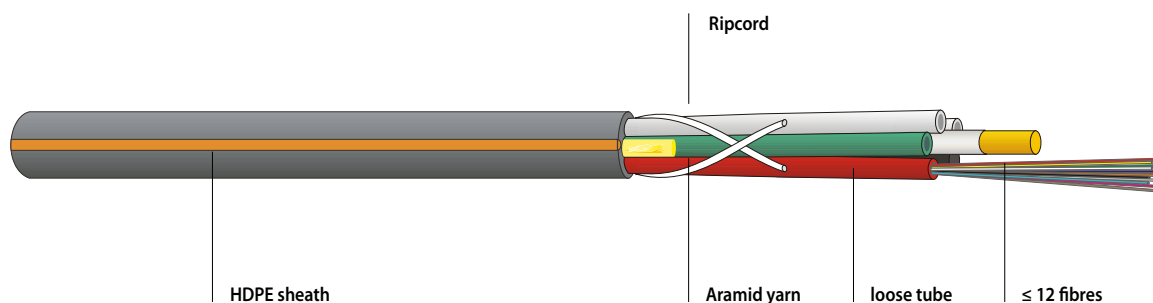
Description A-DQ(ZN)2Y n x m	No. of fibres	Article No. E9/125 G.652.D	Article No. E9/125 G.657.A1
wbKT Micro 1 x 12	12	191706	on request
wbKT Micro 2 x 12	24	190080	192131
wbKT Micro 3 x 12	36	190229	on request
wbKT Micro 4 x 12	48	190230	191859
wbKT Micro 5 x 12	60	190231	191860
wbKT Micro 6 x 12	72	190232	191858
wbKT Micro 8 x 12	96	191813	192158
wbKT Micro 6 x 24	144	191814	on request

FIBRE OPTIC OUTDOOR CABLES

FO Outdoor wbKT S-Micro / A-DQ(ZN)2Y

S-Micro up to 216 Fasern

non metallic, non armoured, water tightness



PRODUCT INFORMATION



FEATURES

Highly compact, metal-free fibre optic outdoor cable containing up to 216 fibres with dry interstices and stranded loose tubes. Easily cut-back, installation-friendly cable construction.

APPLICATION

Fibre to the Home.
Optimised for injection into microducts.

OPTICAL CHARACTERISTICS

The cables are available with different types of optical fibre (see fibre data sheets).

The following attenuation values are valid when using the fibre type G.652.D:


1310 nm:	1550 nm:	1625 nm:
≤ 0.36 dB/km	≤ 0.25 dB/km	≤ 0.30 dB/km

MECHANICAL CHARACTERISTICS

Temperature range	storage:	-40 / +70°C	IEC 60794-1-2 F1
	during installation:	-15 / +40°C	
	in operation:	-40 / +70°C	
Tensile performance:		IEC 60794-1-2 E1	
Crush resistance:		IEC 60794-1-2 E3	
Repeated bending:		IEC 60794-1-2 E6	
Torsion:		IEC 60794-1-2 E7	
Bend:		IEC 60794-1-2 E11	
Water penetration:		IEC 60794-1-2 F5	

GENERAL CHARACTERISTICS

Printing example: DATWYLER «cable type» «Datwyler designation» «DIN designation»
«number of fibres» «fibre type» «additional text» «batch number»
~ ~ «meter marks» ~ ~

 Zero halogen,
non corrosive gases IEC 60754-1/-2, EN 50267-2-1/2-2, VDE 0482-267-2-1/-2-2

INSTALLATION RECOMMENDATION

We recommend to use a special cable blowing machine that provides feed caterpillars made of rubber.

ACCESSORIES

Please find the appropriate FTx accessories in the data sheets on our homepage or in the Datwyler FTTH catalogue.

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

GF-M04FO Micro wbKT 96F-0712/e

PRODUCT INFORMATION

Description A-DQ(ZN)2Y n x m	No. of fibres	Loose tubes	Sheath Ø mm	Weight kg/km	Bending radius mm	Tensile load N	Crush resistance		Fire load	
							continuous N	short term N	kWh/km	MJ/km
wbKT 2 x 12	24	2	4.2	13	250	750	400	1200	90	330
wbKT 4 x 12	48	4	4.2	13	250	750	400	1200	90	330
wbKT 8 x 12	96	8	6.6	37	300	1900	400	1200	180	640
wbKT 9 x 24	216	9	8.4	60	300	1800	400	1200	325	1170

VERSIONS

Description A-DQ(ZN)2Y nxm	No. of fibres	Article No. E9/125 G.652.D	Article No. E9/125 G.657.A1
wbKT 2 x 12	24	–	192693
wbKT 4 x 12	48	–	192150
wbKT 8 x 12	96	192159	192149
wbKT 9 x 24	216	192 625	on request

FIBRE OPTIC TRUNKS

Pre-assembly of loose-tube FO cable

with all current FO connector types



Trunk termination

PRODUCT INFORMATION

DESCRIPTION

The pre-assembly of loose-tube FO cable from Datwyler enables customers to work with ready-to-install fibre optic multiple cables (trunks) in the requested lengths and types. The trunks are made to customer specifications under laboratory conditions. They allow for cost saving and simple installations without expensive fibre optic equipment.

FEATURES

Trunk termination

- Termination of up to 144 fibres
- Termination with all current fibre optic connectors
- After the distribution splitter (screwable) each single fibre is protected by aramide yarn and has its own sheath
- Versions with more than 48 fibres come with 2-step (cascaded) fibre distribution
- Fibre termination graded in length (maximum length after distribution splitter: 2 m)
- Delivery with crush-resistant hose protection and with optical attenuation measurement report.

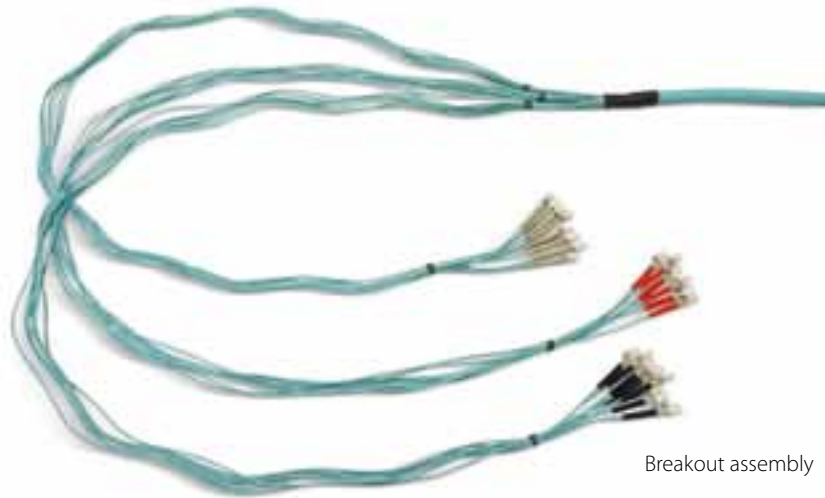
Trunk termination (Article numbers are valid for FO connector termination on one side only)

Numer of fibres	Multimode connector types				Singlemode connector types					
	ST	SC	LC	LSH	ST	SC	LC	LSH	SC/APC	LSH/APC
4	1406098	1406421	416601	417131	417218	1407244	415030	417219	415001	417222
6	1407718	1407658	415018	417213	1407719	1407778	415014	415010	417221	415006
8	1406758	1407777	415028	417214	1405818	1410923	417132	417220	415002	417223
12	1406403	1406794	415019	417215	1407720	1407035	415015	415011	415003	415007
24	1406780	1408597	415020	417216	1408529	1406242	415016	415012	415004	415008
48	1406091	1408725	415021	417217	1408723	1406768	415017	415013	415005	415009

Attention: Please order the loose tube cable seperately - according to your individual needs!
 When ordering a trunk cable please ensure that the specified length of the trunk cable is defined by the length of the longest single optical fibre! This means: The total length of the trunk cable is the length of the cable between the two distribution splitters plus the additional length of the longest single optical fibre on both sides.
 You can find the lengths of the single fibre elements in the installation manual on the Datwyler homepage.

Pre-assembly of breakout cables

with all current FO connector types



Breakout assembly

PRODUCT INFORMATION

DESCRIPTION

The pre-assembly of breakout cables from Datwyler enables customers to work with ready-to-install fibre optic multiple cables (trunks) in the requested lengths and types. The trunks are made to customer specifications under laboratory conditions. They allow for cost saving and simple installations without expensive fibre optic equipment.

FEATURES

Breakout assembly

- Termination of up to 48 single-fibre cables
- Termination with all current fibre optic connectors
- Fibre termination optionally graded in length
- Delivery with optical attenuation measurement report
- Optionally delivered with hose protection

Breakout assembly (Article numbers are valid for FO connector termination on one side only)

Breakout assembly on one cable end	Connector type	Number of connectors	Multimode fibre	Singlemode fibre
			Article No.	Article No.
	SC	4	1410596	415023
	SC	8	1410597	415024
	SC	12	1410598	415025
	SC	24	415083	415081
	SC	48	415084	415082
	LC	4	415085	415090
	LC	8	415086	415091
	LC	12	415087	415092
	LC	24	415088	415093
	LC	48	415089	415094

Attention: Please order the breakout cable separately - according to your individual needs!
 When ordering a trunk cable please ensure that the specified length of the trunk cable is defined by the length of the longest single-fibre cable! This means: The total length of the trunk cable is the length of the cable between the two splits plus the additional length of the longest single-fibre cable on both sides.
 You can find the lengths of the single-fibre elements in the installation manual on the Datwyler homepage.

Pigtails



PRODUCT INFORMATION

Pigtails

Connector type	Fibre type	Fibre pigtail 2 m	Set of 12 fibre pigtails 2 m*
SC/APC	E09/OS2	427721	427722
SC	E09/OS2	421121	421122
SC	G50/OM4	421144	421145
SC	G50/OM3	421141	421142
SC	G50/OM2	421161	421162
SC	G62.5/OM1	421181	421182
ST	E09/OS2	422221	422222
ST	G50/OM4	422244	422245
ST	G50/OM3	422241	422242
ST	G50/OM2	422261	422262
ST	G62.5/OM1	422281	422282
LC/APC	E09/OS2	429921	429922
LC	E09/OS2	423321	423322
LC	G50/OM4	423348	423349
LC	G50/OM3	423341	423342
LC	G50/OM2	423361	423362
LC	G62.5/OM1	423381	423382
LSH/APC	E9/OS2	428821	428822
LSH	E09/OS2	424421	424422
LSH	G50/OM3	424441	424442
LSH	G50/OM2	424461	424462
LSH	G62.5/OM1	424481	424482
FC/PC	E09/OS2	425521	425522
FC/PC	G50/OM3	425541	425542
FC/PC	G50/OM2	425561	425562
FC/PC	G62.5/OM1	425581	425582
MT-RJ	E09/OS2	426621	426622
MT-RJ	G50/OM3	426641	426642
MT-RJ	G50/OM2	426661	426662
MT-RJ	G62.5/OM1	426681	426682

* Set has 12 fibre pigtails in 12 colours (according to IEC 60304).

For parameters of all FO terminations see the data sheet "FO connector termination" / catalogue page 250.

FO-Pigtails 0612/e



FO patch cable SCD - ST



FO patch cable SCD - LCD



FO patch cable SCD - LSH

PRODUCT INFORMATION

Fibre optic patch cords SCD ...

Connector type		Fibre type	Length in m / Article No.									
Side A	Side B		1	2	3	4	5	6	7	8	9	10
SCD	SC/APC	E09/OS2	421711	421712	421713	421714	421715	421716	421717	421718	421719	421720
SCD	SCD	E09/OS2	421111	421112	421113	421114	421115	421116	421117	421118	421119	421120
SCD	SCD	G50/OM3	421131	421132	421133	421134	421135	421136	421137	421138	421139	421140
SCD	SCD	G50/OM2	421151	421152	421153	421154	421155	421156	421157	421158	421159	421160
SCD	SCD	G62.5/OM1	421171	421172	421173	421174	421175	421176	421177	421178	421179	421180
SCD	ST	E09/OS2	421211	421212	421213	421214	421215	421216	421217	421218	421219	421220
SCD	ST	G50/OM3	421231	421232	421233	421234	421235	421236	421237	421238	421239	421240
SCD	ST	G50/OM2	421251	421252	421253	421254	421255	421256	421257	421258	421259	421260
SCD	ST	G62.5/OM1	421271	421272	421273	421274	421275	421276	421277	421278	421279	421280
SCD	LCD	E09/OS2	421311	421312	421313	421314	421315	421316	421317	421318	421319	421320
SCD	LCD	G50/OM3	421331	421332	421333	421334	421335	421336	421337	421338	421339	421340
SCD	LCD	G50/OM2	421351	421352	421353	421354	421355	421356	421357	421358	421359	421360
SCD	LCD	G62.5/OM1	421371	421372	421373	421374	421375	421376	421377	421378	421379	421380
SCD	LSH/APC	E09/OS2	421811	421812	421813	421814	421815	421816	421817	421818	421819	421820
SCD	LSH	E09/OS2	421411	421412	421413	421414	421415	421416	421417	421418	421419	421420
SCD	LSH	G50/OM3	421431	421432	421433	421434	421435	421436	421437	421438	421439	421440
SCD	LSH	G50/OM2	421451	421452	421453	421454	421455	421456	421457	421458	421459	421460
SCD	LSH	G62.5/OM1	421471	421472	421473	421474	421475	421476	421477	421478	421479	421480
SCD	FC/PC	E09/OS2	421511	421512	421513	421514	421515	421516	421517	421518	421519	421520
SCD	FC/PC	G50/OM3	421531	421532	421533	421534	421535	421536	421537	421538	421539	421540
SCD	FC/PC	G50/OM2	421551	421552	421553	421554	421555	421556	421557	421558	421559	421560
SCD	FC/PC	G62.5/OM1	421571	421572	421573	421574	421575	421576	421577	421578	421579	421580
SCD	MT-RJ	E09/OS2	421611	421612	421613	421614	421615	421616	421617	421618	421619	421620
SCD	MT-RJ	G50/OM3	421631	421632	421633	421634	421635	421636	421637	421638	421639	421640
SCD	MT-RJ	G50/OM2	421651	421652	421653	421654	421655	421656	421657	421658	421659	421660
SCD	MT-RJ	G62.5/OM1	421671	421672	421673	421674	421675	421676	421677	421678	421679	421680

For parameters of all FO terminations see the data sheet "FO connector termination" / catalogue page 250.

Patch cords with Duplex connectors on both ends are delivered with a single Duplex clip which is not fixed to enable a change of polarity.

The polarity of these connectors is marked with cable clips "A" and "B" - please see the data sheet "FO connector termination" / catalogue page 250.

FO patch cable
ST ...



FO patch cable ST - SCD



FO patch cable ST - FC/PC



FO patch cable ST - MT-RJ

PRODUCT INFORMATION

Fibre optic patch cords ST ...

Connector type		Fibre type	Length in m / Article No.									
Side A	Side B		1	2	3	4	5	6	7	8	9	10
ST	SC/APC	E09/OS2	422711	422712	422713	422714	422715	422716	422717	422718	422719	422720
ST	SCD	E09/OS2	421211	421212	421213	421214	421215	421216	421217	421218	421219	421220
ST	SCD	G50/OM3	421231	421232	421233	421234	421235	421236	421237	421238	421239	421240
ST	SCD	G50/OM2	421251	421252	421253	421254	421255	421256	421257	421258	421259	421260
ST	SCD	G62.5/OM1	421271	421272	421273	421274	421275	421276	421277	421278	421279	421280
ST	ST	E09/OS2	422211	422212	422213	422214	422215	422216	422217	422218	422219	422220
ST	ST	G50/OM3	422231	422232	422233	422234	422235	422236	422237	422238	422239	422240
ST	ST	G50/OM2	422251	422252	422253	422254	422255	422256	422257	422258	422259	422260
ST	ST	G62.5/OM1	422271	422272	422273	422274	422275	422276	422277	422278	422279	422280
ST	LCD	E09/OS2	422311	422312	422313	422314	422315	422316	422317	422318	422319	422320
ST	LCD	G50/OM3	422331	422332	422333	422334	422335	422336	422337	422338	422339	422340
ST	LCD	G50/OM2	422351	422352	422353	422354	422355	422356	422357	422358	422359	422360
ST	LCD	G62.5/OM1	422371	422372	422373	422374	422375	422376	422377	422378	422379	422380
ST	LSH/APC	E09/OS2	422811	422812	422813	422814	422815	422816	422817	422818	422819	422820
ST	LSH	E09/OS2	422411	422412	422413	422414	422415	422416	422417	422418	422419	422420
ST	LSH	G50/OM3	422431	422432	422433	422434	422435	422436	422437	422438	422439	422440
ST	LSH	G50/OM2	422451	422452	422453	422454	422455	422456	422457	422458	422459	422460
ST	LSH	G62.5/OM1	422471	422472	422473	422474	422475	422476	422477	422478	422479	422480
ST	FC/PC	E09/OS2	422511	422512	422513	422514	422515	422516	422517	422518	422519	422520
ST	FC/PC	G50/OM3	422531	422532	422533	422534	422535	422536	422537	422538	422539	422540
ST	FC/PC	G50/OM2	422551	422552	422553	422554	422555	422556	422557	422558	422559	422560
ST	FC/PC	G62.5/OM1	422571	422572	422573	422574	422575	422576	422577	422578	422579	422580
ST	MT-RJ	E09/OS2	422611	422612	422613	422614	422615	422616	422617	422618	422619	422620
ST	MT-RJ	G50/OM3	422631	422632	422633	422634	422635	422636	422637	422638	422639	422640
ST	MT-RJ	G50/OM2	422651	422652	422653	422654	422655	422656	422657	422658	422659	422660
ST	MT-RJ	G62.5/OM1	422671	422672	422673	422674	422675	422676	422677	422678	422679	422680

For parameters of all FO terminations see the data sheet "FO connector termination" / catalogue page 250.

Patch cords with Duplex connectors on both ends are delivered with a single Duplex clip which is not fixed to enable a change of polarity.

The polarity of these connectors is marked with cable clips "A" and "B" - please see the data sheet "FO connector termination" / catalogue page 250.



FO patch cable LCD - LCD



FO patch cable LCD - LSH/APC



FO patch cable LCD - SC/APC

PRODUCT INFORMATION

Fibre optic patch cords LCD ...

Connector type		Fibre type	Length in m / Article No.									
Side A	Side B		1	2	3	4	5	6	7	8	9	10
LCD	SC/APC	E09/OS2	423711	423712	423713	423714	423715	423716	423717	423718	423719	423720
LCD	SCD	E09/OS2	421311	421312	421313	421314	421315	421316	421317	421318	421319	421320
LCD	SCD	G50/OM3	421331	421332	421333	421334	421335	421336	421337	421338	421339	421340
LCD	SCD	G50/OM2	421351	421352	421353	421354	421355	421356	421357	421358	421359	421360
LCD	SCD	G62.5/OM1	421371	421372	421373	421374	421375	421376	421377	421378	421379	421380
LCD	ST	E09/OS2	422311	422312	422313	422314	422315	422316	422317	422318	422319	422320
LCD	ST	G50/OM3	422331	422332	422333	422334	422335	422336	422337	422338	422339	422340
LCD	ST	G50/OM2	422351	422352	422353	422354	422355	422356	422357	422358	422359	422360
LCD	ST	G62.5/OM1	422371	422372	422373	422374	422375	422376	422377	422378	422379	422380
LCD	LCD	E09/OS2	423311	423312	423313	423314	423315	423316	423317	423318	423319	423320
LCD	LCD	G50/OM3	423331	423332	423333	423334	423335	423336	423337	423338	423339	423340
LCD	LCD	G50/OM2	423351	423352	423353	423354	423355	423356	423357	423358	423359	423360
LCD	LCD	G62.5/OM1	423371	423372	423373	423374	423375	423376	423377	423378	423379	423380
LCD	LSH/APC	E09/OS2	423811	423812	423813	423814	423815	423816	423817	423818	423819	423820
LCD	LSH	E09/OS2	423411	423412	423413	423414	423415	423416	423417	423418	423419	423420
LCD	LSH	G50/OM3	423431	423432	423433	423434	423435	423436	423437	423438	423439	423440
LCD	LSH	G50/OM2	423451	423452	423453	423454	423455	423456	423457	423458	423459	423460
LCD	LSH	G62.5/OM1	423471	423472	423473	423474	423475	423476	423477	423478	423479	423480
LCD	FC/PC	E09/OS2	423511	423512	423513	423514	423515	423516	423517	423518	423519	423520
LCD	FC/PC	G50/OM3	423531	423532	423533	423534	423535	423536	423537	423538	423539	423540
LCD	FC/PC	G50/OM2	423551	423552	423553	423554	423555	423556	423557	423558	423559	423560
LCD	FC/PC	G62.5/OM1	423571	423572	423573	423574	423575	423576	423577	423578	423579	423580
LCD	MT-RJ	E09/OS2	423611	423612	423613	423614	423615	423616	423617	423618	423619	423620
LCD	MT-RJ	G50/OM3	423631	423632	423633	423634	423635	423636	423637	423638	423639	423640
LCD	MT-RJ	G50/OM2	423651	423652	423653	423654	423655	423656	423657	423658	423659	423660
LCD	MT-RJ	G62.5/OM1	423671	423672	423673	423674	423675	423676	423677	423678	423679	423680

For parameters of all FO terminations see the data sheet "FO connector termination" / catalogue page 250.

Patch cords with Duplex connectors on both ends are delivered with a single Duplex clip which is not fixed to enable a change of polarity.

The polarity of these connectors is marked with cable clips "A" and "B" - please see the data sheet "FO connector termination" / catalogue page 250.

FO patch cable
LSH ...



FO patch cable LSH - SCD



FO patch cable LSH - SCD



FO patch cable LSH - SC/APC

PRODUCT INFORMATION

Fibre optic patch cords LSH ...

Connector type		Fibre type	Length in m / Article No.									
Side A	Side B		1	2	3	4	5	6	7	8	9	10
LSH	SC/APC	E09/OS2	414711	414712	414713	414714	414715	414716	414717	414718	414719	414720
LSH	SCD	E09/OS2	421411	421412	421413	421414	421415	421416	421417	421418	421419	421420
LSH	SCD	G50/OM3	421431	421432	421433	421434	421435	421436	421437	421438	421439	421440
LSH	SCD	G50/OM2	421451	421452	421453	421454	421455	421456	421457	421458	421459	421460
LSH	SCD	G62.5/OM1	421471	421472	421473	421474	421475	421476	421477	421478	421479	421480
LSH	ST	E09/OS2	422411	422412	422413	422414	422415	422416	422417	422418	422419	422420
LSH	ST	G50/OM3	422431	422432	422433	422434	422435	422436	422437	422438	422439	422440
LSH	ST	G50/OM2	422451	422452	422453	422454	422455	422456	422457	422458	422459	422460
LSH	ST	G62.5/OM1	422471	422472	422473	422474	422475	422476	422477	422478	422479	422480
LSH	LCD	E09/OS2	423411	423412	423413	423414	423415	423416	423417	423418	423419	423420
LSH	LCD	G50/OM3	423431	423432	423433	423434	423435	423436	423437	423438	423439	423440
LSH	LCD	G50/OM2	423451	423452	423453	423454	423455	423456	423457	423458	423459	423460
LSH	LCD	G62.5/OM1	423471	423472	423473	423474	423475	423476	423477	423478	423479	423480
LSH	LSH/APC	E09/OS2	424811	424812	424813	424814	424815	424816	424817	424818	424819	424820
LSH	LSH	E09/OS2	424411	424412	424413	424414	424415	424416	424417	424418	424419	424420
LSH	LSH	G50/OM3	424431	424432	424433	424434	424435	424436	424437	424438	424439	424440
LSH	LSH	G50/OM2	424451	424452	424453	424454	424455	424456	424457	424458	424459	424460
LSH	LSH	G62.5/OM1	424471	424472	424473	424474	424475	424476	424477	424478	424479	424480
LSH	FC/PC	E09/OS2	424511	424512	424513	424514	424515	424516	424517	424518	424519	424520
LSH	FC/PC	G50/OM3	424531	424532	424533	424534	424535	424536	424537	424538	424539	424540
LSH	FC/PC	G50/OM2	424551	424552	424553	424554	424555	424556	424557	424558	424559	424560
LSH	FC/PC	G62.5/OM1	424571	424572	424573	424574	424575	424576	424577	424578	424579	424580
LSH	MT-RJ	E09/OS2	424611	424612	424613	424614	424615	424616	424617	424618	424619	424620
LSH	MT-RJ	G50/OM3	424631	424632	424633	424634	424635	424636	424637	424638	424639	424640
LSH	MT-RJ	G50/OM2	424651	424652	424653	424654	424655	424656	424657	424658	424659	424660
LSH	MT-RJ	G62.5/OM1	424671	424672	424673	424674	424675	424676	424677	424678	424679	424680

For parameters of all FO terminations see the data sheet "FO connector termination" / catalogue page 250.

Patch cords with Duplex connectors on both ends are delivered with a single Duplex clip which is not fixed to enable a change of polarity.

The polarity of these connectors is marked with cable clips "A" and "B" - please see the data sheet "FO connector termination" / catalogue page 250.

FO Patchkabel LSH 0612/e



FO patch cable FC/PC - FC/PC



FO patch cable FC/PC - LSH/APC



FO patch cable FC/PC - SC/APC

PRODUCT INFORMATION

Fibre optic patch cords FC/PC ...

Connector type		Fibre type	Length in m / Article No.									
Side A	Side B		1	2	3	4	5	6	7	8	9	10
FC/PC	SC/APC	E09/OS2	425711	425712	425713	425714	425715	425716	425717	425718	425719	425720
FC/PC	CD	E09/OS2	421511	421512	421513	421514	421515	421516	421517	421518	421519	421520
FC/PC	SCD	G50/OM3	421531	421532	421533	421534	421535	421536	421537	421538	421539	421540
FC/PC	SCD	G50/OM2	421551	421552	421553	421554	421555	421556	421557	421558	421559	421560
FC/PC	SCD	G62.5/OM1	421571	421572	421573	421574	421575	421576	421577	421578	421579	421580
FC/PC	ST	E09/OS2	422511	422512	422513	422514	422515	422516	422517	422518	422519	422520
FC/PC	ST	G50/OM3	422531	422532	422533	422534	422535	422536	422537	422538	422539	422540
FC/PC	ST	G50/OM2	422551	422552	422553	422554	422555	422556	422557	422558	422559	422560
FC/PC	ST	G62.5/OM1	422571	422572	422573	422574	422575	422576	422577	422578	422579	422580
FC/PC	LCD	E09/OS2	423511	423512	423513	423514	423515	423516	423517	423518	423519	423520
FC/PC	LCD	G50/OM3	423531	423532	423533	423534	423535	423536	423537	423538	423539	423540
FC/PC	LCD	G50/OM2	423551	423552	423553	423554	423555	423556	423557	423558	423559	423560
FC/PC	LCD	G62.5/OM1	423571	423572	423573	423574	423575	423576	423577	423578	423579	423580
FC/PC	LSH/APC	E09/OS2	425811	425812	425813	425814	425815	425816	425817	425818	425819	425820
FC/PC	LSH	E09/OS2	424511	424512	424513	424514	424515	424516	424517	424518	424519	424520
FC/PC	LSH	G50/OM3	424531	424532	424533	424534	424535	424536	424537	424538	424539	424540
FC/PC	LSH	G50/OM2	424551	424552	424553	424554	424555	424556	424557	424558	424559	424560
FC/PC	LSH	G62.5/OM1	424571	424572	424573	424574	424575	424576	424577	424578	424579	424580
FC/PC	FC/PC	E09/OS2	425511	425512	425513	425514	425515	425516	425517	425518	425519	425520
FC/PC	FC/PC	G50/OM3	425531	425532	425533	425534	425535	425536	425537	425538	425539	425540
FC/PC	FC/PC	G50/OM2	425551	425552	425553	425554	425555	425556	425557	425558	425559	425560
FC/PC	FC/PC	G62.5/OM1	425571	425572	425573	425574	425575	425576	425577	425578	425579	425580
FC/PC	MT-RJ	E09/OS2	425611	425612	425613	425614	425615	425616	425617	425618	425619	425620
FC/PC	MT-RJ	G50/OM3	425631	425632	425633	425634	425635	425636	425637	425638	425639	425640
FC/PC	MT-RJ	G50/OM2	425651	425652	425653	425654	425655	425656	425657	425658	425659	425660
FC/PC	MT-RJ	G62.5/OM1	425671	425672	425673	425674	425675	425676	425677	425678	425679	425680

For parameters of all FO terminations see the data sheet "FO connector termination" / catalogue page 250.

Patch cords with Duplex connectors on both ends are delivered with a single Duplex clip which is not fixed to enable a change of polarity.

The polarity of these connectors is marked with cable clips "A" and "B" - please see the data sheet "FO connector termination" / catalogue page 250.

FIBRE OPTIC PATCH CORDS

**FO patch cable
MT-RJ ...**



FO patch cable MT-RJ - ST

FO patch cable MT-RJ - LCD

FO patch cable MT-RJ - MT-RJ

PRODUCT INFORMATION

Fibre optic patch cords MT-RJ ...

Connector type		Fibre type	Length in m / Article No.									
Side A	Side B		1	2	3	4	5	6	7	8	9	10
MT-RJ	SCD	E09/OS2	421611	421612	421613	421614	421615	421616	421617	421618	421619	421620
MT-RJ	SCD	G50/OM3	421631	421632	421633	421634	421635	421636	421637	421638	421639	421640
MT-RJ	SCD	G50/OM2	421651	421652	421653	421654	421655	421656	421657	421658	421659	421660
MT-RJ	SCD	G62.5/OM1	421671	421672	421673	421674	421675	421676	421677	421678	421679	421680
MT-RJ	ST	E09/OS2	422611	422612	422613	422614	422615	422616	422617	422618	422619	422620
MT-RJ	ST	G50/OM3	422631	422632	422633	422634	422635	422636	422637	422638	422639	422640
MT-RJ	ST	G50/OM2	422651	422652	422653	422654	422655	422656	422657	422658	422659	422660
MT-RJ	ST	G62.5/OM1	422671	422672	422673	422674	422675	422676	422677	422678	422679	422680
MT-RJ	LCD	E09/OS2	423611	423612	423613	423614	423615	423616	423617	423618	423619	423620
MT-RJ	LCD	G50/OM3	423631	423632	423633	423634	423635	423636	423637	423638	423639	423640
MT-RJ	LCD	G50/OM2	423651	423652	423653	423654	423655	423656	423657	423658	423659	423660
MT-RJ	LCD	G62.5/OM1	423671	423672	423673	423674	423675	423676	423677	423678	423679	423680
MT-RJ	LSH	E09/OS2	424611	424612	424613	424614	424615	424616	424617	424618	424619	424620
MT-RJ	LSH	G50/OM3	424631	424632	424633	424634	424635	424636	424637	424638	424639	424640
MT-RJ	LSH	G50/OM2	424651	424652	424653	424654	424655	424656	424657	424658	424659	424660
MT-RJ	LSH	G62.5/OM1	424671	424672	424673	424674	424675	424676	424677	424678	424679	424680
MT-RJ	FC/PC	E09/OS2	425611	425612	425613	425614	425615	425616	425617	425618	425619	425620
MT-RJ	FC/PC	G50/OM3	425631	425632	425633	425634	425635	425636	425637	425638	425639	425640
MT-RJ	FC/PC	G50/OM2	425651	425652	425653	425654	425655	425656	425657	425658	425659	425660
MT-RJ	FC/PC	G62.5/OM1	425671	425672	425673	425674	425675	425676	425677	425678	425679	425680
MT-RJ	MT-RJ	E09/OS2	426611	426612	426613	426614	426615	426616	426617	426618	426619	426620
MT-RJ	MT-RJ	G50/OM3	426631	426632	426633	426634	426635	426636	426637	426638	426639	426640
MT-RJ	MT-RJ	G50/OM2	426651	426652	426653	426654	426655	426656	426657	426658	426659	426660
MT-RJ	MT-RJ	G62.5/OM1	426671	426672	426673	426674	426675	426676	426677	426678	426679	426680

For parameters of all FO terminations see the data sheet "FO connector termination" / catalogue page 250.
Patch cords with Duplex connectors on both ends are delivered with a single Duplex clip which is not fixed.
In Patch cords with MT-RJ connectors on both sides the fibres are crossed.

The polarity of these connectors is marked with cable clips "A" and "B" - please see the data sheet "FO connector termination" / catalogue page 250.



FO patch cable FC/PC - SC/APC



FO patch cable SC/APC - LC



FO patch cable SC/APC - SC/APC

PRODUCT INFORMATION

Fibre optic patch cords SC/APC ...

Connector type		Fibre type	Length in m / Article No.									
Side A	Side B		1	2	3	4	5	6	7	8	9	10
SC/APC	SCD	E09/OS2	421 711	421 712	421 713	421 714	421 715	421 716	421 717	421 718	421 719	421 720
SC/APC	ST	E09/OS2	422711	422712	422713	422714	422715	422716	422717	422718	422719	422720
SC/APC	LCD	E09/OS2	423711	423712	423713	423714	423715	423716	423717	423718	423719	423720
SC/APC	LSH	E09/OS2	414711	414712	414713	414714	414715	414716	414717	414718	414719	414720
SC/APC	FC/PC	E09/OS2	425711	425712	425713	425714	425715	425716	425717	425718	425719	425720
SC/APC	SC/APC	E09/OS2	427711	427712	427713	427714	427715	427716	427717	427718	427719	427720
SC/APC	LSH/APC	E09/OS2	427811	427812	427813	427814	427815	427816	427817	427818	427819	427820

For parameters of all FO terminations see the data sheet "FO connector termination" / catalogue page 250.

Patch cords with Duplex connectors on both ends are delivered with a single Duplex clip which is not fixed.

The polarity of these connectors is marked with cable clips "A" and "B" - please see the data sheet "FO connector termination" / catalogue page 250.

FIBRE OPTIC PATCH CORDS

FO patch cable
LSH/APC ...



FO patch cable LSH/APC - FC/PC



FO patch cable LSH/APC - LCD



FO patch cable LSH/APC - SC/APC

PRODUCT INFORMATION

Fibre optic patch cords LSH/APC ...

Connector type		Fibre type	Length in m / Article No.									
Side A	Side B		1	2	3	4	5	6	7	8	9	10
LSH/APC	SCD	E09/OS2	421811	421812	421813	421814	421815	421816	421817	421818	421819	421820
LSH/APC	ST	E09/OS2	422811	422812	422813	422814	422815	422816	422817	422818	422819	422820
LSH/APC	LCD	E09/OS2	423811	423812	423813	423814	423815	423816	423817	423818	423819	423820
LSH/APC	LSH	E09/OS2	424811	424812	424813	424814	424815	424816	424817	424818	424819	424820
LSH/APC	FC/PC	E09/OS2	425811	425812	425813	425814	425815	425816	425817	425818	425819	425820
LSH/APC	SC/APC	E09/OS2	427811	427812	427813	427814	427815	427816	427817	427818	427819	427820
LSH/APC	LSH/APC	E09/OS2	428811	428812	428813	428814	428815	428816	428817	428818	428819	428820

For parameters of all FO terminations see the data sheet "FO connector termination" / catalogue page 250.

Patch cords with Duplex connectors on both ends are delivered with a single Duplex clip which is not fixed.

The polarity of these connectors is marked with cable clips "A" and "B" - please see the data sheet "FO connector termination" / catalogue page 250.

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

FO Patchkabel LSH/APC 0612/e



FO patch cable LCD/APC - LSH/APC



FO patch cable LCD/APC - LSH



FO patch cable LCD/APC - SC/APC

PRODUCT INFORMATION

Fibre optic patch cords LCD/APC ...

Connector type		Fibre type	Length in m / Article No.									
Side A	Side B		1	2	3	4	5	6	7	8	9	10
LCD/APC	SCD	E09	421911	421912	421913	421914	421915	421916	421917	421918	421919	421920
LCD/APC	LCD	E09	423911	423912	423913	423914	423915	423916	423917	423918	423919	423920
LCD/APC	LSH	E09	424911	424912	424913	424914	424915	424916	424917	424918	424919	424920
LCD/APC	SCD/APC	E09	427911	427912	427913	427914	427915	427916	427917	427918	427919	427920
LCD/APC	LSH/APC	E09	428911	428912	428913	428914	428915	428916	428917	428918	428919	428920
LCD/APC	LCD/APC	E09	429911	429912	429913	429914	429915	429916	429917	429918	429919	429920

For parameters of all FO terminations see the data sheet "FO connector termination" / catalogue page 250.

Patch cords with Duplex connectors on both ends are delivered with a single Duplex clip which is not fixed.

The polarity of these connectors is marked with cable clips "A" and "B" - please see the data sheet "FO connector termination" / catalogue page 250.

FIBRE OPTIC CONNECTORS

FO adapters FO couplers



PRODUCT INFORMATION

FO adapter	Fibre type	Sleeve	Cover material	Colour	Mounting	2 pieces M2 screws	Article No.
ST	MM	PB	metal		D hole		1414885
ST	SM	ceramics	metal		D hole		1414886
SC	MM	PB	polymer	beige	flange	without	418504
SC	MM	PB	polymer	beige	threaded flange	yes	1412754
SC	SM	ceramic	polymer	blue	flange	without	418505
SC	SM	ceramic	polymer	blue	threaded flange	yes	1412752
SC/APC	SM	ceramic	polymer	green	flange	without	418506
SC/APC	SM	ceramic	polymer	green	threaded flange	yes	1412753
SCD	MM	PB	polymer	beige	flange	without	418507
SCD	MM	PB	polymer	beige	threaded flange	yes	1414608
SCD	MM	ceramic	polymer	beige	flange	without	418508
SCD	MM	PB	polymer	turquoise	flange	without	418509
SCD	MM	ceramic	polymer	turquoise	flange	without	418510
SCD	SM	ceramic	polymer	blue	flange	without	418511
SCD	SM	ceramic	polymer	blue	threaded flange	yes	1414890
SCD/APC	SM	ceramic	polymer	green	flange	without	418512
SCD/APC	SM	ceramic	polymer	green	threaded flange	yes	1414892
LCD	MM	ceramic	polymer	beige	flange	without	418513
LCD	MM	PB	polymer	beige	threaded flange	yes	1414415
LCD	MM	ceramic	polymer	turquoise	flange	without	418516
LCD	MM	PB	polymer	turquoise	threaded flange	yes	414490
LCD	SM	ceramic	polymer	blue	flange	without	418514
LCD	SM	ceramic	polymer	blue	threaded flange	yes	1414417
LCD/APC	SM	ceramic	polymer	green	flange	without	418515
LCD	MM	ceramic	polymer	beige	without flange	without	418525 *
LCD	SM	ceramic	polymer	blue	without flange	without	418526 *
LCD/APC	SM	ceramic	polymer	green	without flange	without	418527 *
LCD	MM	ceramic	polymer	turquoise	without flange	without	418528 *
LCQ	MM	ceramic	polymer	beige	flange	without	418517
LCQ	MM	ceramic	polymer	turquoise	flange	without	418518
LCQ	SM	ceramic	polymer	blue	flange	without	418519
LCQ/APC	SM	ceramic	polymer	green	flange	without	418520
SCD	MM	PB	metal		flange	yes	418521
SCD	MM	ceramic	metal		flange	yes	418522
SCD	SM	ceramic	metal		flange	yes	418523
SCD/APC	SM	ceramic	metal		flange	yes	418524
FC/PC	MM	PB	metal		D hole		1412761
FC/PC	SM	ceramic	metal		D hole		1412762
LSH	MM	ceramic	polymer	black	threaded flange	yes	1412965
LSH	SM	ceramic	polymer	blue	threaded flange	yes	1414450
LSH/APC	SM	ceramic	polymer	green	threaded flange	yes	1411031
LSH/APC-M	SM	ceramic	polymer	green	threaded flange	yes	1411042

* These adapters are used with Datwyler subracks 3U/7HP - Article No. 417212.

FO-Adapter/Kupplungen 0712/e

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information



Shutter for SC-Duplex



Blank cover plug

PRODUCT INFORMATION

Description	Fibre type	Cover material	Colour	Article No.
Shutter for SCD POL BG	MM	polymer	beige	1414889
Shutter for SCD POL BL	SM	polymer	blue	1414887
Shutter for SCD POL GN	SM	polymer	green	1414888
Blank cover plug SC/LSH/LCD (16 mm)				1414223
Blank cover plug SC/LSH/LCD (21.5 mm)				418596
Blank cover plug SCD				1414224
Blank cover plug ST/FC				1414225
M2 screws and nuts to mount adapters with flange				418599

FO connector termination

Optical performance values



LSH/APC-M

ST

LC

MTP®/MPO

SC

PRODUCT INFORMATION

FEATURES

Datwyler offers a broad range of terminated connectors for individual customer needs, e.g. the connector types SC, LC, ST, LSH, FC/PC, MU, MT-RJ, MPO and others. These can be supplied in simplex as well as in duplex. Most types are available as APC/HRL variants, too. We are also able to deliver terminations for higher requirements on the optical performance.

Ferrule material:	Zirconia; MT-RJ and MPO: Polymer
Lifetime:	1000 connections with stable attenuation values
Testing conditions IL:	IEC 61300-3-4
Testing conditions RL:	IEC 61300-3-6
Reproducibility of the IL value:	on the whole lifetime a maximum of +/- 0.1dB
Operating temperature:	-10° C up to +60° C

Connector	IL [dB] typical	IL [dB] maximal	RL [dB] typical	RL [dB] minimal	Grade (IEC 61755-1)
MM	0.2	0.5	25	20	better than Bm2m
SM	0.2	0.5	45	40	better than C1
SM/APC	0.2	0.5	65	60	better than Cm2m
MT-RJ	0.5	0.75		20	better than Bm2m
MTP®/MPO MM	0.25	0.5	25	20	better than Cm2m
MTP®/MPO SM	0.25	0.5	65	60	C1

All connectors are tested with our simplex, duplex and Mini-Zipcord cables as well as with our pigtail fibres.

NOTE

Our single-fibre cables and the connectors of our Duplex patch cables are marked with cable clips „A“ and „B“.



There is a single Duplex clip enclosed to enable a change of polarity.

Wiring of an FO Duplex patch cable A to B



MTP® is a registered brand of US Conec.



Fig. 1: FO faceplate 2x SCD with intermediate frame (70 x 70 mm)



Fig. 2: FO faceplate 2x SCD



Fig. 3: Surface mount box for Datwyler FO faceplates



Fig. 4: Distance frame for surface mount box

PRODUCT INFORMATION

APPLICATION

Faceplates and outlets especially for the high-speed transmission of voice, video and data in accordance with the EN 50173.

DESCRIPTION

Flush and surface/duct mounted FO faceplates for SCD adapters

Cut-outs: for 2x SCD adapter
 Outlet attachment: 90 or 180 degree

Article No.	Description	Colour (similar to)	Fig.
1406935	FO outlet for 2x SCD (without cover frame and adapters)	RAL 1013, oyster white	1
1406936	FO outlet for 2x SCD (without cover frame and adapters)	RAL 9010, pure white	1
1407120	FO outlet for 1x SCD (without cover frame and adapters)	RAL 9010, pure white	
1400830	Cover frame 80 x 80 mm	RAL 9010, pure white	
1401630	Cover frame 80 x 80 mm	RAL 1013, oyster white	

Article No.	Description	Colour (similar to)	Fig.
1407837	FO outlet (without insert and cover frame)	RAL 9010, pure white	2
1407611	Insert for 2x SCD for FO outlet No. 1407837 (without adapters)		2
1404390	Cover frame for FO outlet No. 1407837		

ACCESSORIES

Surface mount box for Datwyler FO outlets

W x H x D: 80 x 80 x 40 mm.

With the distance frame the assembly height can be adjusted from 40 mm to 50 mm.

Article No.	Description	Colour (similar to)	PU	Fig.
1406274	Surface mount box 40 mm with cover frame	RAL 1013, oyster white	1 pc.	3
1406276	Distance frame 10 mm for surface mount box	RAL 1013, oyster white	1 pc.	4
1406273	Surface mount box 40 mm with cover frame	RAL 9010, pure white	1 pc.	3
1406275	Distance frame 10 mm for surface mount box	RAL 9010, pure white	1 pc.	4

FIBRE OPTIC PANELS & ENCLOSURES

FO patch panel OV-A / OV-AT

19"/1U, unloaded

exchangeable front plate, extractable,
depth-adjustable mounting



Fibre optic patch panel OV-AT, 19"/1U, without front plate,
extractable, depth-adjustable mounting

PRODUCT INFORMATION

APPLICATION	For the termination of fibre optic cables (breakout, loose tube) - maximum of 48 fibres. Applicable with a wide range of front plates / connector systems (see OV-A / OV-AT 1U accessories).	
DESCRIPTION	Housing:	metallic, extractable drawer (OV-A) or drawer with telescopic slides (OV-AT), both with locking mechanism
	Rack mounting:	depth-adjustable mounting of box (5 steps, maximum 50 mm) due to the adjustable 19" mounting brackets
	Colour (variants):	similar to RAL 7035, similar to RAL 9005 and stainless steel
	Imprint:	numbers (silk screen printing) on frontplate (to be ordered separately)
	Capacity:	up to 48 fibres
	Strain relief:	with cable tie and screwed cable gland or cable distributor
	Cable entry:	rear left and right
	Dimensions:	19"/1U, depth 254 mm
CONNECTOR SYSTEM	Adapter:	ST, FC, SCD, SC, LSH, LCD
SCOPE OF DELIVERY	Box, strain relief with M20 (1U) cable gland, splice tray holder and adhesive fibre fixation (3 pcs.)	
	Please order the front plate separately.	

Article No.	Description	Colour (similar to)	Note
416950	OV-A extractable 1U	RAL 7035	without front plate
416964	OV-AT telescopic 1U	RAL 7035	without front plate
417376	OV-A extractable 1U	RAL 9005	without front plate
416975	OV-AT telescopic 1U	stainless steel	without front plate
416959	Telescopic slides for upgrading OV-A to OV-AT		
1405304	Label for OV-A and OV-AT, self-adhesive, length 420 mm		



Fibre optic patch panel OV-AT, 19"/1U, without front plate, extractable, depth-adjustable mounting

PRODUCT INFORMATION

	Article No.	Description	Colour (similar to)
	416951	Front plate for 12x SCD	RAL 7035
	416952	Front plate for 24x SCD	RAL 7035
	416953	Front plate for 24x SC or LSH	RAL 7035
	416954	Front plate for 24x ST or FC/PC	RAL 7035
	417279	Front plate for 24x LCD (offset design)	RAL 7035
	419051	Front plate for 24x LSH Compact (LSH-C)	RAL 7035
	416955	Front plate for insertion of 2 partial front plates	RAL 7035
	416956	Partial front plate for 12x LSH (1-12) for No. 416955	RAL 7035
	416968	Partial front plate for 12x LSH (13-24) for No. 416955	RAL 7035
	416957	Partial front plate for 6x SCD for No. 416955	RAL 7035
	416967	Partial front plate for 12x ST or FC/PC for No. 416955	RAL 7035
	416958	Blank partial front plate for No. 416955	RAL 7035
	417374	Front plate for 24x SC or LSH	RAL 9005
	417377	Front plate for 24x ST or FC/PC	RAL 9005
	417378	Front plate for 12x SCD	RAL 9005
	417379	Front plate for 24x SCD	RAL 9005
	417868	Front plate for 24x SCD	Stainless steel
	417550	Angled cable entry M25	Steel
	417559	Angled cable entry M20	Steel
	416994	Straight cable entry M20 + M25	Steel
	418650	Straight cable entry 1x 21 mm + 2x 15 mm	Steel
	418652	Angled cable entry 15 mm	Steel
	418654	Angled cable entry 21 mm	Steel
	417857	Strain relief M20	Steel
	417858	Strain relief M25	Steel

Zubehör OV-A, OV-AT IHE 06/12/e

FIBRE OPTIC PANELS & ENCLOSURES

FO patch panel OV-A / OV-AT

19"/2U, unloaded

exchangeable front plate, extractable,
depth-adjustable mounting



Fibre optic patch panel OV-AT, 19"/2U, without front plate,
extractable, depth-adjustable mounting

PRODUCT INFORMATION

APPLICATION

For the termination of fibre optic cables (breakout, loose tube) - maximum of 96 fibres.
Applicable with a wide range of front plates / connector systems (see OV-A / OV-AT 2U accessories).

CONSTRUCTION

Housing: metallic, extractable drawer (OV-A) or drawer with telescopic slides (OV-AT), both with locking mechanism
Rack mounting: depth-adjustable mounting of box (5 steps, maximum 50 mm) due to the adjustable 19" mounting brackets
Colour (variants): similar to RAL 7035 or stainless steel
Imprint: numbers (silk screen printing) on frontplate (to be ordered separately)
Capacity: up to 96 fibres
Strain relief: with cable tie and screwed cable gland or cable distributor
Cable entry: rear left and right
Dimensions: 19"/2U, depth 254 mm

CONNECTOR SYSTEM

Adapter: ST, FC, SCD, SC, LSH, LCD

SCOPE OF DELIVERY

Box, strain relief with M25 (2U) cable gland,
splice tray holder and adhesive fibre fixation (3 pcs.)

Please order the front plate separately.

Article No.	Description	Colour (similar to)	Note
416960	OV-A extractable 2U	RAL 7035	without front plate
416965	OV-AT telescopic 2U	RAL 7035	without front plate
416977	OV-AT telescopic 2U	Stainless steel	without front plate
416959	Telescopic slides for upgrading OV-A to OV-AT		
418098	Label for OV-A and OV-AT, aluminium, length 420 mm		



Fibre optic patch panel OV-AT, 19"/2U, without front plate, extractable, depth-adjustable mounting

PRODUCT INFORMATION

	Article No.	Description	Colour (similar to)
	416961	Front plate for 24x SCD	RAL 7035
	416976	Front plate for 24x SCD	Stainless steel
	416962	Front plate for 48x SC or LSH	RAL 7035
	416963	Front plate for 48x ST	RAL 7035
	417992	Front plate for 48x SCD	RAL 7035
	417299	Front plate for 48x LCD (offset design)	RAL 7035
	419052	Front plate 48x LSH Compact (LSH-C)	RAL 7035
	416966	Front plate for insertion of 4 partial front plates	RAL 7035
	416956	Partial front plate for 12x LSH (1-12) for No. 416966	RAL 7035
	416968	Partial front plate for 12x LSH (13-24) for No. 416966	RAL 7035
	416957	Partial front plate for 6x SCD for No. 416966	RAL 7035
	416967	Partial front plate for 12x ST or FC/PC for No. 416966	RAL 7035
	416958	Blank partial front plate for No. 416966	RAL 7035
	417560	Angled cable entry M25	Steel
	417562	Angled cable entry M20	Steel
	417561	Straight cable entry M20 + M25	Steel
	418651	Straight cable entry 1x 21 mm + 2x 15 mm	Steel
	418653	Angled cable entry 15 mm	Steel
	418655	Angled cable entry 21 mm	Steel
	417857	Strain relief M20	Steel
	417858	Strain relief M25	Steel

FO subrack OV-BG

19"/3U and 4U



Front plate for slide-in modules:



FO subrack OV-BG 4U, configuration example with 12 FO slide-in modules SCD, cassette for excess cable length and support brackets

for Article No.
416908
6 x SCD/LCQ

for Article No.
416909
12 x SC und LSH

for Article No.
417212
12 x LCD

PRODUCT INFORMATION

APPLICATION

Modular solution for the termination of multiple-fibre cables - maximum of 288 fibres.
Suitable for a wide range of applications - depending on the type of FO slide-in modules or front plates (maximum of 12).

DESCRIPTION

Housing: Solid aluminium profile with side walls, integrated 19"/3U fixation on the front and pre-assembled guide rail for FO slide-in modules
Colour: Aluminium, anodised
Capacity: 84HP, up to 12 slide-in modules or front plates 3U/7HP
Cable entry: from rear, via the cassette for excess cable length (only for 4U version)
Support brackets: can be mounted in front of cassette for excess cable length
Dimensions: 19"/3U, depth 225 mm
19"/4U, depth 295 mm

CONNECTOR SYSTEM

ST, SCD, SC, LCD, LSH
Pre-assembled FO slide-in modules with pigtails (colours: IEC 60304), stripped and stored in splice tray

Article No.	Description	Dimensions
416980	FO subrack (unloaded)	3U/84HP
416907	FO subrack (unloaded)	4U/84HP with cassette for excess cable length
416908 *	FO slide-in module for 6x SCD (fastened by screws)	3U/7HP with splice tray, without adapters/pigtails
417212 *	FO slide-in module for 12x LCD (snap-in adapters)	3U/7HP with splice tray, without adapters/pigtails
416909 *	FO slide-in module for 12xSC/LSH (fastened by screws)	3U/7HP with splice tray, without adapters/pigtails
416981	Blank front plate	3U/7HP for FO subrack

* All unloaded FO slide-in modules (without adapters/pigtails) are delivered with a splice tray (already mounted) which provides an excess fibre length section and a cover.

Article No.	Description		
417350 *	FO slide-in module	loaded with 12x LCD adapter (beige) and 24 LC pigtails	G50/125 OM2
417351 *	FO slide-in module	loaded with 6x LCD adapter (beige) and 12 LC pigtails	G50/125 OM2
417352 *	FO slide-in module	loaded with 6x LCD adapter (blue) and 12 LC pigtails	E09/125 OS2
417353 *	FO slide-in module	loaded with 12x LCD adapter (turquoise) and 24 LC pigtails	G50/125 OM3
417354 *	FO slide-in module	loaded with 12x LCD adapter (blue) and 24 LC pigtails	E09/125 OS2
417355 *	FO slide-in module	loaded with 6x LCD adapter (turquoise) and 12 LC pigtails	G50/125 OM3
417356	FO slide-in module	loaded with 6x SCD adapter (beige) and 12 SC pigtails	G50/125 OM2
417357	FO slide-in module	loaded with 6x SCD adapter (turquoise) and 12 SC pigtails	G50/125 OM3
417358	FO slide-in module	loaded with 6x SCD adapter (blue) and 12 SC pigtails	E09/125 OS2

All loaded FO slide-in modules are delivered with splice holder, splice protection and excess fibre length section. Pigtails (colour code: IEC 60304) are ready for splicing.

* FO slide-in modules LCD are based on article no. 417212 for snap-in adapters.

Please ask for further versions of our pre-assembled FO slide-in modules!

FO patch panel OV-A

19"/1U, loaded

splice box with adapters and pigtails



Fibre optic splice box OV-A, 19"/1U, extractable, configuration example with 24 SCD adapters and 48 pigtails

PRODUCT INFORMATION

APPLICATION	For the termination of fibre optic cables - maximum of 48 fibres. Loaded with FO adapters, ready for splicing prepared pigtails (2 m, colour code: IEC 60304), splice trays, splice holders and splice protection in crimp technology.	
DESCRIPTION	Housing:	metallic, extractable drawer with locking mechanism, can be upgraded to OV-AT using telescopic slides: allows for depth-adjustable mounting of box (5 steps, maximum 50 mm)
	Colour:	similar to RAL 7035
	Imprint:	numbers (silk screen printing) on frontplate
	Capacity:	up to 48 fibres
	Strain relief:	with cable tie and screwed cable gland (M20)
	Cable entry:	rear left and right
	Dimensions:	19"/1U, depth 254 mm
CONNECTOR SYSTEM	Adapter:	SCD, LCD, LSH, ST
SCOPE OF DELIVERY	Included are: - coloured pigtails with measurement report - FO adapters, fastened by screws - splice trays with cover - splice protection in crimp technology - splice holder - fastening set	
NOTE	Variants on request	

FO patch panel OV-A

19"/1U, loaded

splice box with adapters and pigtails

PRODUCT INFORMATION

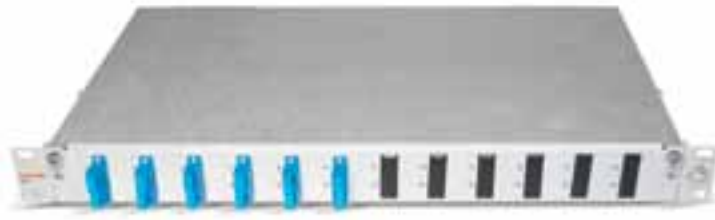
Article No.	Description	Loaded with	
190968	Splice box, OV-A, extractable, 1U	6x LCD adapter, blue polymer housing	with ceramic sleeve and 12 LC pigtails 2 m E09/125µm OS2
190969	Splice box, OV-A, extractable, 1U	6x LCD adapter, beige polymer housing	with ceramic sleeve and 12 LC pigtails 2 m G50/125µm OM2
190884	Splice box, OV-A, extractable, 1U	6x LCD adapter, turquoise polymer housing	with ceramic sleeve and 12 LC pigtails 2 m G50/125µm OM3
190975	Splice box, OV-A, extractable, 1U	12x LCD adapter, blue polymer housing	with ceramic sleeve and 24 LC pigtails 2 m E09/125µm OS2
190988	Splice box, OV-A, extractable, 1U	12x LCD adapter, beige polymer housing	with ceramic sleeve and 24 LC pigtails 2 m G50/125µm OM2
190885	Splice box, OV-A, extractable, 1U	12x LCD adapter, turquoise polymer housing	with ceramic sleeve and 24 LC pigtails 2 m G50/125µm OM3
191761	Splice box, OV-A, extractable, 1U	24x LCD adapter, blue polymer housing	with ceramic sleeve and 48 LC pigtails 2 m E09/125µm OS2
191762	Splice box, OV-A, extractable, 1U	24x LCD adapter, beige polymer housing	with ceramic sleeve and 48 LC pigtails 2 m G50/125µm OM2
191763	Splice box, OV-A, extractable, 1U	24x LCD adapter, turquoise polymer housing	with ceramic sleeve and 48 LC pigtails 2 m G50/125µm OM3
190989	Splice box, OV-A, extractable, 1U	6x LSH/APC adapter, green polymer housing	with ceramic sleeve and 6 LSH/APC pigtails 2 m E09/125µm OS2
190990	Splice box, OV-A, extractable, 1U	6x LSH adapter, black polymer housing	with ceramic sleeve and 6 LSH pigtails 2 m G50/125µm OM3
190893	Splice box, OV-A, extractable, 1U	12x LSH/APC adapter, green polymer housing	with ceramic sleeve and 12 LSH/APC pigtails 2 m E09/125µm OS2
190886	Splice box, OV-A, extractable, 1U	12x LSH adapter, black polymer housing	with ceramic sleeve and 12 LSH pigtails 2 m G50/125µm OM3
190894	Splice box, OV-A, extractable, 1U	24x LSH/APC adapter, green polymer housing	with ceramic sleeve and 24 LSH/APC pigtails 2 m E09/125µm OS2
190887	Splice box, OV-A, extractable, 1U	24x LSH adapter, black polymer housing	with ceramic sleeve and 24 LSH pigtails 2 m G50/125µm OM3
190888	Splice box, OV-A, extractable, 1U	6x SCD adapter, blue polymer housing	with ceramic sleeve and 12 SC pigtails 2 m E09/125µm OS2
190974	Splice box, OV-A, extractable, 1U	6x SCD adapter, beige polymer housing	with PB sleeve and 12 SC pigtails 2 m G50/125µm OM2
190882	Splice box, OV-A, extractable, 1U	6x SCD adapter, turquoise polymer housing	with PB sleeve and 12 SC pigtails 2 m G50/125µm OM3
190889	Splice box, OV-A, extractable, 1U	12x SCD adapter, blue polymer housing	with ceramic sleeve and 24 SC pigtails 2 m E09/125µm OS2
190955	Splice box, OV-A, extractable, 1U	12x SCD adapter, beige polymer housing	with PB sleeve and 24 SC pigtails 2 m G50/125µm OM2
190883	Splice box, OV-A, extractable, 1U	12x SCD adapter, turquoise polymer housing	with PB sleeve and 24 SC pigtails 2 m G50/125µm OM3
190973	Splice box, OV-A, extractable, 1U	24x SCD adapter, blue polymer housing	with ceramic sleeve and 48 SC pigtails 2 m E09/125µm OS2
190972	Splice box, OV-A, extractable, 1U	24x SCD adapter, beige polymer housing	with PB sleeve and 48 SC pigtails 2 m G50/125µm OM2
190991	Splice box, OV-A, extractable, 1U	24x SCD adapter, turquoise polymer housing	with PB sleeve and 48 SC pigtails 2 m G50/125µm OM3
190971	Splice box, OV-A, extractable, 1U	6x ST adapter, metal housing	with ceramic sleeve and 6 ST pigtails 2 m E09/125µm OS2
191757	Splice box, OV-A, extractable, 1U	6x ST adapter, metal housing	with PB sleeve and 6 ST pigtails 2 m G50/125µm OM2
191758	Splice box, OV-A, extractable, 1U	6x ST adapter, metal housing	with PB sleeve and 6 ST pigtails 2 m G50/125µm OM3
191759	Splice box, OV-A, extractable, 1U	12x ST adapter, metal housing	with ceramic sleeve and 12 ST pigtails 2 m E09/125µm OS2
191760	Splice box, OV-A, extractable, 1U	12x ST adapter, metal housing	with PB sleeve and 12 ST pigtails 2 m G50/125µm OM2
190880	Splice box, OV-A, extractable, 1U	12x ST adapter, metal housing	with PB sleeve and 12 ST pigtails 2 m G50/125µm OM3
190999	Splice box, OV-A, extractable, 1U	24x ST adapter, metal housing	with ceramic sleeve and 24 ST pigtails 2 m E09/125µm OS2
191764	Splice box, OV-A, extractable, 1U	24x ST adapter, metal housing	with PB sleeve and 24 ST pigtails 2 m G50/125µm OM2
190881	Splice box, OV-A, extractable, 1U	24x ST adapter, metal housing	with PB sleeve and 24 ST pigtails 2 m G50/125µm OM3

All pigtails are coloured (in accordance with IEC 60304), stripped and stored in splice tray

FO patch panel OV-A

19"/1U, loaded

breakout box with adapters, without pigtails



Fibre optic breakout box OV-A, 19"/1U, extractable, configuration example with 6 SCD adapters, without pigtails

PRODUCT INFORMATION

APPLICATION For the termination of pre-assembled fibre optic cables - maximum of 48 fibres. Loaded with a maximum of 12 / 24 FO adapters.

CONSTRUCTION

Housing:	metallic, extractable drawer with locking mechanism, can be upgraded to OV-AT using telescopic slides: allows for depth-adjustable mounting of box (5 steps, maximum 50 mm)
Colour (variants):	similar to RAL 7035, similar to RAL 9005 and stainless steel
Imprint:	numbers (silk screen printing) on frontplate
Capacity:	up to 48 fibres
Strain relief:	with cable tie and screwed cable gland
Cable entry:	rear left and right
Dimensions:	19"/1U, depth 254 mm

CONNECTOR SYSTEM Adapter: ST, SCD, LCD, LSH

SCOPE OF DELIVERY Included are:
 - FO adapters, fastened by screws
 - fastening set

NOTE Variants on request

FO patch panel OV-A

19"/1U, loaded

breakout box with adapters, without pigtails

PRODUCT INFORMATION

Article No.	Description	Loaded with
191765	Breakout box OV-A, extractable, 1U	6x LCD SM adapter, blue polymer housing, with ceramic sleeve
190871	Breakout box OV-A, extractable, 1U	6x LCD MM adapter, beige polymer housing, with ceramic sleeve
191766	Breakout box OV-A, extractable, 1U	6x LCD MM adapter, turquoise polymer housing, with ceramic sleeve
191767	Breakout box OV-A, extractable, 1U	12x LCD SM adapter, blue polymer housing, with ceramic sleeve
190872	Breakout box OV-A, extractable, 1U	12x LCD MM adapter, beige polymer housing, with ceramic sleeve
191768	Breakout box OV-A, extractable, 1U	12x LCD MM adapter, turquoise polymer housing, with ceramic sleeve
191769	Breakout box OV-A, extractable, 1U	24x LCD SM adapter, blue polymer housing, with ceramic sleeve
190873	Breakout box OV-A, extractable, 1U	24x LCD MM adapter, beige polymer housing, with ceramic sleeve
191770	Breakout box OV-A, extractable, 1U	24x LCD MM adapter, turquoise polymer housing, with ceramic sleeve
191771	Breakout box OV-A, extractable, 1U	6x LSH/APC SM adapter, green polymer housing, with ceramic sleeve
191772	Breakout box OV-A, extractable, 1U	6x LSH MM adapter, black polymer housing, with ceramic sleeve
190878	Breakout box OV-A, extractable, 1U	12x LSH/APC SM adapter, green polymer housing, with ceramic sleeve
190874	Breakout box OV-A, extractable, 1U	12x LSH MM adapter, black polymer housing, with ceramic sleeve
190879	Breakout box OV-A, extractable, 1U	24x LSH/APC SM adapter, green polymer housing, with ceramic sleeve
190875	Breakout box OV-A, extractable, 1U	24x LSH MM adapter, black polymer housing, with ceramic sleeve
190876	Breakout box OV-A, extractable, 1U	6x SCD SM adapter, blue polymer housing, with ceramic sleeve
190869	Breakout box OV-A, extractable, 1U	6x SCD MM adapter, beige polymer housing, with PB sleeve
191773	Breakout box OV-A, extractable, 1U	6x SCD MM adapter, turquoise polymer housing, with PB sleeve
190877	Breakout box OV-A, extractable, 1U	12x SCD SM adapter, blue polymer housing, with ceramic sleeve
190870	Breakout box OV-A, extractable, 1U	12x SCD MM adapter, beige polymer housing, with PB sleeve
191774	Breakout box OV-A, extractable, 1U	12x SCD MM adapter, turquoise polymer housing, with PB sleeve
191775	Breakout box OV-A, extractable, 1U	24x SCD SM adapter, blue polymer housing, with ceramic sleeve
191776	Breakout box OV-A, extractable, 1U	24x SCD MM adapter, beige polymer housing, with PB sleeve
191777	Breakout box OV-A, extractable, 1U	24x SCD MM adapter, turquoise polymer housing, with PB sleeve
191778	Breakout box OV-A, extractable, 1U	6x ST SM adapter, metal housing, with ceramic sleeve
191779	Breakout box OV-A, extractable, 1U	6x ST MM adapter, metal housing, with PB sleeve
191780	Breakout box OV-A, extractable, 1U	12x ST SM adapter, metal housing, with ceramic sleeve
190867	Breakout box OV-A, extractable, 1U	12x ST MM adapter, metal housing, with PB sleeve
191781	Breakout box OV-A, extractable, 1U	24x ST SM adapter, metal housing, with ceramic sleeve
190868	Breakout box OV-A, extractable, 1U	24x ST MM adapter, metal housing, with PB sleeve

Fibre distribution box OV-W
wall mounted



Fig. 1: Fibre distribution box OV-W



Fig. 2: Cable entry with 2 plates and 2 brush strips



Fig. 3: Patch panel for 12 x SC-D



Fig. 4: Patch panel for 48 x SC

Fig. 5: Take-up for splice tray

PRODUCT INFORMATION

APPLICATION For the distribution of the fibre optic backbone cabling to the horizontal cabling. For splice connections or removable connections.

DESCRIPTION

Housing: steel plate 1.5 mm, with removable front door and side walls

Colour: RAL 7035

Patch panels: available for 48 adapters SCD, SC, ST and LCD (other on request)

Strain relief: with cable tie, screwed cable gland or snap-in

Cable entries: on four sides possible

Dimensions: 300 x 300 x 85 mm

CONNECTOR SYSTEM ST/FC, SCD, SC/LSH/LCD

SCOPE OF DELIVERY Fibre optic wall mount distribution box OV-W with lock and two keys, splice tray holder for four cassettes, fastening set

Article No.	Fig.	Description	PU
416904	1	FO wall mount distribution box 300 x 300 x 85 mm (unloaded, with splice tray holder)	1 pc.
416905	2	Cable entry with 2 plates and 2 brush strips	1 set
416906	3	Patch panel for 12x SCD	1 pc.
416979	4	Patch panel for 48x SC	1 pc.
416989	-	Patch panel für 48x ST	1 pc.
416988	5	Take-up for splice tray	4 pcs.

Fibre distribution box OV-W

wall mounted

for 2 patch panels 2U



Fig. 1: FO wall mount distribution box OV-W

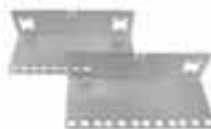


Fig. 2: Angle bracket set for patch panels



Fig. 3: Bürstenleisten-Set



Fig. 4: Splice tray holder



Fig. 5: Brush strip set

PRODUCT INFORMATION

APPLICATION

For the distribution of the fibre optic backbone cabling to the horizontal cabling.
For splice connections or removable connections.

DESCRIPTION

Housing: steel plate 1.5 mm, with removable front door and side walls, can be extended
Colour: RAL 7035
Patch panels: available for 48 adapters SCD, SC, ST and LCD each (other on request)
Strain relief: with cable tie, screwed cable gland or snap-in
Cable entries: on four sides possible
Dimensions: 600 x 425 x 220 mm

CONNECTOR SYSTEM

ST/FC, SCD, SC/LSH/LCD

SCOPE OF DELIVERY

Fibre optic wall mount distribution box OV-W with lock and two keys, fastening set

Article No.	Fig.	Description	PU
416900	1	FO wall mount distribution box 600 x 425 x 220 mm (unloaded)	1 pc.
416901	2	Angle bracket set for patch panels for 416900	2 pcs.
416902	3	Brush strip set for 416900	2 pcs.
417396	-	Cable entry set PG 16 / PG 21 for 416900	2 pcs.
416903	-	Patch panel 2U for 24x SCD for 416900	1 pc.
418983	-	Patch panel 2U for 48x ST for 416900	1 pc.
416997	4	Splice tray holder for 12 cassettes for 416900	1 pc.
416988	5	Take-up for splice tray for 416900 and 416904	4 pcs.

Management panels & cable shelves 19"/1U

in different versions



Management panel 19" 1U, version made of stainless steel, with 5 support brackets



19" cable shelf with management panel



19" cable shelf with cable feedthrough panel and strip

PRODUCT INFORMATION

APPLICATION

Management panels 19" 1U are suitable for the routing of copper and fibre optic cables, particularly suitable for patch cords in racks or cabinets with 19" mounting angles and rails.

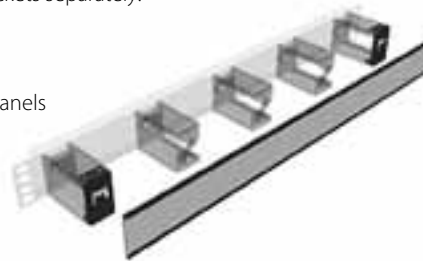
Cable shelves fulfil the same function, particularly for multiple (trunk) cables.

DESCRIPTION

The basic management panels 19" 1U are available in three versions: a) stainless steel, b) black or c) grey.

These panels come without support brackets. They can be fitted with 5 support brackets in the required dimension. Please order the support brackets separately!

There are labelling strips for complete management panels with support brackets available:



Article No.	Description	Colour/Material	PU
1411480	Support bracket 30 mm	plastic, black	1 pc.
1411481	Support bracket 75 mm	metal	1 pc.
1411482	Support bracket 110 mm	metal	1 pc.
1411604	Management panel 19"/1U for 5 support brackets (delivery without brackets)	RAL 7035	1 pc.
1407689	Management panel 19"/1U for 5 support brackets (delivery without brackets)	RAL 9005	1 pc.
418200	Management panel 19"/1U for 5 support brackets (delivery without brackets)	stainless steel, blank	1 pc.
401240	19" blank plate, 1U	RAL 7035	1 pc.
401241	19" blank plate, 1U	RAL 9005	1 pc.
401242	19" blank plate, 1U	stainless steel, blank	1 pc.
401243	19" blank plate, 2U	RAL 7035	1 pc.
401244	19" blank plate, 2U	RAL 9005	1 pc.
401245	19" blank plate, 2U	stainless steel, blank	1 pc.
401247	Cable feedthrough panel with strip 19"/1U	RAL 7035	1 pc.
401248	Cable feedthrough panel with strip 19"/1U	RAL 9005	1 pc.
401249	Cable feedthrough panel with strip 19"/1U	stainless steel, blank	1 pc.
400300	19" cable shelf, depth adjustable due to slide rails (from 520 mm up to 850 mm) (only mountable with a management panel or cable feedthrough panel; rear side 19" fixation necessary)		1 pc.
470033	Labelling strip (for complete management panel with bracket type 1411480)		1 pc.
470034	Labelling strip (for complete management panel with bracket types 1411481, 1411482)		1 pc.

Splicing accessories & cable glands



Splice tray



Splice holder



Splice protection



Cable gland

PRODUCT INFORMATION

Accessories

Article No.	Description	PU
1411150	Splice tray without cover	1 piece
1411151	Splice tray cover	1 piece
1411152	Splice holder for up to 12 splices (crimp technology)	1 piece
1411153	Splice holder for up to 6 splices (heat shrink technology)	1 piece
1401560	Splice protection (crimp technology)	1 piece
1401581	Splice protection (shrink technology)	100 pieces
416996	Splice kit with 12x splice protection (crimp technology) and splice tray cover	1 set

Cable gland

Article No.	Type	Article	Diameter	Clamping range
418165	M16	Cable gland	16 mm	4-8 mm
418166	M16	Locknut		
418160	M20	Cable gland	20 mm	6-12 mm
418161	M20	Locknut		
418162	M25	Cable gland	25 mm	9-17 mm
418163	M25	Locknut		

**Launch cable box
for OTDR testing**



OTDR launch cable box

PRODUCT INFORMATION

APPLICATION	Launch cables are necessary for optical performance testing/measurement of fibre optic connections with an OTDR.
DESCRIPTION	<p>Housing: PVC hard-top case (275 x 225 x 80 mm) with spare tray for FO adapters and other accessories</p> <p>Contents: optionally with 3 different fibre types or with 12 fibres of the same type</p> <p>The fibres are wound stress free. About 2.5 m of the fibres are protected by a tube.</p>
CONNECTOR SYSTEM	ST, SC, LSH, LC, FC/PC, HRL variants and other (to be defined)

Article No.	Description	Information
416890	Launch cable box with 100 m G50+G62 and 1000 m E09	connector to be defined
416891	Launch cable box with 1000 m E09	connector to be defined
416892	Launch cable box with 100 m G50	connector to be defined
416893	Launch cable box with 100 m G62	connector to be defined
416894	Launch cable box with 12x 100 m G50	connector to be defined
416895	Launch cable box with 12x 100 m G62	connector to be defined

Network racks SP

19"/42U

with glass front door



Network rack SP with glass front door and plinth

PRODUCT INFORMATION

APPLICATION

19" network rack

FEATURES

High-grade 19" network cabinet in two sizes
 Can be very flexibly assembled, configured and fully dismantled
 Can be bayed together side-by-side
 Protection rating IP20 (optional up to IP54)
 Load capacity up to 1000 kg

DIMENSIONS

19"/42U, H x W x D: 2100 x 800 x 800 mm
 19"/42U, H x W x D: 2100 x 600 x 800 mm

DESCRIPTION

- basic frame made of steel profiles, pegged with corner pieces (screwed)
- 4 mounting angles 19" (482.6 mm)
- 2 depth members on either side for depth adjustable installation of the mounting angles
- Front door with 3 mm toughened safety glass and standard lever handle / 2-point locking system
- Rear door with lever handle
- 2 removable side walls with safety lock
- One-piece bottom
- One-piece roof, ready for strip (enclosed) and with 6 knockouts for fans
- Plinth 100 mm (removable), passively ventilated, with levelling feet
- 2 C mounting profiles for mounting in width
- 2 C mounting profiles for depth adjustable mounting
- Set for protective earthing conductor installation
- 19" fastening set



DELIVERY

Mounted and packed

Article No.	Description	Height	Width	Depth (mm)	Colour
190822	Network rack SP 19"/42U	2100	800	800	light grey, RAL 7035
190823	Network rack SP 19"/42U	2100	600	800	light grey, RAL 7035
190835	Network rack SP 19"/42U, basic frame	2100	800	800	light grey, RAL 7035

Other dimensions on request.

For accessories please see page 275

Network racks PX

19" 25U and 43U
with glass front door



Network Rack PX with glass front door and integrated plinth

PRODUCT INFORMATION

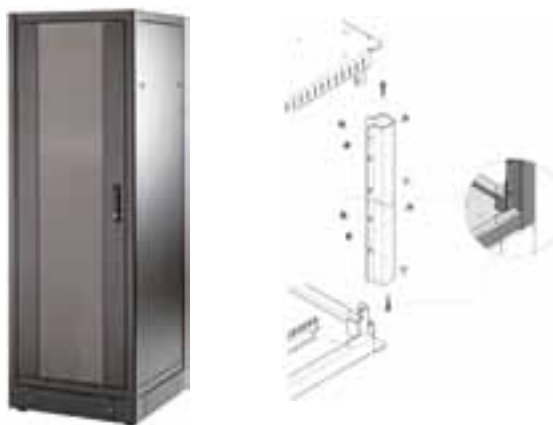
APPLICATION	19" network rack
FEATURES	<p>Cost-efficient 19" network cabinet in three sizes Can be very flexibly assembled, configured and fully dismantled Can be bayed together side-by-side Protection rating IP20 Load capacity up to 700 kg</p>
DIMENSIONS	<p>19" 25U, H x W x D: 1300 x 600 x 800 mm 19" 43U, H x W x D: 2100 x 800 x 800 mm 19" 43U, H x W x D: 2100 x 800 x 1000 mm</p>
DESCRIPTION	<ul style="list-style-type: none"> - basic frame made of steel, multi-folded, screwed together via the roof and the integrated plinth - 4 mounting angles 19" (482.6 mm) - 2 depth members on either side for depth adjustable installation of the mounting angles - Front door (inside) with 3 mm toughened safety glass and standard lever handle - One-piece rear door (inside) with lever handle - 2 removable side walls, each with two cam locks - One-piece roof with knock-outs for strips, for cable entries (at the rear and at both sides) and/or for 6 axial fans - open bottom - Plinth 100 mm (fix), passively ventilated, with levelling feet - Set for protective earthing conductor installation - 19" fastening set
DELIVERY	Mounted and packed

Article No.	Description	Height	Width	Depth (mm)	Colour
309 214	Network rack PX 19" 25U	1300	600	800	light grey, RAL 7035
309 215	Network rack PX 19" 43U	2100	800	800	light grey, RAL 7035
309 216	Network rack PX 19" 43U	2100	800	1000	light grey, RAL 7035

Other dimensions on request.

For accessories please see page 275

Network racks ER
 19"/24U, 34U, 42U and 48U
 with glass front door



Network rack ER with glass front door and plinth

PRODUCT INFORMATION

APPLICATION 19" network rack

FEATURES Particularly cost-efficient 19" network cabinet in many different sizes
 Can be very flexibly assembled, configured and dismantled
 Can be bayed together side-by-side
 Protection rating IP20
 Load capacity front only: up to 5.5 kg/U
 Load capacity front and rear: up to 11 kg/U

DESCRIPTION

- Reversible front door with smoked safety glass in accordance with EN 12150-1, handle and lock
- Removable side walls and rear door
- Cabinets with 600 mm depth: front mounted components can be adjusted in depth
- Cabinets with 800 mm depth: front and rear mounted components can be adjusted in depth
- Plinth 100 mm (removable) with 4 levelling feet
- Perforated roof and base for passive air ventilation and cable entry
- Colour: black, RAL 9005

DELIVERY Mounted and packed

Article No.	Description	Height (mm)*	Width (mm)	Depth (mm)
309054	Network rack ER, 24U	1256	600	600
309055	Network rack ER, 24U	1256	600	800
309056	Network rack ER, 24U	1256	800	600
309057	Network rack ER, 24U	1256	800	800
309058	Network rack ER, 34U	1701	600	600
309059	Network rack ER, 34U	1701	600	800
309060	Network rack ER, 34U	1701	800	600
309061	Network rack ER, 34U	1701	800	800
309062	Network rack ER, 42U	2057	600	600
309063	Network rack ER, 42U	2057	600	800
309064	Network rack ER, 42U	2057	800	600
309065	Network rack ER, 42U	2057	800	800
309066	Network rack ER, 48U	2324	600	600
309067	Network rack ER, 48U	2324	600	800
309068	Network rack ER, 48U	2324	800	600
309069	Network rack ER, 48U	2324	800	800

* including plinth 100 mm

Special designs available on request. For accessories please see pages 276 - 277

Server racks SP

19"/24U and 42U

with perforated front and rear door



Server rack SP with perforated doors

PRODUCT INFORMATION

APPLICATION 19" server rack

FEATURES High-grade 19" server cabinet in three sizes
 Can be very flexibly assembled, configured and fully dismantled
 Can be bayed together side-by-side
 Protection rating IP20
 Load capacity up to 1000 kg

DIMENSIONS 19"/42U, H x W x D: 2100 x 800 x 1000 mm
 19"/42U, H x W x D: 2100 x 600 x 1000 mm
 19"/24U, H x W x D: 1300 x 600 x 1000 mm

DESCRIPTION

- basic frame made of steel profiles, pegged with corner pieces (screwed)
- 4 mounting angles 19" (482.6 mm)
- 2 depth members on either side for depth adjustable installation of the mounting angles
- Perforated front door (passively ventilated) with standard lever handle / 2-point locking system
- Perforated rear door (passive ventilation) with lever handle
- 2 removable side walls with safety lock
- One-piece roof, ready for strip (enclosed) and with 6 knockouts for fans
- Plinth 100 mm (removable), passively ventilated, with levelling feet
- Set for protective earthing conductor installation
- 19" fastening set



DELIVERY Mounted and packed

Article No.	Description	Height	Width	Depth (mm)	Colour
190825	Server rack SP 19"/42U	2100	800	1000	black, RAL 9005
190826	Server rack SP 19"/42U	2100	600	1000	black, RAL 9005
190827	Server rack SP 19"/24U	1300	600	1000	black, RAL 9005

For accessories please see page 275

Server racks SP

19"/24U and 42U

with glass front door, perforated rear door



Server rack SP with glass front door and perforated rear door

PRODUCT INFORMATION

APPLICATION

19" server rack

FEATURES

High-grade 19" server cabinet in four sizes
 Can be very flexibly assembled, configured and fully dismantled
 Can be bayed together side-by-side
 Protection rating IP20
 Load capacity up to 1000 kg

DIMENSIONS

19"/42U, H x W x D: 2100 x 800 x 800 mm
 19"/42U, H x W x D: 2100 x 800 x 1000 mm (version with circumferentially perforated glass front door)
 19"/42U, H x W x D: 2100 x 600 x 1000 mm
 19"/24U, H x W x D: 1300 x 600 x 1000 mm

DESCRIPTION

- basic frame made of steel profiles, pegged with corner pieces (screwed)
- 4 mounting angles 19" (482.6 mm)
- 2 depth members on either side for depth adjustable installation of the mounting angles
- Front door with 3 mm toughened safety glass and standard lever handle / 2-point locking system
- Perforated rear door (passive ventilation) with lever handle
- 2 removable side walls with safety lock
- One-piece roof, ready for strip (enclosed) and with 6 knockouts for fans
- Plinth 100 mm (removable), passively ventilated, with levelling feet
- Set for protective earthing conductor installation
- 19" fastening set



DELIVERY

Mounted and packed

Article No.	Description	Height	Width	Depth (mm)	Colour
309217	Server rack SP 19"/42U	2100	800	800	light grey, RAL 7035
309218	Server rack SP 19"/42U	2100	800	1000	light grey, RAL 7035
309219	Server rack SP 19"/42U	2100	600	1000	light grey, RAL 7035
309 220	Server rack SP 19"/24U	1300	600	1000	light grey, RAL 7035

For accessories please see page 275

Serverschrank 0910/e

Copper

Fibre Optics

Cabinets & Racks

Data Centre

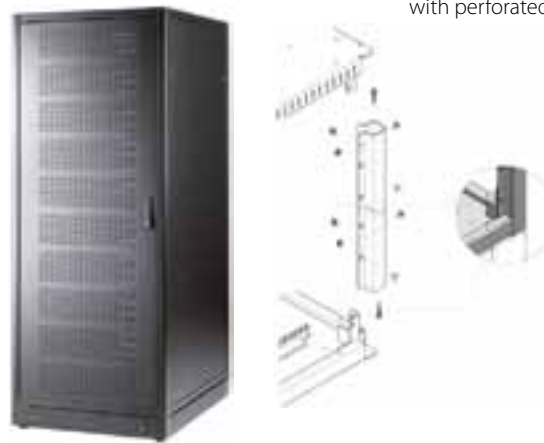
Wireless

Multimedia

General Information

Server Racks ER**19"/24U, 34U, 42U and 48U**

with perforated front and rear door



Server rack ER with perforated doors

PRODUCT INFORMATION

APPLICATION 19" server rack

FEATURES Particularly cost-efficient 19" network cabinet in many different sizes
 Can be very flexibly assembled, configured and dismantled
 Can be bayed together side-by-side
 Protection rating IP20
 Load capacity front only: up to 5.5 kg/U
 Load capacity front and rear: up to 11 kg/U

DESCRIPTION

- Reversible perforated front door, both with handle and lock
- Removable side walls and rear door
- Cabinets with 600 mm depth: front mounted components can be adjusted in depth
- Cabinets with 800 mm depth: front and rear mounted components can be adjusted in depth
- Plinth 100 mm (removable) with 4 levelling feet
- Perforated roof and base for passive air ventilation and cable entry
- Colour: black, RAL 9005

DELIVERY Mounted and packed

Article No.	Description	Height (mm)*	Width (mm)	Depth (mm)
309070	Server rack ER 19"/24U	1256	600	1000
309071	Server rack ER 19"/24U	1256	800	1000
309072	Server rack ER 19"/34U	1701	600	1000
309073	Server rack ER 19"/34U	1701	800	1000
309074	Server rack ER 19"/42U	2057	600	1000
309075	Server rack ER 19"/42U	2057	800	1000
309076	Server rack ER 19"/48U	2324	600	1000
309077	Server rack ER 19"/48U	2324	800	1000

* including plinth 100 mm

Special designs available on request. For accessories please see pages 276 - 277

Cold Aisle Containment Systems

For data cabinets and server racks SP and PX

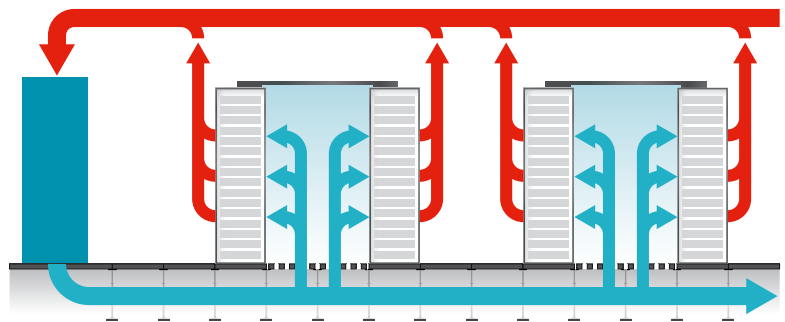


Cold Aisle Containment Systems (CACS) meet the two most significant thermal challenges in data centres

- Preventing hot air from recirculation
- Preventing high losses of cold air

Arguments for CACS:

- Economical, energy efficient solution
- Minimal effort, easy installation of roof and doors
- Cooling capacity through false floor can be adjusted according to the demand
- Cold aisle containment provides physical separation between cold and hot aisles
- Scalable with additional cooling units within the rack rows when needed
- Optionally expandable solution (cold aisle *and* hot aisle containment)



Example for cooling through the raised floor and for a containment of cold aisles

suitable for up to 12 kW per rack

Effective cold-air routing

The purpose of a cold aisle containment is the complete structural separation of the cold aisle in front of the servers and the hot air behind the servers. To achieve this, data centres are equipped with raised floors, rack rows are aligned face to face, and the corridors between them are fitted with ceilings and sliding doors to enclose the cold aisles.

The cold air directed through the false floor is exclusively released into cold aisles. Containment of the cold aisles (and the hot aisles) facilitates the targeted routing of cold air from the raised floor to the hotspots in the cabinets - and of warm air back into the cooling cycle in the rear of the racks. In addition, it effectively prevents warm and cold in the data centre from mixing.

Cutting costs

Cold aisle containment systems are a globally recognised and proven solution for reducing the energy needs and cutting costs while achieving the required cooling performance in data centres. When rack extensions are necessary, the doors can simply be reattached to the end cabinets, and additional ceiling panels can be added.

If you are interested in a consultation or in developing a project please do not hesitate to contact us. We would be happy to give you more information!

For contact details please see the catalogue's back cover or www.datwyler.com / Cabling Solutions.

Wall mounted racks

19"/9U, 12U, 15U

Mini rack

19" 18U



19" wall mounted racks

19" mini rack with levelling feet

PRODUCT INFORMATION

APPLICATION Wall mount cabinets and mini rack for 19" components.

FEATURES Removable side walls and glass front door
 Protection rating IP20
 Load capacity up to 3kg/U
 Reversible front door
 Pre-punched wall-fixing holes in rear wall
 Mounted and packed

DIMENSIONS

<p>Wall-mounted racks: 19"/9U, H x W x D: 475 x 570 x 400 mm 19"/9U, H x W x D: 475 x 570 x 500 mm 19"/12U, H x W x D: 600 x 570 x 400 mm 19"/12U, H x W x D: 600 x 570 x 500 mm 19"/15U, H x W x D: 750 x 570 x 400 mm 19"/15U, H x W x D: 750 x 570 x 500 mm</p>	<p>Mini rack: 19"/18U, H x W x D: 910 x 570 x 600 mm</p>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------

DESCRIPTION

- Multi-bend basic frame, screwed together
- Glass front door with 3 mm toughened safety glass and lock, removable (lock nut hinge pins)
- Knock-out holes (top/bottom) for cable entry with pre-installed strip
- Removable side walls, perforated for passive ventilation
- 2 mounting angles 19" (482.6 mm), zinc-plated
- Cable support rail for cable ties
- Set for protective earthing conductor installation with earthing cable 1.5 mm²

DELIVERY Mounted and packed

Article No.	Description	Height	Width	Depth (mm)	Colour
190828	Wall mounted rack 19"/9U	475	570	400	light grey, RAL 7035
190829	Wall mounted rack 19"/9U	475	570	500	light grey, RAL 7035
190830	Wall mounted rack 19"/12U	600	570	400	light grey, RAL 7035
190831	Wall mounted rack 19"/12U	600	570	500	light grey, RAL 7035
190832	Wall mounted rack 19"/15U	750	570	400	light grey, RAL 7035
190833	Wall mounted rack 19"/15U	750	570	500	light grey, RAL 7035
190834	Mini rack 19"/18U	910	570	600	light grey, RAL 7035

Wall mounted racks ER
19"/9U, 12U and 16U



Wall mounted rack ER

PRODUCT INFORMATION

APPLICATION	Wall mounted cabinet 19" components.
FEATURES	Flexible and economical solution Reversible glass front door Removable side walls and back door 19" components can be adjusted in depth Protection rating IP20 in accordance with EN 60529
DESCRIPTION	- Reversible front door with smoked safety glass, handle and lock - Side walls and back door can be removed - 19"-Frontebene ist tiefenverstellbar - Front mounted 19" components can be adjusted in depth - Rear mounted 19" components cannot be adjusted in depth - Perforated roof and base for passive ventilation and cable entry - Colour: black, RAL 9005
DELIVERY	Mounted and packed

Article No.	Description	Height (mm)	Width (mm)	Depth (mm)
309048	Wall mounted rack ER 19"/9U	504	600	526
309049	Wall mounted rack ER 19"/12U	637	600	526
309050	Wall mounted rack ER 19"/16U	833	600	526
309051	Wall mounted rack ER 19"/9U	504	600	400
309052	Wall mounted rack ER 19"/12U	637	600	400
309053	Wall mounted rack ER 19"/16U	833	600	400

For accessories please see pages 276 - 277



Fig. 1: Fan set



Fig. 2: Thermostat



Fig. 3: Multiple socket



Fig. 4: Slide rail set



Fig. 5: Shelf board, retractable



Fig. 6: Shelf board, fix



Fig. 7: C profile



Fig. 8: Fastening set

PRODUCT INFORMATION

APPLICATION

The different accessories allow for customized solutions for all network and server racks SP and PX.

Article No.	Fig.	Accessories / Description	Note
401200	–	Lever handle	on request
401201	6	Shelf set 19" x 600 mm (perforated, fix, st, 1.5 mm), RAL 7035	Load capacity 120 kg
401202	5	Shelf set 19" x 600 mm (perforated, retractable, st, 1.5 mm), RAL 7035	Load capacity 50 kg
401203	4	Slide rail set 19" x 712 mm for server rack	Load capacity 40 kg
401211	1	Fan set, 2 pcs., with protective grid and fastening set	
401212	2	Thermostat	
401213	–	Powercord for fan set 2 m DE/AT	
401214	–	Power cord for fan set 2 m CH	
401215	–	Power cord for fan set 2 m UK	
401220	–	Multiple socket DE/AT, 5 EU	
401221	3	Multiple socket CH 10x type 13 vertical	other versions on request
401222	–	Multiple socket DE/AT, 9	
401230	8	Wall mounting set	for wall-mounted racks
401231	–	Fastening set 19" screw / cage nut	50 pcs.
401232	–	Lacquer touch-up stick RAL 7035	on request
401233	–	Lacquer touch-up stick RAL 9005	on request
401234	–	Measurement adhesive strip for mounting angles 1-47U	
401235	–	Baying set for network racks	on request
401236	–	19" mounting angle support	Load capacity 1000 kg
401237	7	C profile 600 for SP rack, 2 pcs.	on request
401238	7	C profile 800 for SP rack, 2 pcs.	on request
401239	7	C profile 1000 for SP rack, 2 pcs.	on request

DATA CABINETS & RACKS

Accessories

for data cabinets ER

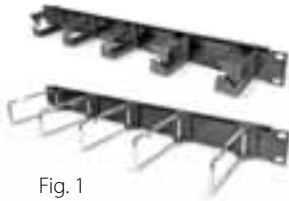


Fig. 1

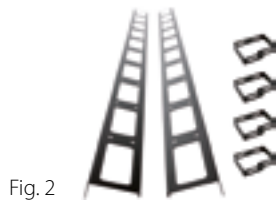


Fig. 2

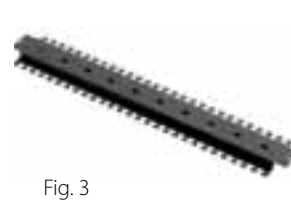


Fig. 3



Fig. 4



Fig. 5



Fig. 6



Fig. 7



Fig. 8

PRODUCT INFORMATION

APPLICATION

The different accessories allow for customized solutions for all ER racks and cabinets.

Article No.	Fig.	Description	Colour/material	PU
1411480	1	Support bracket 30 mm	Black, plastic	1 pc.
1411481	1	Support bracket 75 mm	metal	1 pc.
1411482	1	Support bracket 110 mm	metal	1 pc.
1411604	1	Management panel 19"/1U	RAL 7035	1 pc.
1407689	1	Management panel 19"/1U	RAL 9005	1 pc.
418200	1	Management panel 19"/1U	stainless steel blank	1 pc.
309084	2	Cable management set 24U, 2 vert. strips/4 rings, for cabinets 800 mm wide		1 set
309085	2	Cable management set 34U, 2 vert. strips/8 rings, for cabinets 800 mm wide		1 set
309086	2	Cable management set 42U, 2 vert. strips/10 rings, for cabinets 800 mm wide		1 set
309087	2	Cable management set 48U, 2 vert. strips/10 rings, for cabinets 800 mm wide		1 set
309088	2	Set of cable management rings, 30 mm (10 pcs.)		1 set
309089	2	Set of cable management rings, 70 mm (10 pcs.)		1 set
309090	3	Cable management side bars for cabinets 600 mm deep		1 pc.
309091	3	Cable management side bars for cabinets 800 mm deep		1 pc.
309092	3	Cable management side bars for cabinets 1000 mm deep		1 pc.
309093	4	Blank panel 19"/1U		1 pc.
309094	4	Blank panel 19"/2U		1 pc.
309095	4	Blank panel 19"/3U		1 pc.
309096	5	2-fixing-point shelf board 19"/2U / 250 mm deep / load capacity 25 kg		1 pc.
309097	5	2-fixing-point shelf board 19"/2U / 380 mm deep / load capacity 25 kg		1 pc.
309098	6	4-fixing-point shelf board 19"/2U / adjustable depth 427 mm - 755 mm / load capacity 50 kg		1 pc.
309107	7	2-fixing-point telescopic shelf 19"/2U / 370 mm deep		1 pc.
309108	7	4-fixing-point telescopic shelf 19"/2U / adjustable depth 466 mm - 696 mm		1 pc.
4000072	8	Fan for roof mounting, including 1 ventilator and lighting switch (for wall-mounted racks)		1 pc.
309109	8	Fan for roof mounting including 2 ventilators and lighting switch		1 pc.
309110	8	Fan for roof mounting including 4 ventilators and lighting switch		1 pc.



Fig. 9



Fig. 10



Fig. 11



Fig. 12



Fig. 13

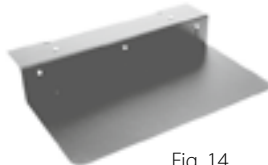


Fig. 14



Fig. 15

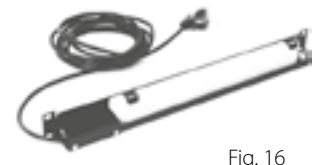


Fig. 16

PRODUCT INFORMATION

APPLICATION

The different accessories allow for customized solutions for all ER racks and cabinets.

Part No.	Fig.	Description
309111	9	Fan for 19" rack mounting including 2 ventilators
309113	9	Fan for 19" rack mounting including 4 ventilators
309115	10	Multiple socket with 6 EU outlets and safety switch 1P+N, 19", 1U
309116	10	Multiple socket with 6 EU outlets and lighting switch, 19", 1U
4000075	10	Multiple socket with 10 EU outlets and safety switch 1P + N, 1U
4000076	10	Multiple socket with 10 EU outlets and lighting switch, 1U
4000077	-	Vertical support for rear mounting 19"/24 U
4000078	-	Vertical support for rear mounting 19"/34 U
4000079	-	Vertical support for rear mounting 19"/42 U
4000080	-	Vertical support for rear mounting 19"/48 U
4000084	11	Support for vertical mounting of 19" multiple sockets
309117	12	Earthing set, 10 cables green-yellow 4 mm ²
309118	12	Earthing bar, copper, with 10 holes and isolating elements
309120	-	Documents pocket
309121	13	Wall mounting kit for all types of floor cabinets
309122	14	Stabilising element for cabinets 600 mm wide
309123	14	Stabilising element for cabinets 800 mm wide
309124	-	Screw set
4000081	15	Levelling feet set
4000070	-	Wheel set (2 wheels with brakes + 2 wheels without brakes)
4000082	16	Neon lamp 19"/1U
4000083	-	Thermostat kit for ventilation elements

Management panels & cable shelves 19"/1U

in different versions



Management panel 19"/1U, version made of stainless steel, with 5 support brackets



19" cable shelf with management panel



19" cable shelf with cable feedthrough panel and strip

PRODUCT INFORMATION

APPLICATION

Management panels 19"/1U are suitable for the routing of copper and fibre optic cables, particularly suitable for patch cords in racks or cabinets with 19" mounting angles and rails.

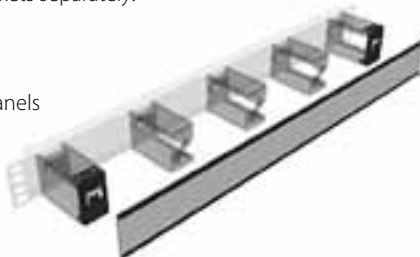
Cable shelves fulfil the same function, particularly for multiple (trunk) cables.

DESCRIPTION

The basic management panels 19"/1U are available in three versions: a) stainless steel, b) black or c) grey.

These panels come without support brackets. They can be fitted with 5 support brackets in the required dimension. Please order the support brackets separately!

There are labelling strips for complete management panels with support brackets available:



Article No.	Description	Colour/Material	PU
1411480	Support bracket 30 mm	plastic, black	1 pc.
1411481	Support bracket 75 mm	metal	1 pc.
1411482	Support bracket 110 mm	metal	1 pc.
1411604	Management panel 19" 1U for 5 support brackets (delivery without brackets)	RAL 7035	1 pc.
1407689	Management panel 19" 1U for 5 support brackets (delivery without brackets)	RAL 9005	1 pc.
418200	Management panel 19" 1U for 5 support brackets (delivery without brackets)	stainless steel, blank	1 pc.
401240	19" blank plate, 1U	RAL 7035	1 pc.
401241	19" blank plate, 1U	RAL 9005	1 pc.
401242	19" blank plate, 1U	stainless steel, blank	1 pc.
401243	19" blank plate, 2U	RAL 7035	1 pc.
401244	19" blank plate, 2U	RAL 9005	1 pc.
401245	19" blank plate, 2U	stainless steel, blank	1 pc.
401247	Cable feedthrough panel with strip 19"/1U	RAL 7035	1 pc.
401248	Cable feedthrough panel with strip 19"/1U	RAL 9005	1 pc.
401249	Cable feedthrough panel with strip 19"/1U	stainless steel, blank	1 pc.
400300	19" cable shelf, depth adjustable due to slide rails (from 520 mm up to 850 mm) (only mountable with a management panel or cable feedthrough panel; rear side 19" fixation necessary)		1 pc.
470033	Labelling strip (for complete management panel with bracket type 1411480)		1 pc.
470034	Labelling strip (for complete management panel with bracket types 1411481, 1411482)		1 pc.

Rangierpanel 1HE 0412/e

Management panels 19"/1U, 2U assembled with 4 support brackets

 SWISS STANDARD


Management panels 19"/1U and 19" 2U

PRODUCT INFORMATION

APPLICATION	Management panels 19"/1U and 19"/2U for the routing of copper and fibre optic cables (patch cords) in racks or cabinets with 19" mounting angles and rails.
DESCRIPTION	These management panels are assembled with 4 support brackets.

Article No.	Description	Material/colour	PU
185735	Management panel 19"/1U with 4 metal support brackets	metal, RAL7035	1 pc.
185736	Management panel 19"/2U with 4 metal support brackets	metal, RAL7035	1 pc.

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

Rangierpanel 1/2HE 0412/e



Future-proof cabling solutions for data centres

The requirements for data centre infrastructures are increasing as the rapid growth in worldwide IT usage continues. High-performance system solutions in copper, but chiefly in fibre optic technology, already constitute the backbone of high-speed data transfer in data centres. The ever higher transmission rates not only call for high quality optical fibres, they also make increasing demands on the connecting components. Both these parameters are crucial to the efficient performance of transmission channels.

Flexibility is the core requirement for a cabling solution in today's data centre environment. New systems need to be planned, assembled and installed within a very short time. New technologies like blade systems or virtualisation, for example, mean that link performance standards are continually rising.

Datwyler's newly developed Data Centre Solution surpasses all the requirements for current cabling solutions, its high quality and excellent optical and geometric connector assembly values being of particular note here.

Benefits of the Datwyler Data Centre Solution

- Top quality guarantees top performance
- High packing densities hand in hand with good clear layout
- Fast easy assembly (plug-and-go)
- Modifications/installations possible during ongoing operation, no need for outside companies
- Pre-assembly: no stripping, splicing or connector termination work necessary
- Slimline cable design, so no disruption to cooling air flow, no redundant lengths of cable in rack
- Scalable thanks to modular design
- Investment protection and future viability, as migratable to 40/100G (MTP®), high spare capacity due to extremely low optical losses, power budget protection thanks to bend-optimised fibres (multimode)

The most important system components

- Pre-assembled fibre optic mini trunks (high-performance, low-loss)
- Pre-assembled fibre optic plug-in modules (high-performance, low-loss)
- Fibre optic patch cables (high-performance, low-loss)
- Modularly equipped 19-inch 1U, 3U and 4U panels / Subracks
- Patch management trays and cable management accessories

In server rooms and data centres these system components provide high-performance modular cabling solutions tailored to customer requirements, the outstanding features of which are clear layout, flexibility, high packing densities and good handling during operation.

Optical values of the components

Criterion	Assembly Class	Insertion Loss IL [dB]		Return Loss RL [dB]	
		typical	maximum	typical	minimum
Connector type	IEC 61755-3-2				
Multi-fibre MTP Elite® 0° PC (Multimode)	Grade B	0,15	0,35	≥ 35	≥ 30
Multi-fibre MTP Elite® 8° APC (Singlemode)	Grade B	0,1	0,35	≥ 70	≥ 65
Single-fibre LCD Uniboot 0° PC (Multimode)	Grade B	0,1	0,35	≥ 40	≥ 35
Single-fibre LCD Uniboot 8° APC (Singlemode)	Grade B	0,1	0,25	≥ 75	≥ 65

MTP® and MTP Elite® are registered brands of US Conec.

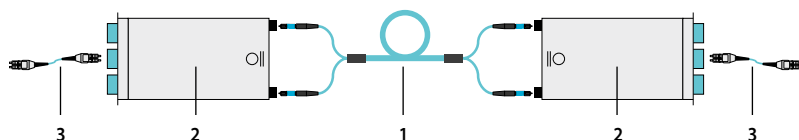
FO channel configurations

The high-performance carefully coordinated cables and components of Datwyler's Data Centre Solution can be combined as required and make it possible to implement an open infrastructure design decoupled from the user's equipment pool. The system also allows simple migration to future applications. The graphics below show some possible typical configurations.

N.B.:

Only the data sheets of the most important system components are covered below. You can obtain further information direct from Datwyler or on our homepage at www.datwyler.com / Cabling Solutions

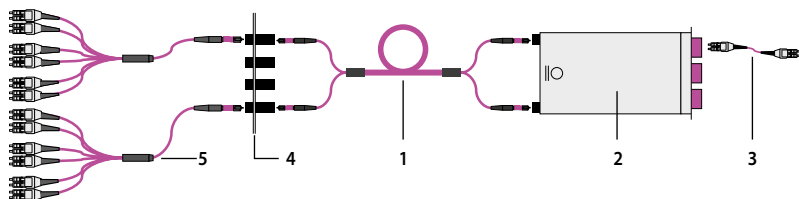
Module-to-module configuration



Two FO-DCS plug-in modules are interconnected by a thin mini-breakout cable MTP®. For all well-known duplex applications such as 10G Ethernet or 16G Fiber Channel.

Part	Level	Description	Remarks
1	High-performance	Mini-breakout cable MTP Type A	12, 24, 48, 72, 96, 144 fibres
2	High-performance	Plug-in module 3U/7TE 24F 2x MTP on 12x LCD	24 fibres
3	High-performance	LCD Uniboot patch cable	Polarity: A to A or A to B

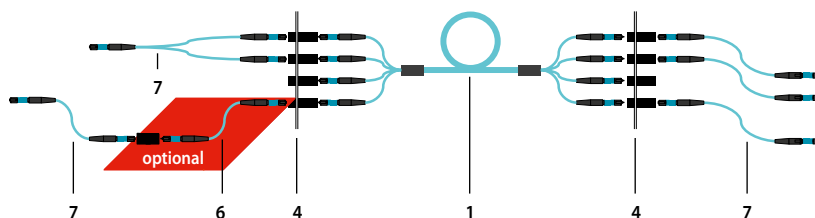
Module-to-fanout configuration



One FO-DCS plug-in module is connected to two fanout cables (MTP on LCD Uniboot) by a thin mini-breakout cable for a direct link between the active ports, e.g. of a SAN switch. For all well-known duplex applications such as 10G Ethernet or 16G Fiber Channel.

Part	Level	Description	Remarks
1	High-performance	Mini-breakout cable MTP Type A	12, 24, 48, 72, 96, 144 fibres
2	High-performance	3U/7HP plug-in module 24F 2x MTP on 12x LCD	24 fibres
3	High-performance	LCD Uniboot patch cable	Polarity: A to A or A to B
4		3U/7HP front plate 4x MTP adapters Type A	also available with 8x MTP adapters Type A
5	High-performance	Fanout cable 1x MTP on 6x LCD Uniboot	Polarität: A to A oder A to B

Migration to 40/100G (parallel optics)



The plug-in modules (MTP-on-LCQ) in subracks are replaced by FO-DCS front plates with MTP adapters. The high-performance MTP mini-breakout cables can continue to be used. Datwyler supplies high-performance MTP patch cables for connection of the active IT equipment.

Part	Level	Description	Remarks
1	High-performance	Mini-breakout cable MTP Type A	12, 24, 48, 72, 96, 144 fibres
4		3U/7HP front plate 4x MTP adapters Type A	also available with 8x MTP adapters
6	High-performance	MTP jumper cable	Polarity: Type A, Type B, 12 or 24 fibers
7	High-performance	Patch cable, MTP Y-patch cable	Polarity: Type A, Type B, 12 or 24 fibers

MTP® is a registered brand name of US Conec

FO-DCS 19"/4U modular subrack

to take 12 FO-DCS plug-in modules



Modularly equippable FO-DCS 19"/4U subrack

PRODUCT INFORMATION

APPLICATION

The modularly equippable 19" 4U subrack can be used for a wide variety of applications, depending on the type of plug-in module – in the data centre environment as a modular high-density solution for up to 144 duplex ports (288 fibres).

It will accept pre-assembled LCD or MTP® trunk cables or up to 12 FO-DCS plug-in modules or 3U/7HP front plates.

Easy migration to all parallel optic applications, e.g. to 40/100 GbE, is possible with FO-DCS 3U/7HP MTP front plates.

DESCRIPTION

Sturdy aluminium housing with side panels and front 19"/3U mounting.

Pre-assembled with horizontal 84HP guide rails to take a maximum of 12 FO-DCS plug-in modules or 3U/7HP front plates.

The excess cable length tray (1U) is equipped with a base and has front and rear cable entry openings. The fourth rack unit permits front and rear insertion to the subrack.

The slightly recessed arrangement of the excess cable length tray allows a 19"/1U management panel with support brackets or a patch management tray with guide elements to be fitted at the front.

SCOPE OF DELIVERY

19"/4U subrack with 19" mounting on 3U (without plug-in modules/front plates)

84HP guide rails for 12 FO-DCS 3U/7HP plug-in modules

1U excess cable length tray, integrated, insertable from front and rear

19" mounting material

Cable support rails available as accessories.

May be combined with various blanking panels and management panels from the Datwyler range.

TECHNICAL DATA

Material/colour: Aluminium, anodised
 Dimensions: 19"/4U, W x H x D: 482.6 x 177 x 295 mm
 Acceptance capacity: 84HP, 12 FO-DCS 3U/7HP plug-in modules

Article No.	Description	Colour	PU
470542	FO-DCS 19"/4U modular subrack for 12 plug-in modules (with excess length tray)	Alu, anodised	1 pc.
470540	FO-DCS 19"/3U modular subrack for 12 plug-in modules (without excess length tray)	Alu, anodised	1 pc.

MTP® is a registered brand name of US Conec



Modularly equippable FO-DCS 19"/1U panel

PRODUCT INFORMATION

APPLICATION	The modularly equippable 19"/1U panel can be used for a wide variety of applications, depending on the type of plug-in module – in the data centre environment as a modular high-density solution for up to 36 duplex ports (72 fibres). It is designed to accept fibre optic cables spliced in situ, trunk and breakout cables pre-assembled with LCD or MTP®, and up to three FO-DCS plug-in modules or 3U/7HP front plates. With the FO-DCS 3U/7HP MTP front plates simple migration is possible to all parallel optic applications, e.g. to 40/100 GbE.
DESCRIPTION	Sturdy aluminium housing with base, side panels and front 19"/1U mounting. Pre-assembled to accept a maximum of 3 FO-DCS plug-in modules or 3U/7HP front plates.
SCOPE OF DELIVERY	19"/1U panel with 19" mounting (without plug-in modules/front plates) 3 cable support rails, enclosed separately 19" mounting material Can be combined with various blanking panels and management panels from the Datwyler range
TECHNICAL DATA	Material/colour: Aluminium, anodised Dimensions: 19"/1U, W x H x D: 482.6 x 44.4 x 315 mm Acceptance capacity: 3 FO-DCS 3U/7HP plug-in modules

Article No.	Description	Colour	PU
470543	FO-DCS 19"/1U modular panel (supplied without plug-in modules/front panels)	Alu, anodised	1 pc.

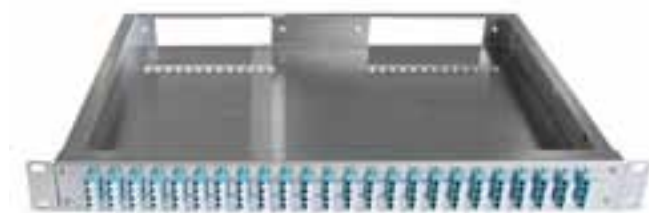
As a high-performance patch cable we recommend the FO-DCS LCD Uniboot patch cable

MTP® is a registered brand of US Conec.

FO-DCS 19"/1U compact breakout panels

with 12 or 24 LC Quad adapters

for OM3, OM4 and OS2



Compact FO-DCS 19"/1U breakout panel, version with 48 LCD ports, OM3 turquoise

PRODUCT INFORMATION

APPLICATION	Compact FO-DCS breakout panels with 12 or 24 LC Quad adapters are a cost-optimised high-density solution for all high-performance applications with duplex signals, particularly in the data centre environment. They are used to accept pre-assembled LCD trunk cables or LCD breakout cables.
DESCRIPTION	Sturdy aluminium housing with base, side panels and front 19"/1U mounting. Pre-assembled with 12 or 24 LC Quad adapters. At the front the panels provide 24 duplex ports (48 fibres) or 48 duplex ports (96 fibres).
SCOPE OF DELIVERY	19"/1U compact panel, with 19" mounting brackets Aluminium front panel, fitted with 12 or 24 LC Quad adapters 19" mounting material Cable support rails available as accessories. Can be combined with various blanking panels and management panels from the Datwyler range.
TECHNICAL DATA	Material: Aluminium, anodised Dimensions: 19"/1U, W x H x D: 482.6 x 44.4 x 320 mm Acceptance capacity: 24 or 48 duplex ports (48 or 96 fibres)

Article No.	Description	Colour	PU
470618	FO-DCS 19"/1U compact breakout panel, 12x LCQ, OM3 turquoise	Alu, anodised	1 pc.
470619	FO-DCS 19"/1U compact breakout panel, 12x LCQ, OM4 violet	Alu, anodised	1 pc.
470620	FO-DCS 19"/1U compact breakout panel, 12x LCQ, OS2 blue	Alu, anodised	1 pc.
470621	FO-DCS 19"/1U compact breakout panel, 12x LCQ, OS2 green	Alu, anodised	1 pc.
470622	FO-DCS 19"/1U compact breakout panel, 24x LCQ, OM3 turquoise	Alu, anodised	1 pc.
470623	FO-DCS 19"/1U compact breakout panel, 24x LCQ, OM4 violet	Alu, anodised	1 pc.
470624	FO-DCS 19"/1U compact breakout panel, 24x LCQ, OS2 blue	Alu, anodised	1 pc.
470625	FO-DCS 19"/1U compact breakout panel, 24x LCQ, OS2 green	Alu, anodised	1 pc.

FO-DCS 19"/1U compact breakout panels

with 12 or 24 LC Quad adapters
for OM3, OM4 and OS2

PRODUCT INFORMATION

FEATURES

Type	Breakout MM LCD	Breakout MM LCD	Breakout SM LCD	Breakout SM LCD
Acceptance capacity	48 fibres / 96 fibres	48 fibres / 96 fibres	48 fibres / 96 fibres	48 fibres / 96 fibres
Connector type, front	LC Quad	LC Quad	LC Quad	LC Quad
Number	12 / 24	12 / 24	12 / 24	12 / 24
Sleeve	Zirconia (ZrO ₂)	Zirconia (ZrO ₂)	Zirconia (ZrO ₂)	Zirconia (ZrO ₂)
Housing colour	turquoise	violet	blue	green
Housing material	polymer	polymer	polymer	polymer
Dust cap (duplex)	white	white	white	white

CONFORMANCE LC IEC 61754-20

REMARKS Laser protection: Optional LCD laser protection clips (metal) can be obtained and retrofitted

As a high-performance patch cable we recommend the FO-DCS LCD Uniboot patch cable

FO-DCS 19"/1U compact MTP-LCD panels

with MTP-LCD pre-assembly

for OM3, OM4 and OS2



Compact, pre-assembled FO-DCS 19"/1U panel, version with 8 MTP couplers (rear) and 48 OM3 LCD ports turquoise (front)



View from rear with cover

PRODUCT INFORMATION

APPLICATION

These compact, pre-assembled FO-DCS panels are a cost-optimised high-density solution for all high-performance applications with duplex signals, particularly in the data centre environment. They are used to accept pre-assembled MTP® trunk cables or MTP breakout cables.

DESCRIPTION

Sturdy aluminium housing with base, side panels, cover and front 19"/1U mounting. Pre-assembled with 4 or 8 MTP couplers (at rear), 4 or 8 MTP-on-LC (low-loss) module fanouts and 12 or 24 LC Quad adapters (at front). At the front the panels therefore provide 24 duplex ports (48 fibres) or 48 duplex ports (96 fibres). Top-quality assembly ensures optimum values for optical performance (IL/RL).

SCOPE OF DELIVERY

19"/1U compact panel, with 19" mounting brackets
Aluminium front panel, fitted with 12 or 24 LC Quad adapters
19" mounting material
Aluminium rear panel, fitted with 4 or 8 MTP adapters
Aluminium cover, screwed on
4 or 8 module fanouts (low-loss): per 12 fibres 1x MTP Elite® (female) on 12x LC
Supplied inclusive of test certificates for all fanouts.

Cable support rails available as accessories.
Can be combined with various blanking panels and management panels from the Datwyler range.

TECHNICAL DATA

Material/colour: Aluminium, anodised
Dimensions: 19"/1U, W x H x D: 482.6 x 44.4 x 320 mm
Acceptance capacity: 24 or 48 duplex ports (48 or 96 fibres)
Equipment: Fully equipped (without cable feed accessories)

Article No.	Description	Colour	PU
470610	FO-DCS 19"/1U compact panel, 4x MTP on 24x LCD, OS2 blue	Alu, anodised	1 pc.
470611	FO-DCS 19"/1U compact panel, 4x MTP on 24x LCD-APC, OS2 green	Alu, anodised	1 pc.
470612	FO-DCS 19"/1U compact panel, 4x MTP on 24x LCD, OM3 turquoise	Alu, anodised	1 pc.
470613	FO-DCS 19"/1U compact panel, 4x MTP on 24x LCD, OM4 violet	Alu, anodised	1 pc.
470614	FO-DCS 19"/1U compact panel, 8x MTP on 48x LCD, OS2	Alu, anodised	1 pc.
470615	FO-DCS 19"/1U compact panel, 8x MTP on 48x LCD-APC, OS2	Alu, anodised	1 pc.
470616	FO-DCS 19"/1U compact panel, 8x MTP on 48x LCD, OM3	Alu, anodised	1 pc.
470617	FO-DCS 19"/1U compact panel, 8x MTP on 48x LCD, OM4	Alu, anodised	1 pc.

MTP® and MTP Elite® are registered brands of US Conec.

PRODUCT INFORMATION

FEATURES

TYPE	MTP - LCD (OM3)	MTP - LCD (OM4)	MTP - LCD (OS2)	MTP - LCD-APC (OS2)
Acceptance capacity	48 fibres / 96 fibres	48 fibres / 96 fibres	48 fibres / 96 fibres	48 fibres / 96 fibres
Connector type rear (side A)	4x / 8x MTP unpinned	4x / 8x MTP unpinned	4x / 8x MTP unpinned	4x / 8x MTP unpinned
Ferrule type, angle	Elite, PC 0°	Elite, PC 0°	Elite, PC 8°	Elite, PC 8°
Insertion Loss IL (max.)	≤ 0.35 dB ¹	≤ 0.35 dB ¹	≤ 0.35 dB	≤ 0.35 dB
Return Loss RL (min.)	≥ 25 dB	≥ 25 dB	≥ 60 dB	≥ 60 dB
Connector type	4x / 8x type A	4x / 8x type A	4x / 8x type A	4x / 8x type A
Housing colour	black	black	black	black
Connector type front (side B)	48x / 96x LC-PC 0°	48x / 96x LC-PC 0°	48x / 96x LC-PC 0°	48x / 96x LC-APC 8°
Ferrule type	Zirconia (ZrO ₂)	Zirconia (ZrO ₂)	Zirconia (ZrO ₂)	Zirconia (ZrO ₂)
Insertion Loss IL (max.)	≤ 0.35 dB ¹	≤ 0.35 dB ¹	≤ 0.25 dB	≤ 0.25 dB
Return Loss RL (min.)	≥ 35 dB	≥ 35 dB	≥ 35 dB	≥ 65 dB
Connector type	12x / 24x LC Quad	12x / 24x LC Quad	12x / 24x LC Quad	12x / 24x LC Quad
Sleeve	Zirconia (ZrO ₂)	Zirconia (ZrO ₂)	Zirconia (ZrO ₂)	Zirconia (ZrO ₂)
Housing colour	turquoise	violet	blue	green
Housing material	polymer	polymer	polymer	polymer
Dust cap (duplex)	white	white	white	white
Module fanout (12 fibers)	4 / 8 pieces	4 / 8 pieces	4 / 8 pieces	4 / 8 pieces
Fibre type	Multimode OM3	Multimode OM4	Singlemode OS2	Singlemode OS2
Fibre colour code	to IEC 60304	to IEC 60304	to IEC 60304	to IEC 60304

¹ Insertion Loss (IL) is determined by the latest measurement methods under EFL multimode excitation conditions (EFL = Encircled Flux Launch) at 850 nm in accordance with IEC 61280-4-1.

CONFORMANCE

MTP IEC 61754-7, IEC 61755-3-31, IEC 611755-3-32
LC IEC 61754-20

REMARKS

Laser protection: Optional LCD laser protection clips (metal) can be obtained and retrofitted
Polarity methods: Fiber light propagation conforms to TIA-568-C.3 and EN 50174-1:2009
Datwyler standard: Polarity Method A (others possible on request)

As a high-performance patch cable we recommend the FO-DCS LCD Uniboot patch cable

MTP® and MTP Elite® are registered brands of US Conec.

FO-DCS 3U/7HP MTP-LCD plug-in modules

for FO-DCS sub racks / modular panel

for OM3, OM4 and OS2



High-performance FO-DCS 3U/7HP plug-in modules

PRODUCT INFORMATION

APPLICATION 3U 7HP plug-in modules are suitable for all high-performance applications with duplex signals, particularly in the data centre environment. They are used to accept pre-assembled MTP® trunk cables. They find modular application in FO-DCS 19"/1U modular panel or in FO-DCS 19"/3U and 19"/4U sub racks.

DESCRIPTION Aluminium housing with press-fit side panels (sealed) and U/7HP front panel (screen-printed labelling of FO ports). Fixed with two knurled screws (captive). At the rear the FO-DCS plug-in modules have two MTP couplers which are routed to the front FO couplers (6x LC Quad = 12 LCD ports) by way of internal fanouts. They are assembled to a very high quality and guarantee optimum values for optical performance (IL/RL). Packing densities of up to 288 fibres on 3U are achieved with the FO-DCS plug-in modules.

SCOPE OF DELIVERY Housing with front panel, equipped with 6x LC Quad adapters (ceramic sleeves) 2 module fanouts (low-loss): per 12 fibres 1x MTP Elite® (female) on 12x LC (ceramic ferrules) Rear fitted with 2 MTP adapters (Type A) Delivery inclusive of test reports on all fanouts

TECHNICAL DATA

Material/colour:	Aluminium, anodised
Dimensions:	7HP/3U, W x H x D: 35 x 128 x 180 mm
Acceptance capacity:	12 duplex ports (24 fibres)
Equipment:	Fully equipped (plug and go)

Article No.	Description	Colour	PU
470500	FO-DCS 3U/7HP plug-in module, 2x MTP on 12x LCD, OM3 turquoise	Alu, anodised	1 pc.
470504	FO-DCS 3U/7HP plug-in module, 2x MTP on 12x LCD, OM4 violet	Alu, anodised	1 pc.
470501	FO-DCS 3U/7HP plug-in module, 2x MTP on 12x LCD-APC, OS2 (G.652.D) green	Alu, anodised	1 pc.
470502	FO-DCS 3U/7HP plug-in module, 2x MTP on 12x LCD-PC, OS2 (G.652.D) blue	Alu, anodised	1 pc.

MTP® and MTP Elite® are registered brands of US Conec.

PRODUCT INFORMATION

FEATURES

TYPE	MTP - LCD (OM3)	MTP - LCD (OM4)	MTP - LCD (OS2)	MTP - LCD-APC (OS2)
Acceptance capacity	24 fibres	24 fibres	24 fibres	24 fibres
Connector type rear (side A)	2x MTP unpinned	2x MTP unpinned	2x MTP unpinned	2x MTP unpinned
Ferrule type, angle	Elite, PC 0°	Elite, PC 0°	Elite, PC 8°	Elite, PC 8°
Insertion Loss IL (max.)	≤ 0.35 dB ¹	≤ 0.35 dB ¹	≤ 0.35 dB	≤ 0.35 dB
Return Loss RL (min.)	≥ 25 dB	≥ 25 dB	≥ 60 dB	≥ 60 dB
Connector type (MTP)	2x type A	2x type A	2x type A	2x type A
Housing colour (MTP)	black	black	black	black
Connector type front (side B)	24x LC-PC 0°	24x LC-PC 0°	24x LC-PC 0°	24x LC-APC 8°
Ferrule type	Zirconia (ZrO ₂)	Zirconia (ZrO ₂)	Zirconia (ZrO ₂)	Zirconia (ZrO ₂)
Insertion Loss IL (max.)	≤ 0.35 dB ¹	≤ 0.35 dB ¹	≤ 0.25 dB	≤ 0.25 dB
Return Loss RL (min.)	≥ 35 dB	≥ 35 dB	≥ 35 dB	≥ 65 dB
Connector type (LC Quad)	6x LC Quad	6x LC Quad	6x LC Quad	6x LC Quad
Sleeve	Zirconia (ZrO ₂)	Zirconia (ZrO ₂)	Zirconia (ZrO ₂)	Zirconia (ZrO ₂)
Housing colour (LC Quad)	turquoise	turquoise or violet	blue	green
Housing material	polymer	polymer	polymer	polymer
Dust caps (duplex)	white	white	white	white
Module fanouts (12 fibres)	2 pieces	2 pieces	2 pieces	2 pieces
Fibre type	Multimode OM3	Multimode OM4	Singlemode OS2	Singlemode OS2
Fibre colour code	to IEC 60304	to IEC 60304	to IEC 60304	to IEC 60304

¹ Insertion Loss (IL) is determined by the latest measurement methods under EFL multimode excitation conditions (EFL = Encircled Flux Launch) at 850 nm in accordance with IEC 61280-4-1.

CONFORMANCE

MTP IEC 61754-7, IEC 61755-3-31, IEC 611755-3-32
LC IEC 61754-20

REMARKS

Laser protection: Optional LCD laser protection clips (metal) can be obtained and retrofitted
Polarity methods: Fibre light propagation conforms to TIA-568-C.3 and EN 50174-1:2009
Datwyler standard: Polarity Method A (others possible on request)

As a high-performance patch cable we recommend the FO-DCS LCD Uniboost patch cable.

MTP® is a registered brand of US Conec.

FO-DCS 3U/7HP splice plug-in modules

for FO-DCS subracks / modular panel

with 12 OM3, OM4, OS2 pigtails and 6 LCD adapters



FO-DCS 3U/7HP
splice plug-in module

PRODUCT INFORMATION

APPLICATION

FO-DCS 3U/7HP splice plug-in modules can be used for all high-performance applications with duplex signals, including in the data centre environment. They are suitable for the connection of fibre optic cables assembled in situ. They are used as modules in FO-DCS 19"/1U modular panel or FO-DCS 19"/3U and 19"/4U subracks.

DESCRIPTION

Aluminium housing with press-fit side panels and 3U/7HP front panel with 6 LC Duplex adapters (screen-printed labelling of FO ports). Fixed with two knurled screws (captive). The plug-in modules are equipped with a splice cassette for 12 fibres. The splice cassette has cable- and pigtail-side splice reserves, splice comb and strain relief. The ready-to-splice pigtails (2.0 m) are neatly inserted. Very high quality fibre pigtail assembly guarantees optimum values for optical performance (IL/RL).

Matching accessories are available for the splitting of incoming loose tube cables, excess length storage and the routing of loose tubes in the racks (boxes with cable inlets and radius limitation, plastic corrugated tubing etc.)

SCOPE OF DELIVERY

Aluminium housing with mounting plate and pigtail excess length tray
Aluminium front panel, fitted with 6x LC Duplex adapters (ceramic sleeves)
Splice cassette with cover and splice comb for 12 fibres
Pigtail set (L = 2.0 m) 12x LC (ceramic ferrules)
2 pre-punched M20 insertion openings at the rear

TECHNICAL DATA

Material/colour: Aluminium, anodised
Dimensions: 7HP/3U, W x H x D: 35 x 128 x 240 mm
Acceptance capacity: 6 duplex ports (12 fibres)
Equipment: Fully equipped

Article No.	Description	Colour	PU
470630	FO-DCS 3U/7HP splice plug-in module, 6x LCD, OM3 turquoise	Alu, anodised	1 pc.
470631	FO-DCS 3U/7HP splice plug-in module, 6x LCD, OM4 violet	Alu, anodised	1 pc.
470632	FO-DCS 3U/7HP splice plug-in module, 6x LCD-PC, OS2 (G.652.D) blue	Alu, anodised	1 pc.
470633	FO-DCS 3U/7HP splice plug-in module, 6x LCD-APC, OS2 (G.652.D) green	Alu, anodised	1 pc.

PRODUCT INFORMATION

FEATURES

TYPE	OM3	OM4	OS2 LC-PC	OS2 LC-APC
Acceptance capacity	12 fibres	12 fibres	12 fibres	12 fibres
Connector type front	12x LC-PC 0°	12x LC-PC 0°	12x LC-PC 0°	12x LC-APC 8°
Ferrule type	Zirconia (ZrO ₂)	Zirconia (ZrO ₂)	Zirconia (ZrO ₂)	Zirconia (ZrO ₂)
Insertion Loss IL (max.)	≤ 0.35 dB	≤ 0.35 dB	≤ 0.25 dB	≤ 0.25 dB
Return Loss RL (min.)	≥ 25 dB	≥ 25 dB	≥ 25 dB	≥ 65 dB
Connector type	6x LC Duplex	6x LC Duplex	6x LC Duplex	6x LC Duplex
Sleeve	Zirconia (ZrO ₂)	Zirconia (ZrO ₂)	Zirconia (ZrO ₂)	Zirconia (ZrO ₂)
Housing colour (LC Quad)	turquoise	turquoise or violet	blue	green
Housing material	polymer	polymer	polymer	polymer
Dust cap (duplex)	white	white	white	white
Pigtail set L = 2.0 m (12 fibres)	1 set	1 set	1 set	1 set
Fibre colour code	to IEC 60304	to IEC 60304	to IEC 60304	to IEC 60304

CONFORMANCE LC IEC 61754-20

REMARKS Laser protection: Optional LCD laser protection clips (metal) can be obtained and retrofitted.

As a high-performance patch cable we recommend the FO-DCS LCD Uniboot patch cable

FO-DCS 3U/7HP MTP front plates

for FO-DCS subracks / modular panel

with 4 or 8 MTP adapters



FO-DCS 3U/7TE front plates
with 4 or 8 MTP adapters

PRODUCT INFORMATION

APPLICATION FO-DCS 3U/7TE front plates with MTP® couplers are suitable for all high-performance applications with parallel optic signals, e.g. 40/100 GbE, particularly in the data centre environment. They are designed to accept pre-assembled MTP trunk cables. They are used in FO-DCS 19"/1U modular panel or 19"/3U and 19"/4U subracks.

DESCRIPTION Aluminium 3U/7HP front plate (screen-printed labelling of FO ports). Fixed with two knurled screws (captive). Each MTP coupler (Type A: key-up/key-down) is fitted with two dust caps. The coupler housings (black as standard) are available in other colours on request (aqua, magenta, green).

SCOPE OF DELIVERY Aluminium front plate equipped with 4 or 8 MTP adapters (Type A: key-up/key-down) Front and rear of adapter with dust caps

TECHNICAL DATA

Material/colour:	Aluminium, anodised
Dimensions:	7HP/3U, W x H x D: 35 x 128 x 240 mm
Acceptance capacity:	4 or 8 parallel optic ports
Equipment:	Fully equipped (plug and go)

CONFORMANCE MTP IEC 61754-7, IEC 61755-3-31, IEC 611755-3-32

Article No.	Description	Colour	PU
470550	FO-DCS 3U/7HP front plate with 4x MTP Type A	Alu, anodised	1 pc.
470551	FO-DCS 3U/7HP front plate with 8x MTP Type A	Alu, anodised	1 pc.

As a high-performance patch cable we recommend the FO-DCS LCD Uniboot patch cable. MTP jumper cables (low-loss) are also available from Datwyler on request.

MTP® is a registered brand name of US Conec

FO-DCS MTP-MTP mini breakout cables
for the connection of FO-DCS plug-in modules
with 12 to 144 OM3, OM4, OS2 fibres



High-performance FO-DCS mini breakout cables MTP-MTP, versions OM3 and OS2

PRODUCT INFORMATION

APPLICATION

OM3, OM4 and OS2 FO-DCS MTP-MTP® mini breakout cables are suitable for all high-performance applications with duplex and parallel optic signals in a data centre environment. The slim cables, pre-assembled at both ends, are used to connect FO-DCS plug-in modules. They can continue to be used in the event of migration to parallel optic applications, e.g. to 40/100 GbE – when the FO-DCS plug-in modules are simply replaced by FO-DCS front plates with MTP couplers.

DESCRIPTION

Compact, metal-free cable structure with FR/LSOH cable sheath and 12 to 144 fibres. OM3, OM4 or OS2 versions are available. The breakout length of individual cables may be defined on the basis of a specific project (max. 4.0 m). Breakout separation is effected without a divider housing. All breakouts are assembled using MTP connectors with high-performance 12-fibre Elite® ferrules. The MTP assemblies of the FO-DCS mini breakout cables guarantee optimum values for optical performance (IL/RL). The cables are fitted at both ends with protective sleeves for the breakouts and are delivered with test certificates. Please specify the exact cable length (L= ? m) between the FO-DCS plug-in modules!

SCOPE OF DELIVERY

FO-DCS mini breakout cable (FR/LSOH) with 12-144 fibres OM3,OM4 or OS2
High-performance connector assembly (low-loss) at either end with MTP Elite® (male)
Labelled using stickers at both cable ends
Test reports on all MTP connectors

Article No. (+length in m)*	Description	Cable sheath colour	PU
470510	FO-DCS mini breakout cable MTP-MTP, 12F OM3 turquoise	turquoise	by the metre
470534	FO-DCS mini breakout cable MTP-MTP, 12F OM4 violet	violet	by the metre
470511	FO-DCS mini breakout cable MTP-MTP, 12F OS2 yellow	yellow	by the metre
470512	FO-DCS mini breakout cable MTP-MTP, 2x12F OM3 turquoise	turquoise	by the metre
470535	FO-DCS mini breakout cable MTP-MTP, 2x12F OM4 violet	violet	by the metre
470513	FO-DCS mini breakout cable MTP-MTP, 2x12F OS2 yellow	yellow	by the metre
470525	FO-DCS mini breakout cable MTP-MTP, 4x12F OM3 turquoise	turquoise	by the metre
470536	FO-DCS mini breakout cable MTP-MTP, 4x12F OM4 violet	violet	by the metre
470526	FO-DCS mini breakout cable MTP-MTP, 4x12F OS2 yellow	yellow	by the metre
470509	FO-DCS mini breakout cable MTP-MTP, 6x12F OM3 turquoise	turquoise	by the metre
470537	FO-DCS mini breakout cable MTP-MTP, 6x12F OM4 violet	violet	by the metre
470519	FO-DCS mini breakout cable MTP-MTP, 6x12F OS2 yellow	yellow	by the metre
470520	FO-DCS mini breakout cable MTP-MTP, 8x12F OM3 turquoise	turquoise	by the metre
470538	FO-DCS mini breakout cable MTP-MTP, 8x12F OM4 violet	violet	by the metre
470521	FO-DCS mini breakout cable MTP-MTP, 8x12F OS2 yellow	yellow	by the metre
470522	FO-DCS mini breakout cable MTP-MTP, 12x12 OM3 turquoise	turquoise	by the metre
470539	FO-DCS mini breakout cable MTP-MTP, 12x12F OM4 violet	violet	by the metre
470523	FO-DCS mini breakout cable MTP-MTP, 12x12F OS2 yellow	yellow	by the metre

* Please specify the exact cable length (L= ? m) between the FO-DCS plug-in modules!

MTP® and MTP Elite® are registered brands of US Conec.

FO-DCS MTP mini breakout cables

for the connection of FO-DCS plug-in modules

with 12 to 144 OM3, OM4, OS2 fibres

PRODUCT INFORMATION

FEATURES

TYPE	MTP-MTP (OM3)	MTP-MTP (OM4)	MTP-MTP (OS2)
Breakout length side A	max. 4.0 m	max. 4.0 m	max. 4.0 m
Connector type side A	n x MTP pinned	n x MTP pinned	n x MTP pinned
Ferrule type, angle	Elite, PC 0°	Elite, PC 0°	Elite, PC 8°
Insertion Loss IL (max.)	≤ 0.35 dB ¹	≤ 0.35 dB ¹	≤ 0.35 dB
Return Loss RL (min.)	≥ 25 dB	≥ 25 dB	≥ 60 dB
Breakout length side B	max. 4.0 m	max. 4.0 m	max. 4.0 m
Connector type side B	n x MTP pinned	n x MTP pinned	n x MTP pinned
Insertion Loss IL (max.)	≤ 0.35 dB ¹	≤ 0.35 dB ¹	≤ 0.35 dB
Return Loss RL (min.)	≥ 25 dB	≥ 25 dB	≥ 60 dB
Fibre type	Multimode OM3	Multimode OM4	Singlemode OS2
Number of fibres	12/24/48/72/96/144	12/24/48/72/96/144	12/24/48/72/96/144
Fibre colour code	conforms to IEC 60304	conforms to IEC 60304	conforms to IEC 60304
Cable sheath	FR/LS0H	FR/LS0H	FR/LS0H
Ø cable [mm] 12F / 24F / 48F	4.5 / 8.0 / 9.0	4.5 / 8.0 / 9.0	4.5 / 8.0 / 9.0
Ø cable [mm] 72F / 96F / 144F	11.2 / 13.5 / 17.5	11.2 / 13.5 / 17.5	11.2 / 13.5 / 17.5
Sheath colour	turquoise	violet	yellow

¹ Insertion Loss (IL) is determined by the latest measurement methods under EFL multimode excitation conditions (EFL = Encircled Flux Launch) at 850 nm in accordance with IEC 61280-4-1.

CONFORMANCE	MTP	IEC 61754-7, IEC 61755-3-31, IEC 611755-3-32
REMARKS	Polarity methods: Datwyler standard:	Fiber light propagation to TIA-568-C.3 and EN 50174-1:2009 Polarity Method A (others possible on request)
ENVIRONMENTAL CONDITIONS	Zero halogen: Smoke density: Corrosivity of gases evolved during combustion: Fire performance:	in accordance with IEC 60754-1 in accordance with IEC 61034 in accordance with IEC 60754-2 in accordance with IEC 60332-1-2, IEC 60332-3-22 Cat. A

MTP® and MTP Elite® are registered brands of US Conec.



High-performance FO-DCS patch cable, pre-assembled with LCD Uniboot connectors at both ends, OM3 and OS2 versions

PRODUCT INFORMATION

APPLICATION	FO-DCS LCD Uniboot OM3, OM4 and OS2 patch cables are suitable for all high-performance applications with duplex signals in the data centre environment. The round patch cables are assembled with LCD Uniboot connectors (low-loss) at both ends.
DESCRIPTION	Compact cable design with FR/LS0H cable sheath (Ø 3.0 mm) and 2 fibres. OM3, OM4 and OS2 versions are available. Standard lengths up to 10 m can be supplied (other lengths on request). The patch cables are available in straight (A to A) and cross (A to B) polarity. The patch cable LCD assemblies ensure optimum values for optical performance (IL/RL).
SCOPE OF DELIVERY	Duplex patch cable (FR/LS0H) with 2 OM3, OM4 or OS2 fibres High-performance connector assembly (low-loss) with LCD Uniboot at both ends Sticker labelling at both cable ends Packed and labelled in clear plastic sleeve Supplied with test certificate

Article No.	Description	Cable sheath colour	PU
470560	FO-DCS LCD Uniboot patch cable A to B, 2F OM3 turquoise	turquoise	1 pc.
on request	FO-DCS LCD Uniboot patch cable A to B, 2F OM4 violet	violet	1 pc.
on request	FO-DCS LCD Uniboot patch cable A to B, 2F OS2 yellow	yellow	1 pc.
470561	FO-DCS LCD-APC Uniboot patch cable A to B, 2F OS2 green	yellow	1 pc.
470562	FO-DCS LCD Uniboot patch cable A to A, 2F OM3 turquoise	turquoise	1 pc.
on request	FO-DCS LCD Uniboot patch cable A to A, 2F OM4 violet	violet	1 pc.
on request	FO-DCS LCD Uniboot patch cable A to A, 2F OS2 yellow	yellow	1 pc.
470563	FO-DCS LCD-APC Uniboot patch cable A to A, 2F OS2 green	yellow	1 pc.

FO-DCS LCD Uniboot patch cable

High-performance

with 2 fibres OM3, OM4 and OS2

PRODUCT INFORMATION

FEATURES

TYPE	LCD Uniboot, OM3	LCD Uniboot, OM4	LCD Uniboot, OS2	LCD-APC Uniboot, OS2
Connector type, side A	LCD Uniboot	LCD Uniboot	LCD Uniboot	LCD-APC Uniboot
Ferrule type, angle	Zirconia (ZrO ₂), PC 0°	Zirconia (ZrO ₂), PC 0°	Zirconia (ZrO ₂), PC 0°	Zirconia (ZrO ₂), APC 8°
Insertion Loss IL (max.)	≤ 0.35 dB ¹	≤ 0.35 dB ¹	≤ 0.25 dB	≤ 0.25 dB
Return Loss RL (min.)	≥ 30 dB	≥ 30 dB	≥ 30 dB	≥ 65 dB
Connector type side B	LCD Uniboot	LCD Uniboot	LCD Uniboot	LCD-APC Uniboot
Insertion Loss IL (max.)	≤ 0.35 dB ¹	≤ 0.35 dB ¹	≤ 0.25 dB	≤ 0.25 dB
Return Loss RL (min.)	≥ 30 dB	≥ 30 dB	≥ 30 dB	≥ 65 dB
Fibre type	Multimode OM3	Multimode OM4	Singlemode OS2	Singlemode OS2
Number of fibres	2 fibres	2 fibres	2 fibres	2 fibres
Fibre colour code	to IEC 60304	to IEC 60304	to IEC 60304	to IEC 60304
Cable sheath	FR/LS0H	FR/LS0H	FR/LS0H	FR/LS0H
Ø cable	3.0 mm	3.0 mm	3.0 mm	3.0 mm
Length in m	1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10		1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10	
Sheath colour	turquoise	violet	yellow	yellow

¹ Insertion Loss (IL) is determined by the latest measurement methods under EFL multimode excitation conditions (EFL = Encircled Flux Launch) at 850 nm in accordance with IEC 61280-4-1

CONFORMANCE	LC	IEC 61754-20
REMARKS	Polarity methods:	Fiber light propagation conforms to TIA-568-C.3 and EN 50174-1:2009
ENVIRONMENTAL CONDITIONS	Zero halogen: Smoke density: Corrosivity of gases evolved during combustion: Fire performance:	in accordance with IEC 60754-1 in accordance with IEC 61034 in accordance with IEC 60754-2 in accordance with IEC 60332-1-2, IEC 60332-3-22 Cat. A



FO-DCS 19"/1U patch management tray with right-hand guide elements and front plate

PRODUCT INFORMATION

APPLICATION

The patch management tray is used for the orderly routing of fibre optic patch cables in cabinets of 19" mounting size.

DESCRIPTION

The FO-DCS 19"/1U patch management tray comes in 3 versions:

- all guide elements right-hand
- all guide elements left-hand
- left- and right-hand guide elements

The patch cables can be left- and right-fastened using hook-and-loop tape.

An appropriate marking/labelling strip for the front plate is also available as an option.

SCOPE OF DELIVERY

FO-DCS 19"/1U patch management tray, fitted with 6 guide elements
Detachable front plate

TECHNICAL DATA

Material/colour: Aluminium, anodised
Dimensions: 19"/1U

Article no.	Description	Colour	PU
470 544	FO-DCS 19"/1U patch management tray with 6 left-hand guide elements	Alu, anodised	1 pc.
470 545	FO-DCS 19"/1U patch management tray with 6 right-hand guide elements	Alu, anodised	1 pc.
470 546	FO-DCS 19"/1U patch management tray with 6 left/right guide elements	Alu, anodised	1 pc.
470 554	Marking strip for FO-DCS 19"/1U patch management tray 420 x12 mm		1 pc.

MHD

MHD – Modular High Density distribution system for use in data centres

A data centre must be set up in a way that ensures the high level of data security required by the operator. This applies to the building (e.g., access control and air conditioning), the electric power supply (UPS), any active devices and, of course, the cabling system. As data centres are constantly evolving, all cabling systems must accommodate moves, adds, changes and upgrades. Often these variations will need to be carried out during

operational periods, and therefore need to be completed within the shortest possible time frame. Where ever possible, clients will prefer to use their in-house technicians to carry out these changes.

To meet these demands, a modular cabling solution was developed, enabling both pre-terminated copper and fibre optic connections to be contained within a modular high density patching system. Within this

system, either 48 duplex FO or copper ports can be terminated on to a single rack unit. These single rack units can be used for either copper or fibre terminations, or both within the same 1U assembly.

The distribution system is composed of two different subrack models in 1U or 3U where the FO or/and copper distributor cartridges are mounted. All components are available in stainless steel or black finish.



MHD subrack 19"/1U for a maximum of 2x 4 cartridges 0,5U

Copper data cabling

VARIANT 1 (pre-assembled solution)

consists of the 6x breakout twisted pair (TP) cable (CU 7002 4P) which is connected on both sides with a cartridge. This cartridge contains a printed circuit board with LSA Plus contacts (IDC). Each cartridge offers 6x RJ45 on the front. This solution supports a transfer rate of up to 10 Gbit/s with a maximum Permanent Link length of 90 m.

Copper data cabling

VARIANT 2 (pluggable solution)

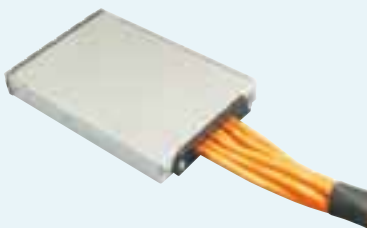
consists of zero-halogen and shielded copper trunk cables (24 pairs), pre-assembled with the 50-pin shielded telco jacks. This combination is very slim in design and flexible for a wide range of applications. This solution supports a transfer rate of up to 1 Gbit/s with a maximum link length of 60 m.

Fibre optic cabling

is based on the standard MPO/MTP® plug connector system for 12 fibres. The Datwyler FO Universal cable (single-mode, multi-mode) is used as an FO trunk cable that is assembled with the necessary number of MPO/MTP® plugs via a splitter on both sides. The ready-to-use, pre-assembled FO cartridges feature an MPO/MTP® coupler on the back which is connected internally via FO fibres with the 6 standard FO couplers (e.g. LCD) mounted on the front.

MHD copper trunk

with copper cartridge 6x RJ45 / 0,5U



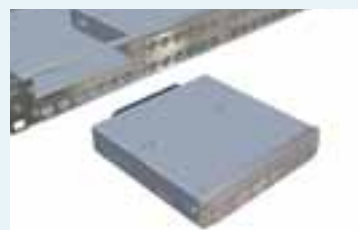
MHD copper trunk

with telco jack



MHD fibre optic trunk

with 8 MPO/MTP® connectors



When ordering pre-assembled cables, note that the length of the supplied trunk cable is always based on the longest cable assembly.

MTP® is a registered brand of US Conec.



MHD subrack 19"/1U
for insertion of
8 MHD cartridges 0.5U

MHD blank front plate
0.5U



MHD subrack 19"/3U
for insertion of
17 MHD cartridges 3U/5HP
(modification set necessary)

MHD blank front plate
3U

MHD modification
set for cartridges

PRODUCT INFORMATION

APPLICATION

The Modular High Density distribution system is suitable for all applications that require the connection of pre-assembled fibre optic and copper cables, especially in data centres. The MHD subracks accept up to 8 / up to 17 MHD distributor cartridges. Any mixture of FO and copper distributor cartridges can be installed in the same housing. This solution provides data centres with the flexibility to perform adds, oves and changes very quickly and without the need for costly on-site work. You can achieve very high packing densities, e.g. 48 FO (duplex) or copper ports in a 1U subrack.

DESCRIPTION 1U SYSTEM

Housing: 19"/1U, metal
Front plate colour: stainless steel or black, similar to RAL 9005
Labelling: screen printed numbers
Insertion capacity: up to 8 MHD distributor cartridges, i.e., up to 48 RJ45 ports or 96 fibres, different cartridge types can be mixed
Strain relief: options include screw fastener, cable splitter or cable clip
Cable inlet: using up to four cable entry plates, straight or diagonal
Dimensions: 19", 1U, depth of 24 cm without diagonal cable inlet installed on outside and without breakout fixing

DESCRIPTION 3U SYSTEM

Housing: 19"/3U, metal
Colour: stainless steel or black, similar to RAL 9005
Labelling: using printed strips
Insertion capacity: up to 17 MHD cartridges 3U/5HP (modification set necessary), i.e., up to 102 RJ45 ports or 204 fibres, mixtures of the above are possible
Strain relief: using cable clips on central crossbeam
Dimensions: 19", 3U, depth 24 cm

SCOPE OF DELIVERY

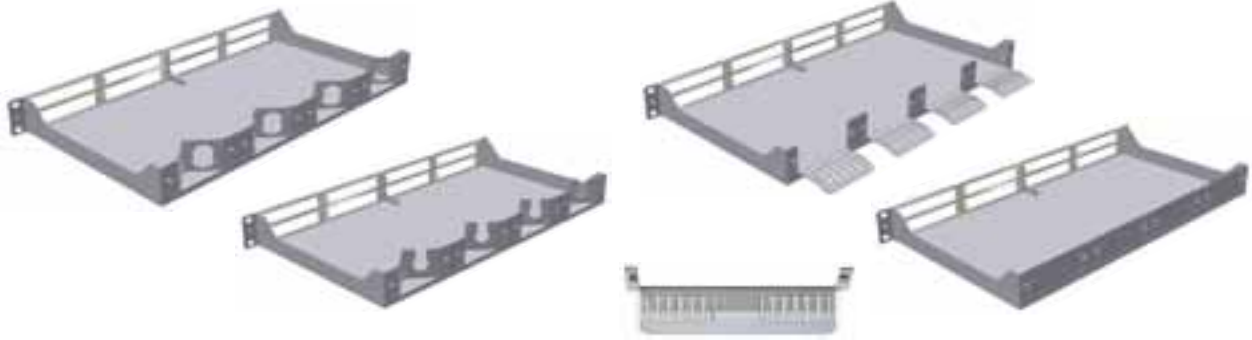
Subrack without distributor cartridges / asseccories.

Description	Article No. stainless steel	Article No. black
MHD subrack 1U	470011	470012
MHD blank front plate for 1U with fixture, for use in the low insertion level	470028	470027
MHD subrack 3U	470031	470032
MHD blank front plate 3U/5HP	470022	470023
Modification sets for insertion of distributor cartridges 0.5U in subrack 19"/3U		
MHD modification set 3U/5HP for FO cartridge 0.5U (LCD)	470029	470030
MHD modification set 3U/5HP for FO cartridge 0.5U (SCD)	470033	470034
MHD modification set 3U/5HP for TP cartridge 0.5U (RJ45)	470035	470037

MHD

MHD-Housing 19"/1U

Cable entries and accessories



Angled cable entry
for cable splitter

Angled cable entry
for PG 13,5/16

Cable entry for Breakout
cables (6-fold, 12-fold)

Cable entry
blank plate

PRODUCT INFORMATION

Accessories for MHD subrack 19"/1U

Article No	Description	PU	
470013	MHD Breakout cable entry	6-fold	1 pc.
470140	MHD Breakout cable entry	12-fold	1 pc.
470014	MHD straight cable entry	for PG13.5/PG16 screw connection	1 pc.
470015	MHD angled cable entry	for PG13.5/PG16 screw connection	1 pc.
470009	MHD straight cable entry	for cable splitter M16/M25	1 pc.
470010	MHD angled cable entry	for cable splitter M16/M25	1 pc.
470016	MHD straight cable entry	for cable splitter M20/M25	1 pc.
470017	MHD angled cable entry	for cable splitter M20/M25	1 pc.
470018	MHD blank plate	instead of cable entry	1 pc.

MHD copper cartridges

for use in the MHD subracks 1U and 3U

ISO/IEC 11801 Class D



MHD copper cartridge 0.5U
rear side: telco connector
front side: 6x RJ45, shielded



MHD copper cartridge 0.5U
with MHD modification set
for insertion into MHD subrack 19"/3U

PRODUCT INFORMATION

APPLICATION

For the connection of MHD copper trunk cables with pre-assembled telco jacks. Can be installed in the MHD subracks either as 0.5U or 3U version. The distributor cartridges provide a shielded 50-pin telco connector as rear input for quick connection of pre-assembled copper trunk cables and an internal wiring to 6 RJ45 ports at the front side. The fully tested cartridges enable a transmission speed of 1 Gbit/s over a maximum length of 60 m together with the MHD copper trunk cables with pre-assembled telco jacks.

This solution provides data centres with the flexibility to perform all changes very quickly and without the need for costly on-site work. You can also achieve high packing densities, e.g. 48 copper ports in a 1U subrack.

DESCRIPTION 0.5U SYSTEM

Chassis: 0.5U, solid metal
Front plate colour: stainless steel or black, similar to RAL 9005
Input: 50-pin telco connector with screw locking
Output: 6 RJ45 ports, shielded
Strain relief: via chassis

DESCRIPTION 3U SYSTEM

Chassis: 3U/5TE, solid metal
Front plate colour: stainless steel or black, similar to RAL 9005
Labelling: using printed strips
Input: 50-pin telco connector with screw locking
Output: 6 RJ45 ports, shielded
Strain relief: via chassis

SCOPE OF DELIVERY

Cartridge with 6 RJ45 sockets (output) and internal wiring, 100% tested in the manufacturing.

Description	Article No. stainless steel	Article No. black
MHD copper cartridge 0.5U with 1x Telco on 6x RJ45	470320	-
MHD copper cartridge 3U with 1x Telco on 6x RJ45	470322	470323
MHD modification set 3U/5HP for TP cartridge 0.5U (RJ45)	470035	470037

MHD

MHD copper trunks with telco interface

for the connection of MHD copper cartridges

shielded, suitable for 1000Base-T



MHD copper trunk with pre-assembled telco jack on both sides

PRODUCT INFORMATION

APPLICATION

For the transmission of all applications up to 1 Gbit/s, especially in data centres. Suitable for the quick connection of the MHD copper cartridges. Connection to the MHD copper cartridges (inserted in the MHD subracks 1U and 3U) via the telco connectors on the rear side.

This solution provides data centres with the flexibility to perform all changes very quickly and without the need for costly on-site work. You can also achieve high packing densities, e.g. 48 copper ports in a 1U subrack.

DESCRIPTION

These shielded copper trunk cable with pre-assembled zero-halogen shielded 50-pin telco jacks have a very slim design and is flexible for a wide range of applications. The maximum link length for a transmission speed of 1 Gbit/s is 60 m.

MHD copper trunks with telco interface are available in any lengths and according to customers' requirements.

SCOPE OF DELIVERY

Pre-assembled copper trunk. Delivery with measurement report.

MHD Cu-Trunks with 2 telco interfaces	Length	Article No.
	5 m	470300
	10 m	470301
	15 m	470302
	20 m	470303
	25 m	470304
	30 m	470305
	35 m	470306
	40 m	470307
	45 m	470308
	50 m	470309
	55 m	470310
	60 m	470311
	other *	470312

* other lengths available on request. The specified lengths are the lengths between the two telco jacks.

MHD copper trunks with copper cartridge

for use in the MHD subracks 1U and 3U

shielded, suitable for 10GBase-T



MHD copper trunk with pre-assembled copper cartridge (6x RJ45) on both sides

PRODUCT INFORMATION

APPLICATION

Shielded copper trunk cable with pre-assembled copper cartridges for the transmission of all applications up to 10 Gbit/s, especially in data centres. The copper cartridges can be installed in the MHD subracks 19"/1U or 19"/3U. The 6-fold TP trunk cable (6x CU 7002 4P) is directly connected to the copper cartridges via LSA plus contacts.

This solution provides data centres with the flexibility to perform all changes very quickly and without the need for costly on-site work.

You can also achieve high packing densities, e.g. 48 copper ports in a 1U subrack.

DESCRIPTION

Chassis: 0.5U, solid metal
 Front plate colour: stainless steel
 Input: 6-fold TP cable, shielded, zero halogen
 Output: 6 RJ45 ports, shielded
 Strain relief: via chassis

For use in the MHD subrack 19"/3U a modification set is necessary.

Pre-assembled MHD copper trunks are available in any lengths according to customers' requirements.

SCOPE OF DELIVERY

Pre-assembled copper trunk. Delivery with measurement report.

MHD CU-Trunk with 2 distributor cartridges for use in the MHD subracks 19"/1U (Front plate stainless steel)

Length of trunk	Article No.	Length of trunk	Article No.
5 m	470400	55 m	470410
10 m	470401	60 m	470411
15 m	470402	65 m	470412
20 m	470403	70 m	470413
25 m	470404	75 m	470414
30 m	470405	80 m	470415
35 m	470406	85 m	470416
40 m	470407	90 m	470417
45 m	470408	other *	470418
50 m	470409		

* other lengths available on request. The specified lengths are the lengths between the front panels (RJ45 ports) of the two copper cartridges.

Accessories

	Article No.
MHD modification set 3U/5HP for TP cartridge 0.5U (RJ45)	470035

MHD

MHD FO cartridges

for use in the MHD subracks 1U and 3U



MHD FO cartridge 0.5U
front side: 6x LCD adapter



MHD FO cartridge 0.5U
rear side: MTP adapter (male, Key-up on Key-down)

PRODUCT INFORMATION

APPLICATION

For the connection of MHD FO trunk cables with MTP® connectors (female).
Can be installed in the MHD subracks either as 0.5U or 3U version.
The distributor cartridges provide an MTP® adapter (male) as rear input for quick connection of the pre-assembled MHD FO trunk cables and an internal fibre routing to the FO ports at the front side, e.g. 6x LCD, SCD, and LSH-C.

This solution provides data centres with the flexibility to perform all changes very quickly and without the need for costly on-site work.
You can also achieve high packing densities, e.g. 48 FO duplex ports in a 1U subrack.

DESCRIPTION 0.5U SYSTEM

Chassis:	0.5U, solid metal
Front plate colour:	stainless steel or black, similar to RAL 9005
Input:	1x MTP
Output:	6 FO duplex adapters (e.g. LCD, LSH-C, SCD) via chassis
Strain relief:	via chassis
Dimensions:	130 x 107 x 20.5 mm

OPTICAL TRANSMISSION PROPERTIES

FO cartridge with (version)	Fibre type	IL (dB) typ.	IL(dB) max.	RL(dB) min.
1x MTP on 6x LCD	OM3	0.35	0.45	20
1x MTP on 6x LCD	OM4	0.20	0.35	25
1x MTP/APC on 6x LCD	OS2	0.25	0.50	55
1x MTP/APC on 6x LCD/APC	OS2	0.30	0.50	65

SCOPE OF DELIVERY

Cartridge with FO couplers and internal fibre duct,
100% tested in the manufacturing.

MHD FO cartridges 0.5U

Version	Article No. OM2	Article No. OM3	Article No. OM4	Article No. OS2	Article No. OS2 APC
MTP on 6x LCD	470150	470153	470154	470156	470157
MTP on 6x LSH-C	on request	470104		470107	
MTP on 6x SCD	on request	on request		470108	

Other configurations are available on request!

MTP® is a registered brand of US Conec.

MHD FO trunks with MTP® interface for the connection of MHD FO cartridges



MTP connector (female) with 12 fibres, Key-up, without pins



MHD FO trunk with 8 MTP connectors on both sides (8 x 12 = 96 fibres)

PRODUCT INFORMATION

APPLICATION

For the transmission of all applications up to 10 Gbit/s, especially in data centres. Suitable for the quick connection of the MHD FO cartridges. Connection to the MHD FO cartridges (inserted in the MHD subracks 1U and 3U) via the MTP connectors on the rear side.

This solution provides data centres with the flexibility to perform all changes very quickly and without the need for costly on-site work. You can also achieve high packing densities, e.g. 48 FO duplex ports in a 1U subrack.

DESCRIPTION

The MHD FO trunks are pre-assembled with MTP connectors (female) and are available in fibre qualities OM4, OM3 and OS2. Datwyler's FO Universal cable is used for the trunk cables. The trunk cable is split into single cables with 12 fibres/1 MTP connector by a special splitting element.

There is a very thin flexible MTP FO patch cable (12 fibres) available to bridge short distances between the MHD FO cartridges.

OPTICAL TRANSMISSION PROPERTIES

	Fibre type	IL (dB) typ.	IL(dB) max.	RL(dB) min.
FO cable with 2 MTP connectors	OM3	0.35	0.45	20
	OM4	0.17	0.35	25
	OS2 APC	0.10	0.45	65

SCOPE OF DELIVERY

Pre-assembled FO trunk.
Delivery with hose protection and optical attenuation measurement report.

MHD FO trunk with MTP connectors

Description	Connector per side	Article No. OM2	Article No. OM3	Article No. OM4	Article No. OS2
MTP FO patch cable	1 (12 fibres)	on request	470231	470241	470211
MTP FO trunk	1 (12 fibres)	on request	470232	470242	470212
MTP FO trunk	2 (24 fibres)	on request	470233	470243	470213
MTP FO trunk	4 (48 fibres)	on request	470234	470244	470214
MTP FO trunk	6 (72 fibres)	on request	470235	470245	470215
MTP FO trunk	8 (96 fibres)	on request	470236	470246	470216
MTP FO trunk	12 (144 fibres)	on request	470237	on request	470217

Please specify the length of the cable when ordering.

The specified lengths are the distances between the furthestmost pre-assembled MTP connectors on both sides.

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MHD

Wiring of the MHD FO solution

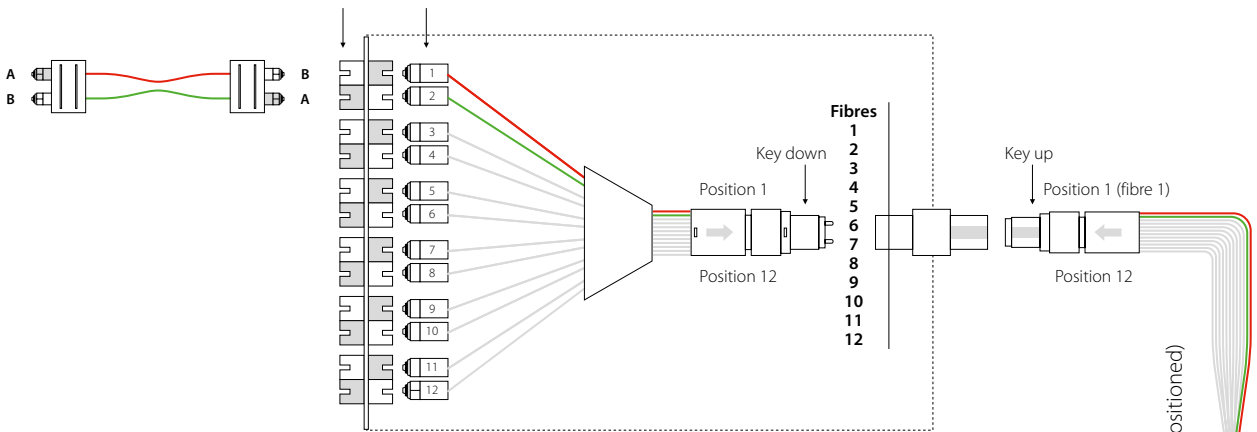
Maintaining correct polarity in accordance with TIA-568-C.3 (method C)

Suitable for 10-gigabit Ethernet and for Fiber Channel

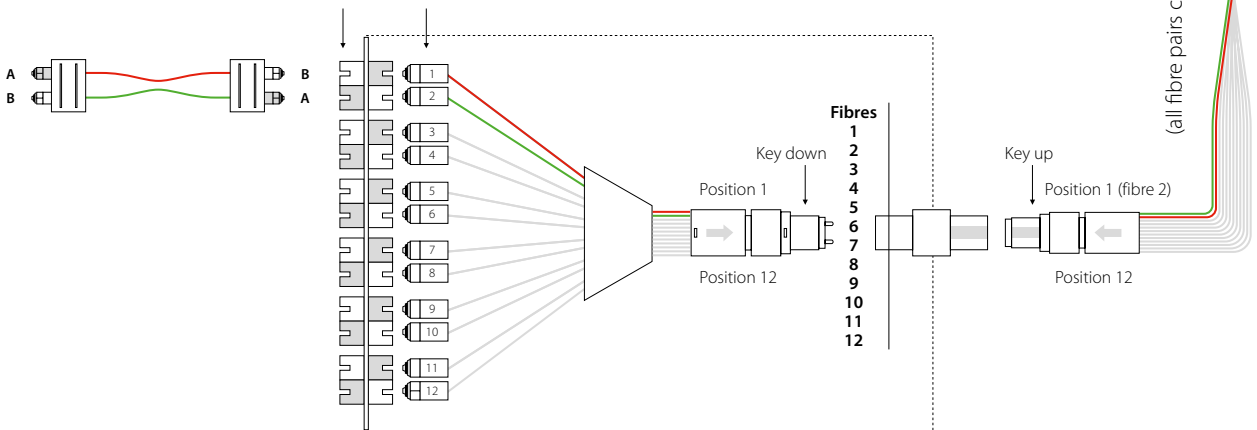


The 12 fibres in the MHD FO trunks are each crossed positioned and pre-assembled with a MTP® connector (female) on both sides. Light propagation in accordance with TIA-568-C.3 (method C).

All MHD FO cartridges provide the same wiring (internal fibre routing) and provide interfaces as follows:
 Input: 1x MTP adapter (Key-up on Key-down)
 Output: 6x LCD or 6x SCD or 6x LSH-C



All MHD FO cartridges provide the same fibre routing



Internal wiring of FO duplex patch cord A to B



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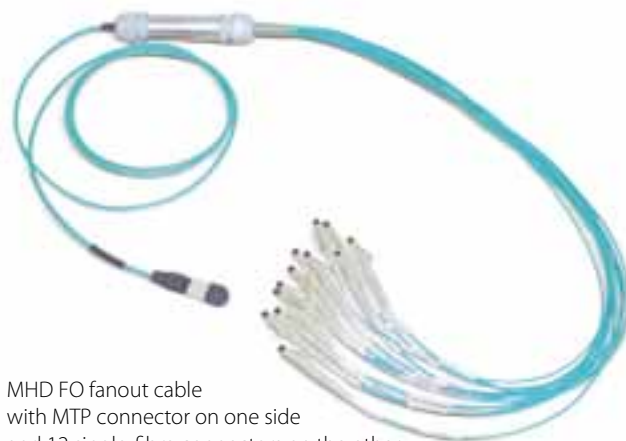
Copper
Fibre Optics
Cabinets & Racks
Data Centre
Wireless
Multimedia
General Information

MHD FO fanout cable MTP®-on-LC adapter cable for connection to LC



MTP connector (12 fibres)
Key-down, with pins

MTP adapter type A (Key-up on Key-down)
(not part of delivery)



MHD FO fanout cable
with MTP connector on one side
and 12 single-fibre connectors on the other

PRODUCT INFORMATION

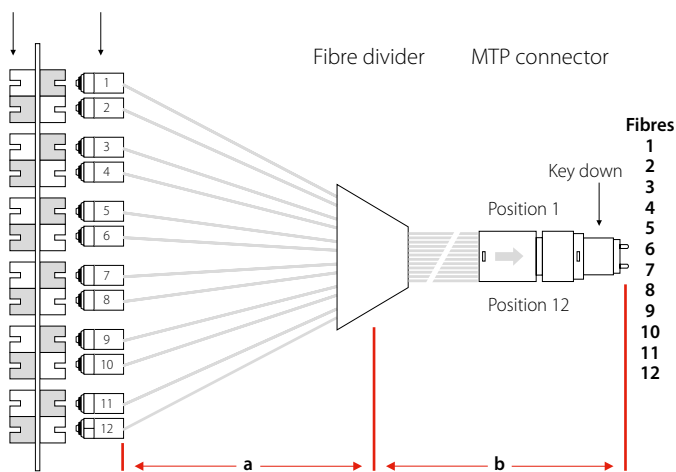
APPLICATION

Suitable for connections between MHD FO trunks and single-fibre ports, e.g. to connect to active equipment without any additional patch level.

DESCRIPTION

The MHD FO fanout cables are pre-assembled with 1 MTP connector (Key-down, with Pins) on one side and 12 single-fibre connectors (typical „LC“) on the other side.
The required MTP adapter type A (Key-up on Key-down) is not part of the delivery (on request).

Length of single fibers (a): 1 m (other available on request)
Cable length up fibre divider (b): see the specified typical distances below



OPTICAL TRANSMISSION PROPERTIES

Fanout with MTP on LC

Fibre type	IL (dB) typ.	IL(dB) max.	RL(dB) min.
OM3	0.35	0.45	20

MHD FO fanout cable with 1x MTP on 12x LC

Length of cable (b)	Article No. OM3	Article No. OS2 (on request)
1 m	470261	470281
2 m	470262	470282
3 m	470263	470283
5 m	470265	470285
7 m	470267	470287
10 m	470270	470290

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Fig. 1:
Reel Cleaner



Fig. 2:
MPO/MTP cleaning device



Fig. 3:
Connector cleaning device



Fig. 4:
Cleaning rod for adapter

PRODUCT INFORMATION

APPLICATION

The cleanliness of FO connectors is critical for satisfactory optical performance and long-term trouble-free transmission. Connectors that are dirty, worn or scratched due to improper use will have a negative effect on optical performance because the Insertion Loss (IL) increases whilst the Return Loss (RL) falls.

This topic is so important that it has found its way into all FO-related cabling standards. The standards point out that professional cleaning tools are necessary to ensure successful acceptance tests and trouble-free patching.

For professional on-site cleaning of FO connectors (e.g. MPO/MTP®) the equipment as featured in Datwyler's FO accessories portfolio (see below) is particularly suitable.

Article No.	Fig.	Name	Description	PU
1411400	1	Reel Cleaner	for FO connectors	1
1411401	-	Replacement reel for Reel Cleaner		6
415627	2	FO connector cleaning device for MPO	through adapter	1
415628	3	FO connector cleaning device for 2.5 mm	through adapter	1
415629	-	FO connector cleaning device for 1.25 mm	through adapter	1
1411404	4	Cleaning rod for 2.5 mm	for adapter	10
1411405	-	Cleaning rod for 1.25 mm	for adapter	10

MTP® is a registered brand of US Conec.

INTEGRATED SOLUTIONS THANKS TO STRONG PARTNERS

In many functional buildings Wireless LAN (WLAN) is just as important a part of building design as LAN, and as such has to be taken seriously. Wired and wireless transmissions have specific strengths which are mutually dependent and complementary. WLAN is essential if there is a particular requirement for unrestricted mobility within a building.

There are, however, hardly any technical planning aids for wireless communication. Today a WLAN needs to be planned just as carefully as its wired counterpart, which is why Datwyler supports end customers, planners and installers with WiFi package solutions.

Together with our partners Cisco, Netgear and Xirrus we can supply you with tailor-made wireless infrastructures comprising all the requisite active network components. Our optional services range from planning your wireless network through installation to maintenance.



NETGEAR®

XIRRUS®

Cisco and Netgear products

Our partners Cisco and Netgear offer an extremely wide variety of products and services which are changing very rapidly, so we thought there was little sense in selecting individual products for this catalogue.

You can safely assume that all the network components you need are available.

WLAN = Wireless LAN

WiFi = Wireless Fidelity = Wireless Standard IEEE-802.11

Nowadays both abbreviations are used synonymously in most countries.

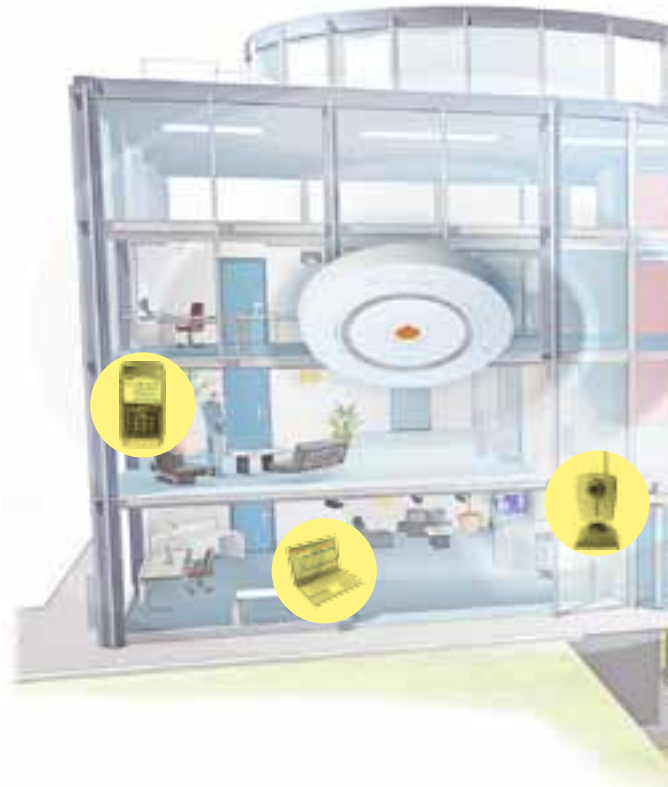
WIRELESS SOLUTION FOR HIGH REQUIREMENTS

WiFi enabled electronic devices, for example mobile phones, Tablet PCs and Notebooks, are gaining ground. Distribution networks everywhere are expanding.

Wireless infrastructures supplement wired network environments. With a modern WiFi solution you can avoid massive performance losses and save on installation, cabling and maintenance costs.

Trend-setting Xirrus arrays provide optimum conditions with their above-average range, coverage and bandwidth. The system is ideal for professional use in offices, factory buildings, conference halls, schools, hospitals and hotels.

Bandwidth-hungry applications such as IPTV, Video on Demand and Voice over WiFi in particular benefit from trouble-free operation with superlative "Quality of experience", even when being used by a lot of people simultaneously and over a large coverage area.

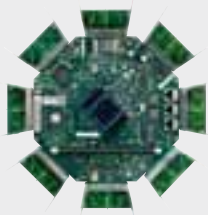


WIFI-ARRAYS

The WiFi arrays incorporate up to 16 self-adjusting radio cells and a Gigabit Ethernet switch in one housing. Up to 7.2 Gbit/s bandwidth in the 802.11a/b/g+n range ensure WiFi coverage of up to 1920 users and an area of over 100 x 100 metres.



Xirrus arrays have double the range and four times the coverage of traditional WiFi systems and achieve savings of up to 75% in the cost of cabling and installation.



All the arrays have an integrated WiFi threat sensor, an integrated firewall and a real time Intrusion, Detection and Prevention System to provide maximum security.

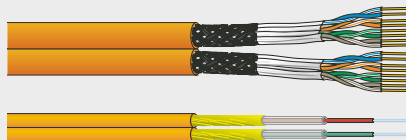
POWER SUPPLY

There are two ways of supplying the WiFi arrays with power: either by an alternating current mains connection (AC) or via the Power over Gigabit Ethernet (PoGE) direct current system.



Power over Gigabit Ethernet (PoGE)

The PoGE system is a simple and cost-effective method of supplying power to the WiFi arrays through the existing data cable.

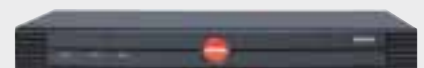


High-performance data cables

Data transfer to the array is made possible by high-performance fiber optic or copper data cables (essential for PoGE).

MANAGEMENT

Radio Frequency (RF) Management, security checks and policy, among other things, can be configured by the Xirrus Management System (XMS). The system also permits the monitoring and documenting of array performance. Control is exercised from a central location anywhere in the network.



Appliance or software based

The Management System is available as a pure appliance or may be deployed as a software-based solution on an existing server. It can be used to administer up to 500 arrays.



BENEFITS AT A GLANCE

Less WiFi equipment

- up to 7.2 Gbit/s bandwidth
- higher range and coverage
- up to 1920 users per array
- wireless mesh
- access points can be configured and removed individually (IAP)
- integrated Gigabit switch
- integrated WiFi controller

Security

- intelligence at the interface
- integrated firewall, integrated WiFi threat sensor

Professional support

- measurement
- network planning
- checking

Investment protection

- modular, expandable design
- new standards by means of hardware upgrades and software updates
- arrays ready for 802.11 ac/ad
- can be switched between 2.4 GHz and 5 GHz

HOUSINGS AND ACCESSORIES

You can choose from a wide range of housings for indoor and outdoor use as well as various installation devices. This ensures that the arrays are well protected from environmental influences and damage.



Indoors

The indoor housing can easily be mounted on or in the ceiling.



Outdoors

This housing is fitted with a fan, heating and a lightning arrester to ensure optimum outdoor protection.

SERVICES

The services on offer are complemented by professional support when measuring a building, designing the network and checking the network installed.



Site Survey

Measurement is carried out with the arrays directly in the building in which WiFi is to be installed.



Simulation

A simulation based on building plans or site maps is carried out to determine the number of arrays required.

Checks

After the installation the range and coverage is measured and the WiFi network is tested to guarantee the highest possible quality.

MAINTENANCE CONTRACTS

Protect your investment with a maintenance contract. This is the way to keep arrays and software up to date at no extra cost.



Comprehensive services

Over and above the standard warranty, maintenance contracts provide services which include the fastest possible support, replacement of defective hardware within one working day, and all software updates.



Upgrade and updates

Hardware upgrades and software updates ensure that your WiFi arrays will always be fully compliant with the latest standards.

WiFi arrays



PRODUCT INFORMATION

DESCRIPTION

Xirrus WiFi arrays are compact solutions giving superlative performance. The integrated Gigabit Ethernet switch, fully modular access points and software controlled via the Web interface allow extremely flexible use of the array and sophisticated fine-tuning to each operational scenario.

An array bundle comprises:

- WiFi array, the choice of 2 to a maximum of 16 integrated access points, depending on configuration, and with 300 or 450 Mbit/s
- Integrated WiFi controller
- PoE adapter including power cable *
- Standard fixing kit for ceiling mounting
- Array operating system including analysis and control software
- Optional: Premium Support for hardware and software

The integrated access points may be operated in all the housings. They can be used in 2.4 GHz and 5 GHz frequency ranges. This makes it possible to implement a fully scaleable WLAN network.

*) The use of standard PoE units is not feasible for a power supply via PoE, as the arrays have a different energy requirement.

APPLICATION

The WiFi arrays are designed mainly for wireless networks with high user density, a wide variety of devices and/or high bandwidth requirements (e.g. for video applications).

Due to the modular design of the WLAN portfolio the WiFi arrays are already geared up to future WiFi standards, thus providing good investment protection.

TECHNICAL SPECIFICATION

Specifications	XR-12x0	XR-2xx0	XR-4xx0	XR-6/7xx0
Housing size	17 cm	25 cm	33 cm	43 cm
WiFi controller	integrated	integrated	integrated	integrated
Available IAP slots	2	2-4	4-8	8-16
802.11n Access Points supplied	2	4	4 or 8	8, 12 or 16
Available Access Ppoint types	300/450 Mbit/s	300/450 Mbit/s	300/450 Mbit/s	300/450 Mbit/s
Maximum WiFi bandwidth	900 Mbit/s	1.8 Gbit/s	1.8 Gbit/s	1.8 Gbit/s
Integrated WiFi threat-sensor	yes	yes	yes	yes
Integrated antennae	up to 6	up to 12	up to 24	up to 48
Max. WiFi backhaul link	450 Mbit/s	1.35 Gbit/s	1.35 Gbit/s	1.35 Gbit/s
Integrated switch ports	2	4	8	16
GigE uplink ports	1	1	2	4
				+1x10GigE FO
Max. number of users	480	960	1920	1920



PRODUCT INFORMATION

VERSIONS

Article No.	Designation	Brief description	Bandwidth	Integrated APs	upgradeable
103500	Bundle Array XR-1220	802.11a/b/g+n WiFi array bundle	300 Mbit/s	2	no
103501	Bundle Array XR-1230	802.11a/b/g+n WiFi array bundle	450 Mbit/s	2	no
103502	Bundle Array XR-2220	802.11a/b/g+n WiFi array bundle	300 Mbit/s	2	yes, up to 4
103503	Bundle Array XR-2230	802.11a/b/g+n WiFi array bundle	450 Mbit/s	2	yes, up to 4
103504	Bundle Array XR-2420	802.11a/b/g+n WiFi array bundle	300 Mbit/s	4	no
103505	Bundle Array XR-2430	802.11a/b/g+n WiFi array bundle	450 Mbit/s	4	no
103506	Bundle Array XR-4420	802.11a/b/g+n WiFi array bundle	300 Mbit/s	4	yes, up to 8
103507	Bundle Array XR-4430	802.11a/b/g+n WiFi array bundle	450 Mbit/s	4	yes, up to 8
103508	Bundle Array XR-4820	802.11a/b/g+n WiFi array bundle	300 Mbit/s	8	no
103509	Bundle Array XR-4830	802.11a/b/g+n WiFi array bundle	450 Mbit/s	8	no

OTHER TECHNICAL DATA

Environmental requirements

Outside temperature: 0 to 55 °C
 Atmospheric humidity: 0 to 90 % (non-condensing)

Management Interfaces

- Command Line
- Web Interface
- Xirrus Management System

WIRELESS SOLUTION

WiFi accessories - housings / mounting



Protective cover
Article No. 103553



Wall mounting bracket
Article No. 103544



Suspended mounting kit
Article No. 103546



Housing for indoor use
Article No. 103545

PRODUCT INFORMATION

APPLICATION

The housings available for indoor and outdoor use will protect your array from environmental influences – for example solar radiation, rain, atmospheric humidity, low temperatures, heat and coarse contaminants – and will provide protection against accidental or malicious damage.

Flexible solutions are available for mounting arrays to walls, ceilings or at hall roof level.

TECHNICAL SPECIFICATION

	Dimensions	Weight	Miscellaneous
Protective cover	35.6 x 35.6 x 7.6 cm	200 g	for all arrays 4x0
Housing for indoor use	60.3 x 60.3 x 14 cm	8.2 kg	lockable
Suspended mounting kit	41 x 41 x 152 cm	6.8 kg	with mounting plate, mounting bracket and protective cover
Wall mounting bracket	25.1 x 14 x 7.9 cm	700 g	
Housing for outdoor use	61 x 61 x 36 cm	19.5 kg	heatable, with ventilation -40°C to 55°C

VERSIONS

Article No.	Description
103544	Array wall mounting
103545	Housing for indoor use, lockable
103546	Suspended mounting kit for halls
103547	Extra protection for use in schools, gyms
103550	Dust protection for use in industrial buildings, incl. PoE-operated air filters
103554	Housing for outdoor use, heatable

Other accessories on request.



XP1-MSI-75



XP2-MSI-95M



XP8-MSI-70M

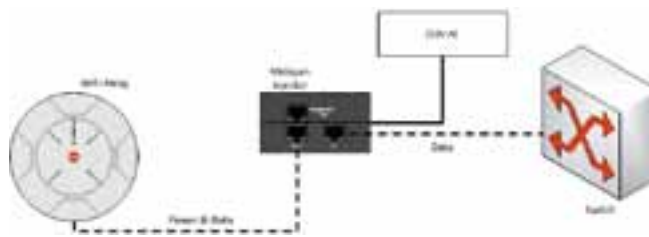
PRODUCT INFORMATION

APPLICATION

The Xirrus XP Power over Gigabit Ethernet (PoGE) system is used to provide WiFi arrays with a simple and cost-effective remote power supply by way of the data cable. The PoGE system supplies the array internally with direct current via the Gigabit Ethernet data interface.

As the arrays have a higher power requirement than that of other WLAN solutions, use of the PoGE system is imperative and already included in the packages on offer.

PoE adapters for use in racks or cabinet systems are available as accessories.



TECHNICAL SPECIFICATION

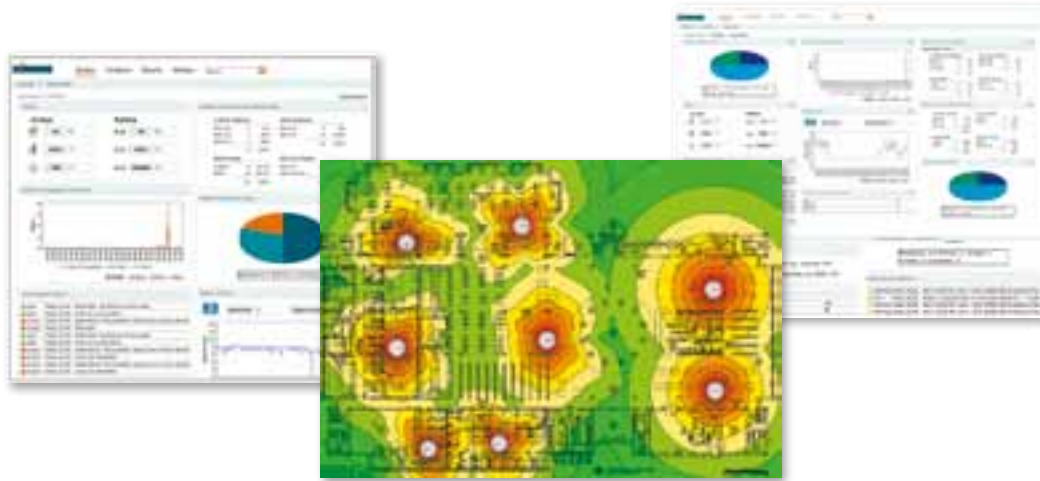
Specifications	XP1-MSI-33	XP1-MSI-75	XP2-MSI-95M	XP8-MSI-70M
Connections	1	1	2	8
Power (DC/port)	up to 33W	up to 75W	up to 95W	70W per port
Power supply for	1 array	1 array	up to 2 arrays	up to 8 arrays
Arrays supported	XR-12x0	XR-2xx0 XR-4xx0 XR-68x0 XR-7xx0	XR-2xx0 XR-4xx0 XR-68x0 XR-7xx0	XR-2xx0 XR-4xx0 XR-68x0 XR-7xx0
Management	not included	not included	SNMP Web	SNMP Web

VERSIONS

Article No.	Type	Designation
103540	XP1-MSI-33	1 port 33W Power over Gigabit Injector
103541	XP1-MSI-75	1 port 75W Power over Gigabit Injector
103542	XP2-MSI-95M	2 port 95W Power over Gigabit Injector, administrable
103543	XP8-MSI-70M	8 port 70W Power over Gigabit Injector, administrable

Other accessories on request.

WiFi accessories - Xirrus Management System



PRODUCT INFORMATION

DESCRIPTION

The Xirrus Management System (XMS) is available as a Linux-based appliance or as software for Windows servers or VMware solutions. Software licensing depends on the number of integrated access points to be administered.

PERFORMANCE CHARACTERISTICS

- Automatic detection of the WiFi arrays in a network
- Policy-based configuration for the simple setup of one or more arrays
- Consolidated view of arrays, radio cells, security, performance and alarm status
- Numerous statistics on all aspects of arrays and performance
- Central monitoring and classification of external access points and wireless devices
- View of alarms, system logs for error monitoring of the entire network
- Overview and detailed reports on data throughput, security, channel utilisation etc.
- Simultaneous push software upgrades for one or more arrays
- Databank-based platform, supports large networks, spread over several locations

APPLICATION

The Xirrus Management System (XMS) provides a powerful platform for central management of the WiFi array network. The XMS detects, configures and monitors the array network and can be scaled to an interlocal system. Because of the comprehensive opportunities for analysis and evaluation on the management console, the XMS is equally suitable for optimising the wireless network on the basis of equipment type and bandwidth requirements.

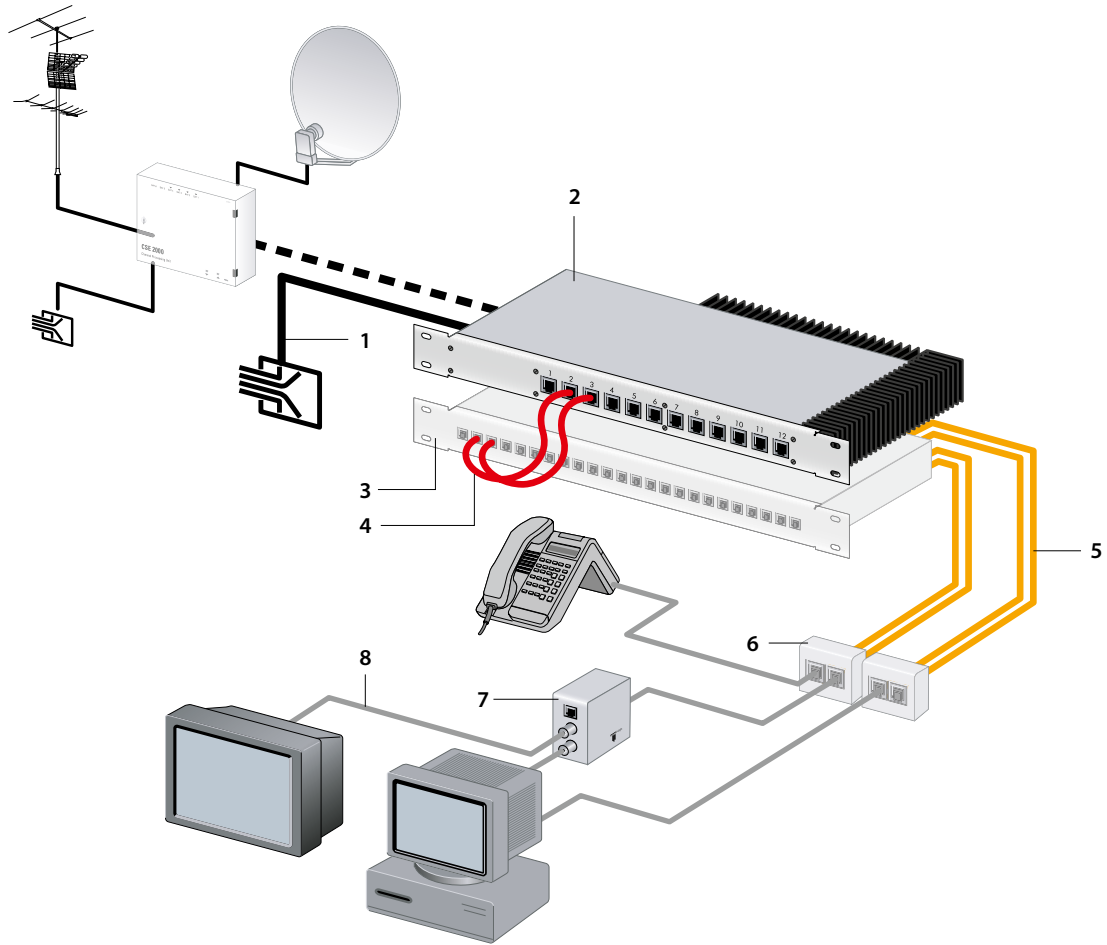
TECHNICAL SPECIFICATION

Specifications	XMS-9000-WIN	XMS-9000-VM	XMS-3320
Number of modular APs	up to 5000	up to 5000	up to 500
Number of devices administered	up to 25000	up to 25000	up to 5000
(Recommended) processor	Dual Quad-Core	Dual Processor +	2x Intel XEON
Recommended RAM	4-16 GB	4-16 GB	4 GB
Operating system	Win 2003 or Window 2008 R2 Server (US Version)	ESXi-5	-

VERSIONS

Article No.	Type	Description
On request	XMS-3320	Linux appliance
On request	XMS-9000-WIN	VMware appliance
On request	XMS-9000-VM	Windows server

MULTIMEDIA SOLUTION
CAT TV Panel / CAT TV Balun
 Active system, up to 862 MHz
 for the distribution of CATV signals



- 1 Input: unbalanced, 75 ohm, coax
 - a) directly from broadband network (building entry point)
 - b) after signal preparation via head-end
- 2 CAT TV Panel
- 3 Patch panel 100 ohm
e.g. Datwyler patch panel
- 4 Patch cord with RJ45 plug, shielded
- 5 Data cable, Cat.7 or Cat.7_A, shielded, with low attenuation,
e.g. Datwyler CU 7150 Multimedia or CU 7702 (AWG 22)
- 6 Faceplate/data outlet with shielded jacks
- 7 CAT TV Balun (balancer/unbalancer)
- 8 TV connection cable, 75 ohm, coax

CAT TV Panel

Active distribution panel, up to 862 MHz
for the distribution of CATV signals



CAT TV Panel



Power adapter for CAT TV Panel

PRODUCT INFORMATION

APPLICATION

For the distribution of CATV signals over structured premises cabling systems.

DESCRIPTION

The CAT TV Panel is an active distribution panel that converts the CATV signals (coaxial/75 ohm) into a balanced signal (symmetrical/100 ohm) for transmission over the structured premises cabling. The CAT TV Balun* which is connected close to the TV/Radio reconverts the signal to coaxial/75 ohm. It is possible to simultaneously distribute TV and telephone services over one and the same cable.

Digital video broadcast programs over cable (DVB-C) can be also transmit without problems. For the receiving a DVB-C receiver is necessary that is integrated in the end-user device or a set top box must be connected. Some satellite programs can also be transmitted if they are transformed into a frequency channel of the CATV frequency range.

TECHNICAL SPECIFICATION

Transmission of CATV signals over shielded Class E/E_A and F/F_A cabling.
Connections on the rear of the panel:

Frequency range:	45 (85) - 862 MHz
Frequency range backward:	without or (optional) with backward channel 5 - 65 MHz
Input signal level:	70-83dBμV, maximal equalization: 12dB
Integrated impedance transducer:	75/100 ohm
Link length:	10 - 90 m, adjustable for LAN, dependent on the type of data cable
Input 1:	F-type jack, 75 ohm (on the rear side)
Input 2:	Interface input, 15 pin D-type
Measurement connection:	1x F-type jack, 75 ohm, for data/backward channel
Output:	12x RJ45, 100 ohm
Housing:	metal, 19"/1U
Power supply:	from an external power supply (adapter included)
EMC:	in accordance with EN 50083-8 and EN 55022 Part B

Article No.	Description
1411770	CAT TV Panel set, 12 ports, with power adapter without backward channel
417824	Power adapter for CAT TV Panel
1411764	Passive Diplex module for retrofitting for backward channel 5-65 MHz

*A separate CAT TV Balun is required for each link where an end device is to be connected.

CAT TV Balun

Active balun, up to 862 MHz
for the distribution of CATV signals



CAT TV Balun

PRODUCT INFORMATION

APPLICATION	For the distribution of CATV signals over structured premises cabling systems.														
DESCRIPTION	<p>The CAT TV-Balun reconverts the balanced signal (100 ohm) that is transmitted from the CAT TV Panel over the structured cabling system into an unbalanced (75 ohm) coaxial output for the connection of an end device (e.g. television, radio).</p> <p>A separate CAT TV Balun is required for each link where an end device is to be connected. A 3-position switch provides adjustment for cable length, attenuation and equalization.</p>														
TECHNICAL SPECIFICATION	<table border="0"> <tr> <td>Frequency range:</td> <td>45 (85) - 862 MHz without (with) backward channel</td> </tr> <tr> <td>Frequency range backward:</td> <td>without or (optional) with backward channel 5-65 MHz</td> </tr> <tr> <td>Input signal level:</td> <td>75/100 ohm</td> </tr> <tr> <td>Input:</td> <td>1x RJ45 jack, 100 ohm</td> </tr> <tr> <td>HF output 1:</td> <td>1x IEC plug, 75 ohm, for TV/radio</td> </tr> <tr> <td>HF output 2:</td> <td>Version without backward channel: 1x IEC jack, 75 ohm, for radio Version with backward channel: 1x F-type jack, 75 ohm, for data</td> </tr> <tr> <td>Output signal level:</td> <td>60-77 dBμV</td> </tr> </table>	Frequency range:	45 (85) - 862 MHz without (with) backward channel	Frequency range backward:	without or (optional) with backward channel 5-65 MHz	Input signal level:	75/100 ohm	Input:	1x RJ45 jack, 100 ohm	HF output 1:	1x IEC plug, 75 ohm, for TV/radio	HF output 2:	Version without backward channel: 1x IEC jack, 75 ohm, for radio Version with backward channel: 1x F-type jack, 75 ohm, for data	Output signal level:	60-77 dBμV
Frequency range:	45 (85) - 862 MHz without (with) backward channel														
Frequency range backward:	without or (optional) with backward channel 5-65 MHz														
Input signal level:	75/100 ohm														
Input:	1x RJ45 jack, 100 ohm														
HF output 1:	1x IEC plug, 75 ohm, for TV/radio														
HF output 2:	Version without backward channel: 1x IEC jack, 75 ohm, for radio Version with backward channel: 1x F-type jack, 75 ohm, for data														
Output signal level:	60-77 dBμV														

Article No.	Description
1411767	CAT TV Balun without backward channel
1411769	CAT TV Balun with backward channel 5-65 MHz

GENERAL INFORMATION

Testing and measuring procedures of copper data cables

This overview indicates to what degree and how consequent all Datwyler copper data cables are tested for their quality.

Testing of all manufactured cables*

DC resistance of copper wire

Voltage Indication

Capacitance

Testing content

Wire resistance, loop resistance, resistance difference

Wire to Wire and Wire to Screen

Mutual capacitances, capacitive couplings, capacitive earth unbalance

* Each length is tested.

Point by point testing (per production unit)

Transmission characteristics

Material features

Testing content

Impedance, Return Loss, Attenuation, Near End Cross Talk (NEXT), ACR-F

Break stretching of the copper wire, tensile strength of the insulation, stretching of the insulation, tensile strength of the sheath, stretching of the sheath

These values/features are tested with samples.

Type specific tests and measuring

Transmission characteristics

Mechanical and physical product features

Tests to avoid damage during installation

Environmental qualities

Resistance for the insulation

Screen performance

Testing content

All electrical parameters demanded in the appropriate standards, Permanent Link and Channel measurements

Shrinking of the insulation, wrapping of the insulation after alteration, cold resistance of the insulation, tensile strength and break stretching of the cable jacket after alteration, pressure sensitivity at high temperatures, cold bending test of the cable, heat resistance, atmospheric humidity test for cables, temperature test and UV test

Cable crushing, wire crushing, shock resistance of the cable, repeated cable bending and tensile strength test

Acid emission, smoke emission, burning test for individual cable (fire behavior) and burning test for bundle cable (vertical burn test)

Resistance between each wire and between wire/cable screen

Transmission impedance of the cable, Coupling Attenuation

Type specific tests are carried out during the development stage and in case of changing the cable construction

Quality Control

Imprint

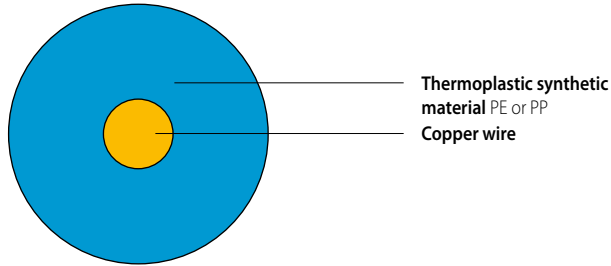
Content

It is ensured by an identification of each cable (production batch number) that the measured values can be recovered at any time.
e.g. CU 7002 4P FRNC/LS0H 887149

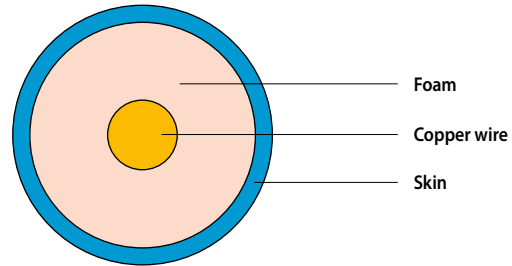
Wire design & Twisting procedures of copper data cables

Copper Wire Design

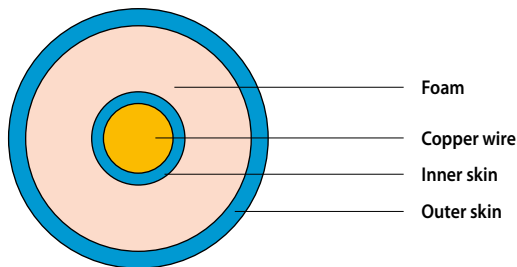
FULL PE WIRE



FOAM WIRE WITH PE SKIN



SKIN-FOAM-SKIN WIRE



Twisting procedures of Datwyler data cables

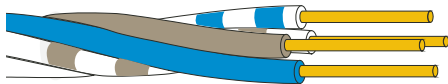
TWISTED PAIR

TP (Twisted Pair)



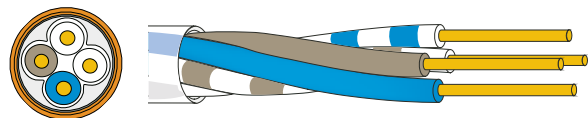
STAR QUAD TWISTING

Star quad



PATENTED STABILIZING ELEMENT

A very important aspect of high performance data cables is their stable mechanical design. The mechanical stress during the installation must not be underestimated: it can have negative effects on the transmission characteristics.





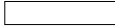





Datwyler maximises the electrical performance of some of its high-quality data cables with an additional stabilizing element.

This special construction is protected by the European patent 0567757 B1.






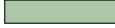


Colour code of copper data cables

Wire insulation colours of Datwyler CU twisted pair data cables (in accordance with IEC 60189)





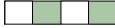
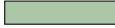


CU 6002 4P, 7060 4P, 7080 4P, 7002 4P, 7120 4P

Twisted Pair	Wire a	Wire b
Pair 1		
Pair 2		
Pair 3		
Pair 4		

CU 7150 4P, 7702 4P









Twisted Pair	Wire a	Wire b
Pair 1		
Pair 2		
Pair 3		
Pair 4		

CU 502 4P, 602 4P, 662 4P, 5002 4P, 5502 4P, 6702 4P (radial marks)

Twisted Pair	Wire a	Wire b
Pair 1		
Pair 2		
Pair 3		
Pair 4		

Wire Colour Code for twisted Pair CU data cables (Flexible cables)

CU 5502 flex 4P, 7702 flex 4P, 7150 flex 4P

Twisted Pair	Wire a	Wire b
Pair 1		
Pair 2		
Pair 3		
Pair 4		

AWG = American Wire Gauge.

This number is derived from the number of drawing dies that are needed to manufacture a certain cross section.

The larger the AWG number, the smaller the wire diameter.

AWG	Diameter of solid conductor, minimum [mm] <small>(according to UL 444 as of 11 July 2008)</small>	Cross-sectional area of stranded conductor, minimum [mm²] <small>(according to UL 444 as of 11 July 2008)</small>
18	1.013	0.807
19	0.866*	0.641
20	0.772*	0.509
21	0.688*	0.404
22	0.610*	0.318
23	0.546*	0.254
24	0.485*	0.201
25	0.432*	0.159
26	0.384*	0.126
27	0.358	0.100
28	0.318	0.079

*) Minimum acceptable diameter (0.95 x nominal) of a solid conductor of this size

AWG number for typical copper data cable constructions

AWG	Category & cable type
AWG 26	Cat.7 flexible cable, shielded (S/FTP, stranded wire)
AWG 24	Cat.6 flexible cable, unshielded (UTP, stranded wire)
AWG 24	Cat.6 data cable, unshielded (UTP)
AWG 23	Cat.7 data cable, shielded (S/FTP)
AWG 22	Cat.7 data cable, shielded (S/FTP)
	due to its low attenuation especially suited for:
	- 10G Ethernet with big reserves to the limit values
	- CATV transmissions up to 862 MHz
	- Power or Ethernet (PoE)

Installation guidelines for copper data cables

Quality assurance on the construction site

- Please check the following points:
 - Did the delivery include the right cable type?
 - Does the product show any damage caused by transit?
 - Is a temporary store organised for the cables on the construction site?
 - Do the cable and connection components comply with the requested Category/Class?
 - Do you have shielded connection components for the shielded cable?

Storage

- If you do not intend to install the data cables immediately after delivery they should be stored in a place that offers protection from mechanical and temperature influences.
- The store should be dry and protected from environmental influences.
- Stored cables should be kept in their original packaging until they are to be installed.

Regulations, standards and guidelines

- In general, always follow the regulations and guidelines specific to the country in which the materials are being installed. Always follow the manufacturer's guidelines for the cables and connecting hardware.

Open installation, wall openings, cable trays

- Copper data cables should be installed in separate containment from other installed cables.
- Where this is the case, cables can be laid in open trays in all areas (pathways, risers, communications rooms, etc.).
- The cables can be held in place using cable ties or similar equipment. Cables should not be crushed when using these devices. Please see the passage 'Pressure on data cables'.
- Before installation the edges of wall apertures should be smooth and rounded off. This will prevent the need to remove and replace cables with a damaged sheath at a later date.
- The bending radius of the cables may not fall below the value stipulated by the manufacturer.
- The radius of the cable channels must correspond to the specified bending radius of the cables.

Lubricants for cable moving

- Never use milking grease or other oiliferous and fatty substances.
- For cable pulling the following lubricants may be used:
 - Yellow lubricant (Wire-Pulling, Lubricant of Klein tools; 51000)
 - Talcum

Pulling force of data cables

- You can find the permitted pulling force per cable on the Datwyler copper cable data sheets.

Installation guidelines for copper data cables

Cable pulling

- Always pull cables directly from the drum or box. When using reels always use suitable equipment that will ensure free rotation of the reel.
- Never pull the cables over the flange of the reel (risk of twisting).
- Rewind unused cable and fix the end firmly.
- Use all wires for retracting.
Please fix the open wires with insulating tape between the moving equipment and the cable sheath.

Bending radius

- The bending radius of copper data cables should always be bigger than 8x the overall diameter of the cable during installation (in accordance with EN50173) - unless otherwise specified by the cable manufacturer.
- Always check the data sheets for exact specifications.
If two different bending radii are listed, this means:
 - bend radius with the higher value: during installation
 - bend radius with the lower value: after installation

Pressure on data cables

- Avoid any pressure on copper data cables! Crushing that effects the wires can have a negative effect on the transmission characteristics of the cable.
The most frequent reasons of crushing are improperly fixed cables, crossing of cables and mechanical stress.

Heat influence

- Foamed wires are sensitive to direct heat influence.
Never expose Datwyler data cables to direct heat sources.
Never use a hot air gun or a gas burner (e.g. when using heat shrinking tubing).

Cable laying

- Lay data cables in separate channels from power cable and always cross at 90° using a bridge.
That avoids negative EMC influence.
Please see the passage «Regulations, standards and guidelines».

Terminating at the patch panel

- Always follow the connecting hardware manuals.
- Avoid storing 'reserve loops' at the patch panel.
- For cables with pairs in metal foil (S/FTP, PiMF) the foil screen should be maintained as close as possible to the point of termination.
- If the cable provides an additional stabilizing element and a metal foil these must be brought as close as possible to the point of termination.

Standards for copper data cables

Areas of application of the standards

Cabling standardisation comes from two main organisations: ISO/IEC defines standards that are applicable world wide.

In Europe, an additional organisation called CENELEC defines specifications which support safety guidelines on behalf of the European Union and the EFTA. Thus, the European Standard EN is the principal reference standard in most European countries.

The cabling system standards are defined in the standards ISO/IEC 11801 and EN 50173-1.

These standards also describe the basic requirements for data cables. Due to these requirements the different cable specifications were worked out and defined in the following documents.

Standards for symmetrical data cables

In Europe, the following international standards are for information only.

INTERNATIONAL STANDARDS

ISO/IEC 11801
is valid worldwide



ISO/IEC 11801	Information technology and application-independent wiring systems
IEC 61156	Multiconductor and symmetrical pair-/star quad twisted cable for the digital communication transmission
	IEC 61156-1: Subject basic specification
	IEC 61156-2: Frame specification for floor cable
	IEC 61156-3: Frame specification for equipment connection cable
	IEC 61156-4: Frame specification for distribution cables
	IEC 61156-5: Frame specification for data cables up to 1000 MHz
	IEC 61156-6: Frame specification for equipment connection cable up to 1000 MHz
	IEC 61156-7: Frame specification for Backbone cable up to 1200 MHz

These international documents specify the data cables of the categories 3, 5, 6, 6_A, 7 and 7_A for patch and connecting cables, for installation cables and backbone cables.

EUROPEAN STANDARDS



EN 50173
is the European standard

50173 series 2011	Information technology: Generic cabling
	Part 1: General requirements Part 4: Homes
	Part 2: Office premises Part 5: Data centres
	Part 3: Industrial premises Part 6: Distributed building services
50174 series	Information technology: Cabling installation
	Part 1: Specification and quality assurance
	Part 2: Installation planning and practices inside buildings
	Part 3: Installation planning and practices outside buildings
EN 50310	Application of equipotential bonding and earthing in buildings with information technology equipment
EN 50288	Multiconductor metallic data and control cables for an analogue and digital transmission
EN 50288-1	Subject basic specifications
EN 50288-2-1	Frame specification for shielded cables for the horizontal and backbone area up to 100 MHz (Cat.5)
EN 50288-2-2	Frame specification for shielded equipment and connecting cables up to 100 MHz (Cat.5)
EN 50288-3-1	Frame specification for unshielded cables for horizontal and backbone area up to 100 MHz (Cat.5)
EN 50288-3-2	Frame specification for unshielded equipment and connecting cables up to 100 MHz (Cat.5)
EN 50288-4-1	Frame specification for shielded cables for horizontal and backbone area up to 600 MHz (Cat.7)
EN 50288-4-2	Frame specification for shielded equipment and connecting cables up to 600 MHz (Cat.7)
EN 50288-5-1	Frame specification for shielded cables for horizontal and backbone area up to 250 MHz (Cat.6)
EN 50288-5-2	Frame specification for shielded equipment and connecting cables up to 250 MHz (Cat.6)
EN 50288-6-1	Frame specification for unshielded cables for horizontal and backbone area up to 250 MHz (Cat.6)
EN 50288-6-2	Frame specification for unshielded equipment and connecting cables up to 250 MHz (Cat.6)
EN 50288-9-1	Frame specification for shielded cables for horizontal and backbone area up to 1000 MHz (Cat.7 _A)
EN 50288-10-1	Frame specification for shielded cables for horizontal and backbone area up to 500 MHz (Cat.6 _A)
EN 55022	EMC standards for office surroundings

Transmission (Channel) requirements for application classes - copper

A comparison of selected electrical requirements
for different frequencies and different transmission classes
according to ISO/IEC

Frequency [MHz]		Class D	Class E	Class E _A	Class F	Class F _A
1	Attenuation	4,0	4,0	4,0	4,0	4,0
	NEXT	63,3	65,0	65,0	65,0	65,0
	ACR	59,3	61,0	61,0	61,0	61,0
	Return loss	17,0	19,0	19,0	19,0	19,0
	PS-ACR-F	x	x	67,0	67,0	67,0
16	Attenuation	9,1	8,3	8,1	8,1	8,0
	NEXT	43,6	53,2	53,2	65,0	65,0
	ACR	34,5	44,9	45,1	56,9	57,0
	Return loss	17,0	18,0	18,0	18,0	18,0
	PS-ACR-F	x	x			
100	Attenuation	24,0	21,7	20,8	20,8	20,3
	NEXT	30,1	39,9	39,9	62,9	65,0
	ACR	6,1	18,2	19,2	42,1	46,1
	Return loss	10,0	12,0	12,0	12,0	12,0
	PS-ACR-F	x	x	60,0	60,0	67,0
250	Attenuation	x	35,9	33,8	33,8	32,5
	NEXT	x	33,1	33,1	56,9	59,1
	ACR	x	-2,8	-0,7	23,1	26,6
	Return loss	x	8,0	8,0	8,0	8,0
	PS-ACR-F	x	x	54,0	54,0	67,0
500	Attenuation	x	x	49,3	49,3	46,7
	NEXT	x	x	27,9	52,4	53,6
	ACR	x	x	-21,4	3,1	6,9
	Return loss	x	x	8,0	8,0	8,0
	PS-ACR-F	x	x	49,5	49,5	64,5
600	Attenuation	x	x	x	54,6	51,4
	NEXT	x	x	x	51,2	51,1
	ACR	x	x	x	-3,4	-0,7
	Return loss	x	x	x	8,0	8,0
	PS-ACR-F	x	x	x	x	x
1.000	Attenuation	x	x	x	x	67,6
	NEXT	x	x	x	x	47,9
	ACR	x	x	x	x	-19,7
	Return loss	x	x	x	x	8,0
	PS-ACR-F	x	x	x	x	60,0

NOTE concerning Alien Crosstalk (the influence by signals of electromagnetic interference from parallel laid other copper cables):
All Category 7 copper data cables fulfil "per design" the standard requirements for Alien Crosstalk parameters.
In the European standard EN 50173-1:2007 three different grades for the electromagnetic compatibility are defined (MICE table).
The best grade E3 can be achieved only with shielded data cables.

**Datwyler has recommended high-grade shielded Cat.7 and Cat.7_A copper data cables (PIMF) for many years
and has therefore - in view of the increasing requirements - provided its customers with long-term investment protection.**

GENERAL INFORMATION

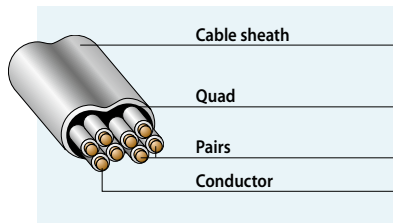
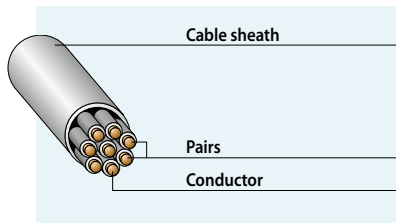
**Copper data cable design description
in accordance with ISO/IEC 11801**

Cable design description

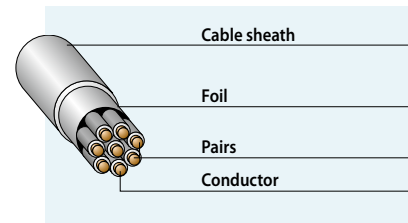
X X / X X X	balanced element	TP = twisted pair or star quad
	shielding element	U = unshielded F = foil
overall shielding		F = foil shielded S = braid shielded SF = braid and foil shielded

- Examples**
- SF/UTP = overall braid and foil shielded cable / with unshielded balanced elements
 - S/FTP = overall braid shielded cable / with foil shielded balanced elements
 - PiMF = Pairs in metal foil (xx/FTP)

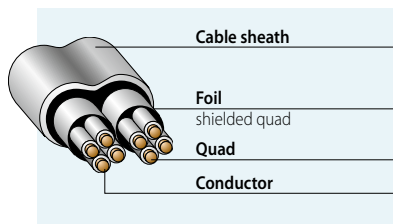
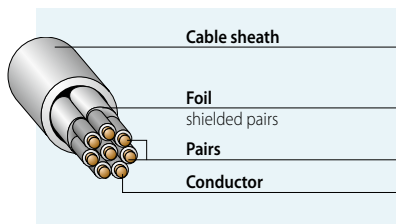
U/UTP



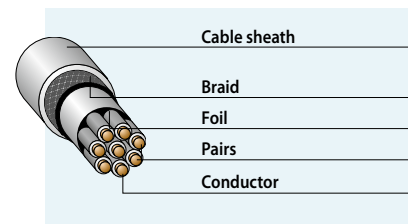
F/UTP



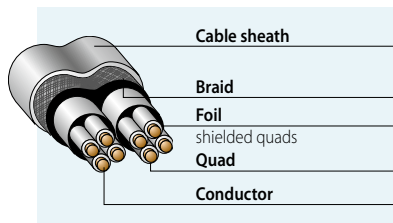
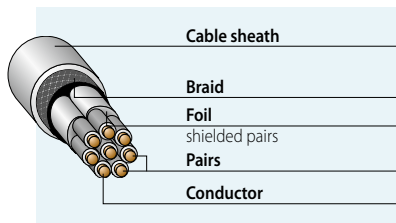
U/FTP



SF/UTP



S/FTP (PiMF with overall braid shielding = best shielding performance)



Low attenuation

For a data connection (Link), consisting of a patch panel, a data cable and an data outlet, the data cable has a decisive influence on the attenuation.

Data cables with a low attenuation permit cable lengths in excess of 90 m in accordance with the requirements of the chosen application.

Furthermore the low attenuation offers additional safety, particularly regarding future applications.

Minimised transfer impedance due to foil and braid shielding

The combination of foil and braid shielding results in a low transfer impedance. Coupled interferences can therefore be better discharged via the shielding and over a large frequency band.

As a side-effect an increased mechanical stabilisation of the cable construction can be achieved.

Constant balance of pairs due to stabilizing element (CU 6702 4P)

The additional stabilizing element results in an additional stabilisation of the wires within the pairs. Thus, the cable provides a very stable mechanical design with improved lateral crush resistance, and it also enables smaller bending radii.

A further advantage is - besides a higher stress resistance during installation - an easier compliance with the electrical values at the point of termination.

Advantages of high-grade copper data cables

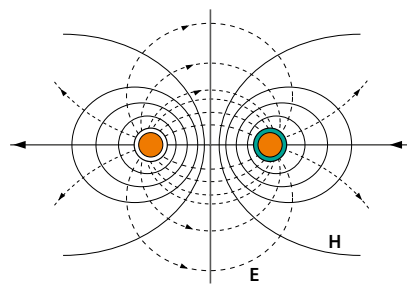
Insensitivity against external electrical and magnetic influences

The electromagnetic field of an unshielded copper data cable is not limited to the immediate area between the wires (see figure 1).

The electrical and magnetic fields close to an installed data cable are rarely uniform or constant. For an unshielded cable these fields directly effect the electrical transmission characteristics of the twisted pairs (see figure 3).

In a shielded data cable (foil and braid shielding of high quality) the electromagnetic field is contained within the overall shield. Therefore, major external influences have minimal effect on the transmission performance of the cable (figure 2). The impedance path is not influenced by the surrounding. The results are stable transmission characteristics (figure 4), usually indicated by excellent Return Loss (RL) values for installed cables.

Twisted Pair, unshielded



E = electric field
H = magnetic field

Figure 1

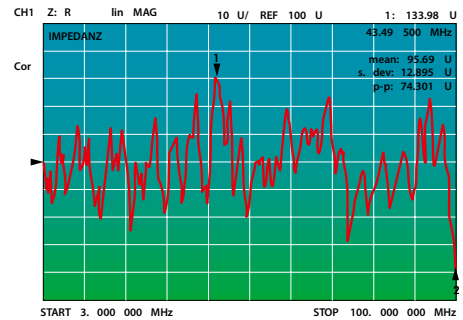
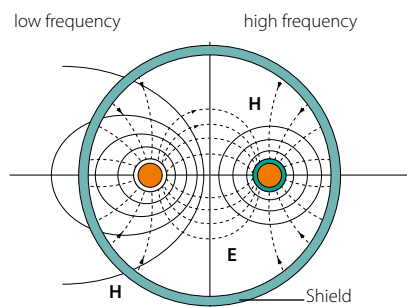


Figure 3

Twisted Pair, shielded



E = electric field
H = magnetic field

Figure 2

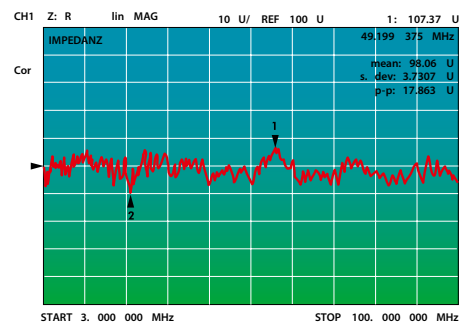


Figure 4

Mechanical & environmental requirements for fibre optic cables

Mechanical / environmental requirements for FO cables with Singlemode fibres

Test type	Test method	Test criterion
Tensile performance	IEC 60794-1-2-E1	Fibre elongation
Crush resistance	IEC 60794-1-2-E3	Fibre attenuation
Impact	IEC 60794-1-2-E4	No damage to the sheath and the cable elements
Repeated bending	IEC 60794-1-2-E6	No fibre break
Bend	IEC 60794-1-2-E11	Fibre attenuation
Torsion	IEC 60794-1-2-E7	Fibre attenuation
Water penetration	IEC 60794-1-2-F5	Water penetration
Temperature cycling	IEC 60794-1-2-F1	Fibre attenuation

Mechanical / environmental requirements for FO cables with Multimode fibres

Test type	Test method	Test criterion
Tensile performance	IEC 60794-1-2-E1	Fibre elongation
Crush resistance	IEC 60794-1-2-E3	Fibre attenuation
Impact	IEC 60794-1-2-E4	No damage to the sheath and the cable elements
Repeated bending	IEC 60794-1-2-E6	No fibre break
Bend	IEC 60794-1-2-E11	Fibre attenuation
Torsion	IEC 60794-1-2-E7	Fibre attenuation
Water penetration	IEC 60794-1-2-F5	Water penetration
Temperature cycling	IEC 60794-1-2-F1	Fibre attenuation

GENERAL INFORMATION

Identification code for Datwyler fibre optic cables according to DIN/VDE

1	2	3	4	5	6	7	8	9	10	11	12	13	14
													Design LG stranded in layers
													Bandwidth in MHz for 1 km (Multimode fibres) Dispersion in ps/nm x km (Singlemode fibres)
													Wavelength B 850 nm (Multimode fibres) F 1300 nm (Multimode fibres) F 1310 nm (Singlemode fibres) H 1550 nm (Singlemode fibres)
													Attenuation coefficient in dB/km
													Overall diameter in μm (125 μm)
													Mode field diameter in μm for Singlemode fibres (9 μm) Core diameter in μm for Multimode fibres (50 / 62.5 μm)
													Fibre type E Singlemode fibre G Multimode fibre
													Number of fibres Number of loose tube x number of fibres per loose tube
													2. Sheath B Armouring BY Armour with PVC oversheath B2Y Armour with PE-oversheath
													1. Sheath H LSOH sheath Y PVC sheath 2Y PE sheath (ZN)2Y PE sheath with non metallic strain relief elements (ZN)(L)2Y PE composite layer sheath with non metallic strain relief elements (ZN)(SR)2Y Corrugated steel composite layer sheath with non metallic strain reliefs elements
													F Filling compound to fill the interstices in the cable core Q Water blocking elements
													S Metal stranding element
													Secondary coating V Tight buffer D Loose tube, filled W Loose tube, filled H Loose tube, unfilled M Mini bundle (not VDE) K Semi loose tube (not VDE)
													Cable type A Outdoor cable I/J Indoor cable A/I or U Universal cable (not VDE)

Copper

Fibre Optics

Cabinets & Racks

Data Centre

Wireless

Multimedia

General Information

Type designation for Datwyler fibre optic cables

A	60	E9	wb	GG	T	5	HighP
							High Performance
						Maximum no. of loose tubes	
				Cable sheath: T Thermoplastic (PE) FR/LSOH Flame retardant in accordance with IEC 60332 LSOH Low smoke zero halogen PVC Polyvinyl chloride			
				Armour: K Aramid yarn W Corrugated steel GG Glass strands			
				Cable design: K Aramid yarn T Thermoplastic sheath Z Central loose tube construction wb Water blocking (swelling yarns or swelling tapes)			
		Fibre type: E Singlemode (SMF E9/125) G Multimode + graded index (MMF G50/125 or G62.5/125)					
							Number of fibres
Area of application: A Outdoor cable I Indoor cable							

Copper

Fibre Optics

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General Information

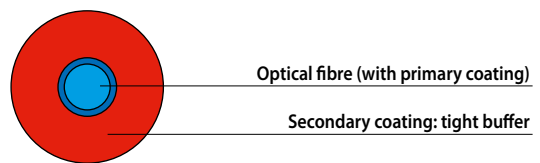
Optical fibre protection & tube construction

There are four different types of fibre optic tube construction - according to the different types of secondary coating that is added to the optical fibres:

- Tight buffer
- Semi tight buffer
- Mini bundle
- Loose tube

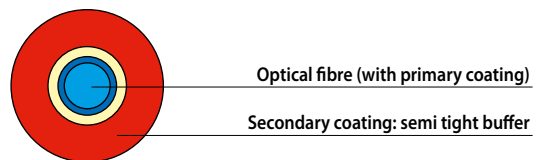
Tight buffer

The fibre is tightly jacketed with a thermoplastic oversheath.



Semi tight buffer

The fibre is loosely jacketed in a tube of a polymer material. The spare room between the fibre and the loose tube is only a few hundredths of a millimeter. The overall diameter of the semi tight buffer is identical with the diameter of the tight buffer.

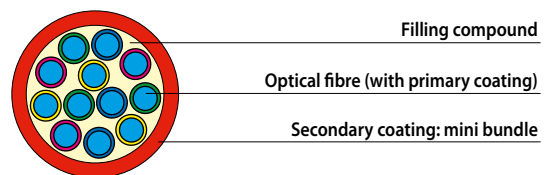


The advantages of the semi tight buffering compared with the tight buffering are:

- The tube can be easily stripped
- Minimal effect of microbending

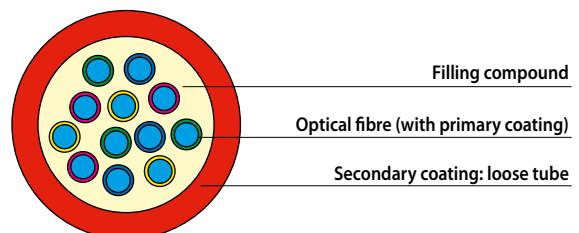
Micro loose tube

2 to 24 optical fibres are loosely encapsulated. The secondary protection consist of one layer of thermoplastic material. The interstices inside the tube are filled with gel. The overall diameter is Approximately 1.45 mm for 12 fibres and 1.95 mm for 24 fibres.



Loose tube

2 to 24 primary coated optical fiber are loosely encapsulated. The tube consist of one or two layers of the same or different materials. The interstices inside the tube are filled with gel. The overall diameter is 2-4 mm / depending on fibre counts.



Fibre/tube colour codes & sheath colours

In order to differentiate between the tubes in the cables and the optical fibres in a loose tube, the tubes and fibres (more precisely: the primary coating) are given different colours.












Fibre colour code (in accordance with IEC 60304)

(up to 12 fibres)







Fibre no.	colour	
1		red
2		green
3		blue
4		yellow
5		white
6		grey
7		brown
8		violet
9		turquoise
10		black
11		orange
12		pink

Fibre colour code with ring signature (Datwyler)







(up to 24 fibres)

Fibre no.	colour	
13		red/black
14		green/black
15		blue/black
16		yellow/black
17		white/black
18		grey/black
19		brown/black
20		violet/black
21		turquoise/black
22		transparent/black
23		orange/black
24		pink/black

Tube colour code

Tube type	Colour		RAL No.	Fibre type
1st tube		red	3020	all types
2nd tub		green	6018	all types
add. tubes		white	9016	E9/125
		light green	6019	G50/125
		blue	5015	G62/125
dummy elements		black	9005	

Sheath colours

Cable type	Colour	
FO Outdoor cable		black with orange longitudinal stripe
FO Universal cable		green
FO Indoor cable		Singlemode G.652 + G.657 yellow (green)
		Multimode G50 (OM2) orange
		Multimode G50 (OM3, OM4) turquoise
		Multimode G62.5 (OM1) grey

GENERAL INFORMATION

Opening of cable sheaths of Datwyler fibre optic cables

Instruction manual

Opening of the cable sheath of fibre optic cables

Instruction manual

Opening of the cable sheath of type ZwbKWT cable



1. Attach a radial cut with a cable stripping knife, approx. 15 cm from one cable end.

Remove the short end by attaching a longitudinal cut.



6. Cut the cable sheath radially, approx. 15 cm from one cable end and from the mark of the required length. (Scratch the corrugated steel tape!) Break the steel tape at those points with care.



2. Lay open the ripcords.



7. Heat the cable end with a gas burner or with an industrial blow-dryer. Remove the heated end carefully (glove!).



3. Fix the ripcord to a screwdriver with a knot (8 loop).



8. Lay open the ripcord. Heat the cable sheath part you want to remove. Grip the ripcord with a screwdriver.



4. Open the cable sheath by pulling the ripcords (vertical to the cable) up to the required length.



9. Grip the ripcord and pull it up to the required length.



5. Carefully remove the cable sheath. Cut back the sheath, glass armour, ripcords and supporting elements.



10. Carefully remove the cable sheath and the supporting elements.

ACR (Attenuation to Crosstalk Ratio)

The distance between the wanted signal and the interfering signal (ACR) is an important factor for the transmission quality. To ensure a faultless transmission, the interfering signal caused by the crosstalk attenuation must be smaller by a certain factor. This corresponds to the difference between the near end crosstalk attenuation (NEXT) and the attenuation of the link.
 $ACR [dB] = NEXT [dB] - a [dB]$; (a = Attenuation)

ACR-F

A calculation that normalizes the results of a FEXT measurement, because it takes attenuation into account. It is derived by subtracting the attenuation of the interfering pair from the far end crosstalk (FEXT) that it has caused in the interfered pair.

Alien Crosstalk

Alien crosstalk (AXT) is electromagnetic noise that can occur in a cable that runs alongside one or more other signal-carrying cables. The term "alien" arises from the fact that this form of crosstalk occurs between different cables in a group or bundle, rather than between individual wires or circuits within a single cable.

Attenuation (signal attenuation, conductor attenuation)

The attenuation depends on the conductor resistance R' and the mutual capacitance C' .
The attenuation rises roughly to 50 MHz with the root of the frequency and increases linearly with the length.

Conductor Resistance (resistance per unit length R')

The resistance per unit length R' includes the losses in the metallic conductors.
The conductor dimensions, the conductor material and the temperature determine the DC resistance R_0 .
Due to the skin effect the conductor resistance increases with frequency.
It behaves linearly with cable length.

Coupling Attenuation

This is the sum of the unsymmetrical attenuation of cable pairs and the shielding effectiveness/attenuation.

Technical terms used in data cable technology

Decibel [dB]

Decibel indicates the relation between the voltage of received signal (U_2) and transmitted signal (U_1). The result is a factor [dB].

The relation is defined:

$$U_2/U_1 \text{ [dB]} = 20 \log_{10} (U_2/U_1)$$

U_2/U_1 [dB]	Received signal [%]	U_2/U_1 [dB]	Received signal [%]
0.0	100.0	4.0	63
0.1	98.8	20.0	10
0.2	97.7	40.0	1
0.9	90.1	60.0	0.1
1.0	89.3	80.0	0.01
2.0	79.4	100.0	0.001

De-embedded

The de-embedded testing method for connecting hardware and components provides combinations with all defined quality classes for the RJ45 connectors. The integrated parts are real category 6 which provides the possibility to create open "mix & match" cabling systems without compatibility or test restrictions for the used patchcords, test adapters or active networking devices.

Dielectrical Constant (DK)

The Dielectrical constant is a material constant of the dielectric. The relative permittivity says how much bigger the capacity of the condenser becomes if instead of air the insulant is used as a dielectric. If the dielectrical constant is multiplied by the DK of the empty room, then the result is the DK of the dielectric.

Distributed Inductance L'

The distributed inductance consists of several parts. The outer inductance is determined by line geometry and the magnetic material qualities. It is frequency-independent. Since mainly non-ferromagnetic metals are used as conductor, it is also independent of the current intensity.

The inner inductance can be explained by the current flow and the magnetic fields connected with that in the conductor. Due to the current superseding, L' disappears at high frequencies. For shielded, symmetrical cables the frequency dependent cover inductance as well as the inductance produced by proximity effect must be taken into account.

Distributed Leakage G'

It describes the insulation losses, the dielectric losses as well as the Corona losses between the wires.

Instead of the often strongly frequency dependent parameter G's the factor Q ($Q=\theta$) indicates the loss factor.

The value of the loss factor depends on the insulant, the insulation design, the frequency and the temperature.

Q should be as small as possible and generally constant.

DMD

DMD measurement (Differential Mode Delay). With DMD, a single laser light pulse excites a few modes equally within a multimode fibre (MMF) cable. These modes, or light pathways, then follow two or more different paths. These paths may be of different lengths and have different transmission delays as the light travels through the cable. With DMD, a distinct pulse propagating down the cable no longer remains a distinct pulse or, in extreme cases, can become two independent pulses. Strings of pulses tend to interfere with each other, making it difficult to recover data in a reliable fashion.

Lasers function at the baud rates and longer distances required for Gigabit Ethernet: The IEEE 802.3z Gigabit Ethernet Task Force has identified the DMD condition that occurs in certain circumstances with particular combinations of lasers and MMF cable. The resulting characteristics create an additional element of "jitter" that limits the reach of Gigabit Ethernet over MMF cable

Earth Unbalance

The measurement of the difference in the electrical performance of the individual wires of a pair to earth and to the screen. It corresponds to the difference between the capacitance of wire A to the screen and the capacitance of wire B to the screen. It influences the transmission characteristics of the cable.

EMC (Electro Magnetic Compatibility)

The ability for an electrical device to not influence other devices with its electromagnetic field and also to work satisfactorily within the electromagnetic fields of other devices.

FRNC, FR/LS0H or FRNC/LS0H

FR	= flame retardant
NC	= non corrosive - means no corrosive effect in the event of fire
LS	= low smoke - means low smoke emission in the event of fire
0H, ØH or ZH	= no halogen, zero halogen

Halogen free coating material

A halogen is a salt creator. Chlorine, bromine, fluorine and astat are listed in the periodic table of elements.

Cables with a PVC (polyvinyl chloride) sheath are flame retardant (see > PVC).

Halogen-free sheath materials don't contain any halogens!

Therefore no corrosive gases are emitted from the cable in the event of a fire, the smoke emission is reduced to a minimum and fire propagation is avoided.

Technical terms used in data cable technology

Impedance Z_0 (wave impedance, characteristic wave impedance)

The impedance of a conduit represents the ratio of the voltage wave progressing in a direction to the current wave. Common values are 100, 120 and 150 ohm. For higher frequencies the impedance is the root over the ratio between the distributed inductance L' and the mutual capacitance C' . It is important that the impedance of the cable corresponds with the input/output impedance of the attached end device.

minEMBc

The minEMBc bandwidth (Minimum Calculated Effective Modal Bandwidth) is the newest, most flexible and most accurate method to determine the minimum laser bandwidth (high data rate capability of a fibre). Its results are more comprehensive than those of DMD mask measurement methods. Both the minEMBc and the DMD measurement techniques were developed as part of the IEEE 802.3ae standard. The minEMBc method is described in TIA/EIA 455-220A and IEC 60793-1-49 Ed. 2.0. Today, it is the only scalable measurement technique recognised by international standards. Just as over-filled launch (OFL) bandwidth testing has demonstrated conformance for legacy applications and specifications, laser bandwidth test data provided by Datwyler MMF suppliers can be used to certify the requirements demanded by bandwidth hungry applications used today and in the future.

Mutual Capacitance (Distributed capacitance C')

This is the function of the line geometry (line ÷ line ÷ screen) and the dielectric constant (DK) of the insulation. As long as the DK of the insulation is constant with frequency, the distributed capacitance is almost frequency-independent. The mutual capacitance increases linearly with the cable length.

Network Theory

Every homogeneous line is defined by four parameters which refer to a unit length and are generally frequency-dependant. These are the resistance per unit length R' (conductor resistance) in ohm, the distributed inductance L' in Henry, the distributed capacitance C' (mutual capacitance) in Farad and the distributed leakage G' in Siemens.

NEXT, FEXT crosstalk attenuation

An interfering signal is induced by the field produced by a transmitted signal in one twisted pair on to a neighbouring twisted pair. The crosstalk is length-independent and becomes bigger with an increasing frequency. The difference between the desired signal and the induced signal on the neighbouring twisted pair is described as crosstalk attenuation and is indicated in dB. We distinguish between NEXT = Near End Cross Talk and FEXT = Far End Cross Talk.

NVP (Nominal Phase Velocity of Propagation)

Corresponds to the reciprocal value of the speed of transmission a sinusoidal wave relative to the speed of light. It is indicated in %c (c = speed of light). The NVP is primarily determined by the relative dielectricity constant of the wire coating. NVP is an approximate average value for the cable.

OFL (Overfilled Launch Bandwidth)

Overfilled launch bandwidth (OFL BW) is a familiar metric that is now understood to correlate only with LED-based multimode applications (typical: up to 100 Mbit/s). It is important to understand that OFL BW is never suitable for predicting laser performance.

PE

Polyethylene (PE) is a halogen-free synthetic material that burns easily. By adding additives, PE can be made flame retardant and get low smoke characteristics.

PiMF

Pair in metal foil - description for a STP cable. Each pair is shielded with a metal foil of its own.

PoE / PoE Plus

Power over Ethernet is the transmission of DC voltage - maximum 15 W (PoE) or 30 W (PoE Plus) - over twisted pair data cables and data networks. The transmission of DC voltage takes place parallel to the transmission of Ethernet protocols in one and the same cable by using the spare wires.

PSACR-F

PSACR-F is the Power Sum Attenuation to Crosstalk Ratio. As with all crosstalk measurements (including ACR) there is also a Power Sum ELFEXT (PSELFEXT). These are calculated values expected for multi-pair simultaneous full duplex transmissions

PVC

Polyvinylchloride (PVC) is a synthetic material containing halogen (unlike Polyethylene). Halogens (salt creators) are chlorine, bromine, fluorine, iodine and astat. By using additives like chlorine and fluorine PVC can be made flame-retardant and more resistant against outer influences. PVC jacketed cables are flame-retardant. Synthetic materials containing halogen, form highly-poisonous gases in case of fire. When mixed with water these gases form harmful corrosive acids.

Technical terms used in data cable technology

Return Loss (RL)

The transmission performance of a data cable differs along the length of the cable. The reasons are tolerances caused by different dielectric constants for the insulation and unavoidable production differences along the cable's length. Although they are so small this discontinuity in the cable construction causes reflections of voltage waves and current waves.

Results of these reflections are:

Reflection coefficient	=	Relation between transmitted (regular) and received (reflected) voltage wave or current wave at the discontinuity points
Reflow factor	=	Sum of all reflections having an effect on the beginning of the line (transmitted wave). This factor indicates the usefulness of a line
Return Loss (RL)	=	Logarithm of the reciprocal value of the reflow factor

A high Return Loss can only be reached by the highest production precision and by extremely little production tolerances (high homogeneity) and therefore is a quality characteristic.

RML (Restricted Mode Launch Bandwidth, RML BW)

RML Bandwidth test procedure is standardized in both TIA/EIA 455-204 (FOTP 204) and IEC 60793-1-41. RML BW restricts an overfilled launch through a 23.5 micron patchcord, which in turn measures the bandwidth capability of a fiber's low and intermediate mode groups. The resulting bandwidth measurement predicts laser performance for intermediate bandwidth systems (up to 850 MHz.km) in the same way – and with the same level of accuracy – as OFL BW predicts LED performance in legacy-bandwidth systems.

Skin Effect

The higher the signal frequency, the closer the current flows to the outside of the cable. At high frequencies the current flows through the very outer molecules of the wire.

Transfer Impedance (Coupling resistance)

The Transfer Impedance is a main parameter for the quality of the screen and is frequency dependant. The relation is between the voltage drop along the screen on the disturbed lengthways side (outer) to the interfering current on the other side (inside) of the screen. The coupling resistance is determined by the construction of the screen, the skin effect and the capacitive coupling.

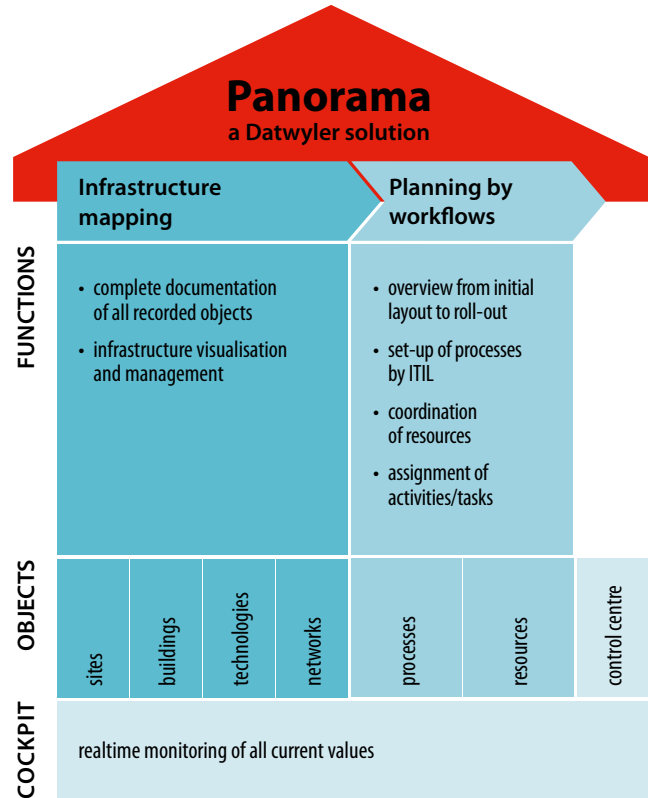


Panorama Management Software Solution

Support of universal building, technology
and network management

OPTIMAL PLANNING BY COMPREHENSIVE FUNCTION MODULES

Panorama is an universal management software, optimised for networks, technologies and buildings. The software can be deployed in many industries such as telecommunications, electrical engineering and finance.

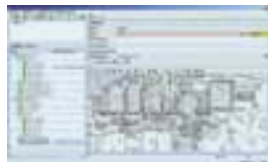


Panorama supports the documentation of all objects to be recorded and the visualisation of all processes and workflows to manage these objects – including any generation of activities and assignment of tasks around the service and maintenance management as well as fault and alarm management.

Individual solutions by deploying Panorama functional modules

Sites

- graphic and alphanumerical site management
- visualisation of imported CAD, GIS and Google Earth data
- area management information such as utilisation, energy consumption and cost data
- calculation and evaluation of site data



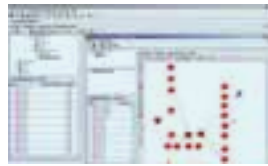
Buildings

- technical and commercial building management
- visualisation of imported CAD, GIS and Google Earth data
- facility management information such as heating systems, cabling infrastructures, climate and access control
- calculation of lease/additional costs
- visualisation of consumption data
- maintenance and service management by processes and workflows



Technologies

- facilities and devices visualisation and documentation
- device/array layout, configuration and operation via remote monitoring and remote control
- reports support fault management, deficiency analysis and asset management



Resources

- coordination of staff, tools, equipment, machinery
- planning of maintenance and service activities
- free definition of resources and intervals



Networks

- management and visualisation, from cable trays up to single optical fibre
- illustration of infrastructure including all logical connections
- workflow and task instructions for patch panel moves, adds, changes



Control centre

- control centre function for building control, transportation and energy systems, production lines and further applications
- remote monitoring and remote control enable control of heterogeneous technologies
- visualisation and monitoring of technical processes (Supervisory Control and Data Acquisition, SCADA)



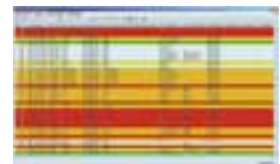
Processes, workflows

- processes and workflows for layout, installation and roll-out: support of maintenance and service intervals, fault and alarm management, IT Infrastructure Library (ITIL), et cetera



Fault management and alarm systems

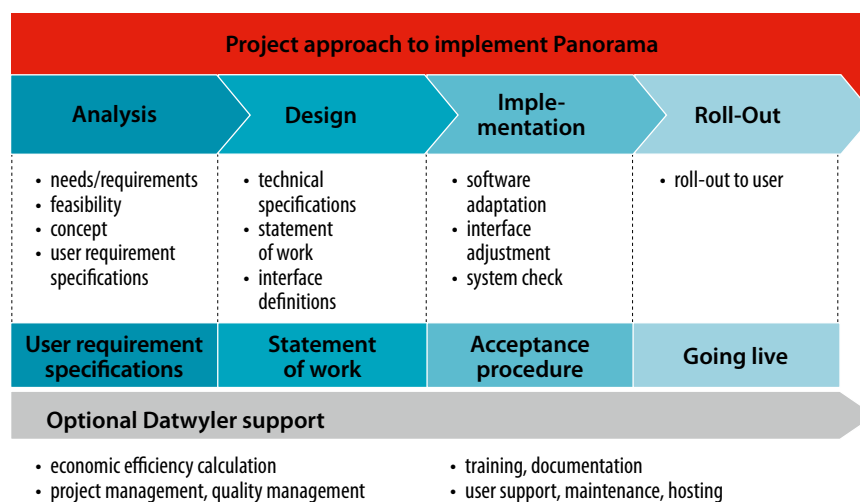
- incoming alarms ordered by priorities
- individually defined workflows enable to send emails, to create pop-up screens and to start assignments of tasks and processes



Development of individual solutions for technical and commercial building management

Some examples are:

- collection of metering data
- connection to facility management system
- benchmarking
- calculation and billing



Datwyler services

Datwyler takes responsibility for all necessary services:

- implementation of Panorama software
- operation of Panorama software
- management of physical infrastructure based on an SLA

THE LAST INFRASTRUCTURE REVOLUTION
in telecommunications

FIBER TO THE HOME (FTTH)



Over the last ten years, demand for bandwidth and the accompanying expansion of bandwidth in industrialised countries has increased ten-fold. The move from traditional, analogue TV consumption to individual digital television, Video on Demand, online gaming and Voice over IP means that copper cable is gradually approaching its physical capacity limits over the last mile. Glass will replace copper over the last mile – this is being called the ‘last infrastructure revolution in telecoms’.

Interest in Fibre to the Home (FTTH) projects has therefore grown steadily both in Europe and worldwide. Prominent flagship cities are Amsterdam, Västerås, Vienna and Zurich. Due to the great complexity and multi-dimensional nature of FTTH projects during the planning, implementation and operating phases, the companies involved must have in-depth expertise in a wide range of disciplines including the business management, legal and technical fields. Great attention must be paid to the development of business cases in order to ensure that investors enjoy long-term financial success.

In many countries, energy supply companies and local utility companies have a crucial part to play in FTTH projects. They are the companies with access to the basic infrastructure which must be used if the high investments are to be kept within reasonable bounds. In addition to this, topics such as Smart Metering and Smart Grid are becoming increasingly important to both groups. It is relatively easy to integrate these technologies during FTTH installation.

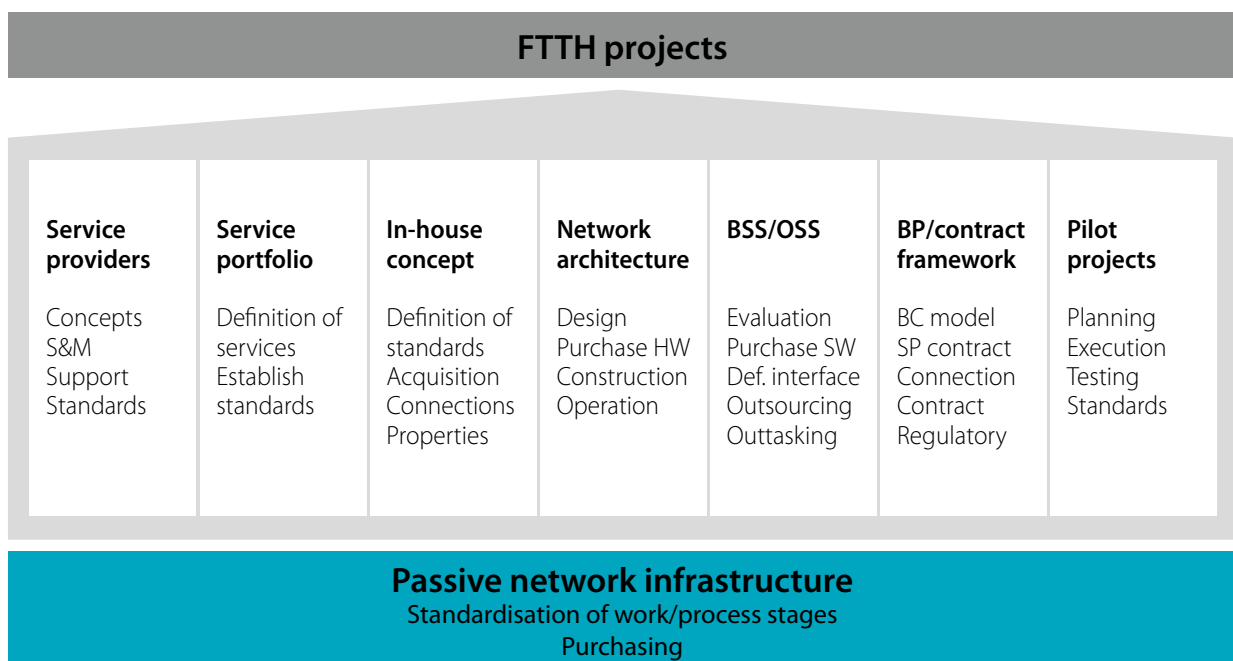
COMPLEXITY OF FTTH PROJECTS

The FTTH network provider will face a wide range of challenges which will vary according to the strategy selected. For example, there is the question of whether the company itself should provide a service to customers, including triple play services, or make the infrastructure (optical distribution network) available to one service provider or several.

The aspects listed clearly indicate that a large number of disciplines are involved in an FTTH project.

The core elements of successful FTTH projects are:

- Business model and business plan
- Service portfolio
- Collaboration with telecoms service providers
- 'Reeling in' the building owner, including building acquisition
- Drafting of contracts with service providers and end customers
- Conceptual network design, in-house/outdoor
- Survey of the existing infrastructure (routes, pipes, building connections, etc.)
- Availability of expertise, resources and organisation
- Establishing and evaluating business and operation support systems (BSS/OSS)
- Carrying out a pilot/reference project
- Process optimisation, eliminating work stages, cost optimisation
- Roll-out in the planned area
- Maintenance and servicing of the FTTH infrastructure



THE DATWYLER SOLUTION



Datwyler realised the complexity of FTTH projects at a very early stage and developed a range of solution concepts which it has implemented successfully when planning and carrying out a variety of projects, both in Switzerland and internationally. It has become clear that standardisation and modularisation offer excellent possibilities for completing projects cost-effectively on an optimum time-scale.

With its wealth of project experience, Datwyler can support energy supply companies and local utility companies at every stage of a project. Datwyler has also proved that it is capable of taking on full responsibility for a project if required.

As a leading provider of high-quality total solutions for FTTH network infrastructure, Datwyler sees its task not only as providing support through products and conventional consultancy services. Its experience also makes it a specialist in implementing FTTH projects on the ground.

The Datwyler FTTH portfolio includes:

- Turnkey infrastructure solutions from one source (as a general contractor)
- Business model preparation, business case validation and planning
- Telecom service level definition and development
- Clarification of the regulatory framework
- Strong partnerships with the leading technology providers in the FTTH field
- Consideration and use of local partners during implementation

Our FTTH solutions are modular. The customer can assemble an individualised package of relevant services. This applies to all three phases of an FTTH project: planning, execution and maintenance.

With its own engineering and service organisation and its existing network of highly qualified, certified partners, Datwyler can execute all aspects of turnkey FTTH projects in the role of a total or full service general contractor. Customers may also prefer to appoint Datwyler to execute individual modules within an FTTH project.

THE RIGHT CONCEPT, THE RIGHT PRODUCTS AND AN EXPERIENCED PARTNER BY YOUR SIDE



In FTTH projects both the choice of concept and the selection of suitable components should be guided by local conditions. The key factor is the type of development area, i.e. urban or rural.

“Green field” or “brown field”

Brown field is an area on at least part of which an infrastructure is already present. Here existing pipes have to be integrated into the design or new sub-pipes need to be laid. Datwyler recommends microtubes for in-pipe installation. Green field, on the other hand, is the name for an unbuilt area which will incorporate a new infrastructure. For reasons of cost it is advisable to rule out sub-pipes here and to plan direct-buried cable systems. Hollow cables from Datwyler suit this requirement: their sheath structure conforms to a cable design which has been tested for longitudinal and transverse leakage and has been well proven for decades.

The siting of technology centres (POPs)

Each chosen POP location should be central so that as many point-to-point connections as possible can be established without an intermediate distribution frame. If the POP locations are defined, further planning needs to cover average supply length and maximum individual length. The following is a rough guide:

Brown field – from POP to household an average of roughly 350 m and a maximum individual length of 800 m: The hollow cables mentioned above are ideal for this purpose, fitted, for example, with 24 pcs. 3/5 mm (internal/external diameter) tubes.

Green field – from POP to household an average of more than 350 m and individual ranges of over 800 m for more than 10% of households: Datwyler’s microtubes are recommended here, carrying a maximum of 7 10/12 mm tubes.

In an urban development, therefore, 24 individual pathways are available for each hollow cable, 7 tubes in a rural area. It is advisable to set aside approximately 15% of the tubes as spares.

Cell division (cluster creation)

Household tube allocations are drawn up at the planning stage. Thus, for example, a trunk cable is planned for every 20 households (24 individual pathways, of which 4 are reserves). All the hollow microcables run to the POP and are logically numbered. Distribution closures are installed as tube distributors. Y-diverters and distribution closures from Datwyler are ideal for this purpose: connectors are used to provide individual tubes with a pressure-resistant joint (10 bar).



Dietlikon Public Utility Company

References

Zurich Electric Utility Company (ewz)	Zurich	e.wa riss GmbH	Biberach
Dietlikon Public Utility Company	Dietlikon	HL kömm	Leipzig
Sankt Gallen Public Utility Company (sgsw)	St Gallen	SIG Services Industriels de Genève	Geneva
Bamberg Public Utility Company	Bamberg	GSW Gemeinschaftsstadtwerke	Kamen-Bönnen-Bergkamen

The ODF (Optical Distribution Frame)

The choice of an ODF depends on your concept, the anticipated packing density and take-rate (subscribers = active ports). In an urban development each of the 20 individual tubes may carry up to 12 fibres. In a rural development 6 individual tubes (1 = reserve) may carry 144 fibres each. An ODF of considerable size may therefore be required! Selection of the right components depends on fibre concept and quantity. ODFs, racks and distribution panels from Datwyler are an excellent choice for all these requirements.

Household termination

Datwyler’s FTTH household distributors were specially developed for passive household FO cable termination. A gas-tight connector can be integrated with each distributor. For house-front mounting we also supply solutions which can be customised to suit any given situation.

Residential cabling

As a rule a new building incorporates a viable, modern standard-compliant star-shaped hollow pipe installation. In older buildings, however, one often has to contend with a tightly dimensioned pipe infrastructure generally laid in a daisy-chain configuration, if not a surface-mounted installation. For all these requirements Datwyler can supply special modular products which are hard-wearing enough for heavy-duty residential use.

Among others these include our flush- and surface-mountable hybrid socket, which can be fitted as a modular component, and thin in-house cables with bend-optimised fibres which are ideal for installing in ducts and pipes. Where customer end devices need to be connected with patch cables we supply steel-reinforced FO patch cables which will withstand heavy loads and have a predetermined breaking point designed to give if you trip over them, thus preventing injury or damage.

Find our products and solutions for Fiber to the Home (FTTH) in the respective catalogue.

www.datwyler.com

SAFETY CABLE SYSTEMS



Leading know-how

As a provider of total solutions for safety cable systems, Datwyler possesses comprehensive know-how accumulated over decades:

- Co-development of extended functional integrity tests in collaboration with renowned testing institutes in the early 1990s.
- Sound knowledge of safety engineering and building codes and standards.
- Leading material, production and process know-how in the fabrication of safety cables incorporating patented and proven ceramic technology.
- Development of the first metal-free fibre-optic cable with E30 extended functional integrity through combining existing technical competence in data and safety cable engineering.
- Broad systems competence.
- Collaboration with renowned technical universities, international standard committees and independent testing institutes.

Diverse applications

Datwyler safety cable systems with extended functional integrity are used wherever stringent fire-safety requirements must be met and people and property could be at risk due to fire and smoke:

- Airports, train stations, metro stations
- Hotels and hospitals
- Sports stadiums, theatres and concert halls
- Office and exhibition buildings, public buildings
- Tunnels for road and rail

System solutions

- The Datwyler cable line includes halogen-free, low-smoke emission and flame retardant safety cables with circuit integrity and functional integrity.
- The safety product line includes support systems, mounting components and appropriate accessories to ensure functional integrity.
- Our FO Safety cables are the first metal-free fibre-optic cables with E30 extended functional integrity with reference to DIN 4102-12.
- Fire protection seminars and special calculation programmes offer engineers and installers valuable support.
- Datwyler offers comprehensive services up to and including turnkey and multi-site projects.



Galeria Krakowska, Krakow

Selected reference projects

Allianz Arena	Munich	Trade Fair	Stuttgart
Dexia BIL	Luxembourg	Reichstag	Berlin
International Airport	Frankfurt	Subway	Munich
World Trade Center	Dubai	Metro	Prague
Galeria Krakowska	Krakow	Gotthard motorway tunnel	Gotthard
New main station (Lehrter Bahnhof)	Berlin	Mercedes Benz Museum	Stuttgart
Crystal Plaza Towers	United Arab Emirates		

Customer value in focus

Datwyler stands for more than the production and distribution of products. For your safety cabling systems we provide everything from one source: modular system solutions with high-quality cables and components, with all the necessary test certificates and authorisations and with long-term warranties. You can rely on our expert support for all aspects of our supply – beginning with planning, consultancy, through logistics, installation and ending with system maintenance. The interaction of these elements creates added value. As a customer you benefit from cost-effective installation thanks to our innovative installation methods, sign-off without any difficulties, low insurance rates, and dependable transmission of power and data even in the event of fire.



Crystal Plaza Towers, United Arab Emirates

SAFETY CONCEPTS FOR BUILDINGS

Proven quality

Datwyler is the first European manufacturer to develop a complete system solution that meets the demands of today's industry for reliable power supply and data transmission in the event of fire. Datwyler cables and our approved cabling system components are the result of many years of intensive development in coordination with the relevant standardisation bodies.

Selected raw materials and special compounds in combination with unique installation methods are what give a Datwyler system its high quality and maximum guaranty of safety in the event of fire.

Datwyler cables and safety system components are used wherever people, machinery and equipment are endangered by fire and smoke emission: in buildings with high density of occupants as well as in facilities containing large concentrations of valuable property.

Our safety cable systems have to be highly reliable when it comes to practical operations. This is why Datwyler measures each and every product against strict quality standards before it leaves the company. Specifically, this means that all processes are integrated into the comprehensive management system in accordance with ISO 9001 and ISO 14001. Beyond this, additional application-specific inspection and test methods ensure that Datwyler cables and safety cable systems exceed the requirements of our customers as well as the stringent standards specified by the various countries in which our products are used.

Steel conduits and halogen-free plastic conduits



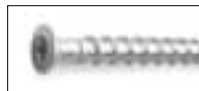
Gas concrete plugs F90



Fire protection plugs F90
Installation depth 30mm



Screws F90



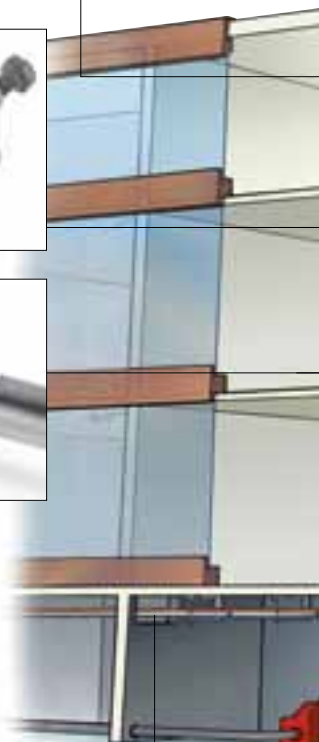
Single clamps
type SAS
Spacing $\leq 600\text{mm}$



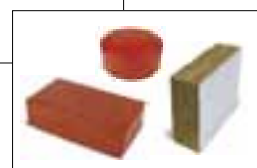
Strap clamps
without trough type B
Spacing $\leq 800\text{mm}$



Strap clamps
with trough type B
Spacing $\leq 800\text{mm}$



Identification signs



Firestop systems S90/S120
Plates/Mortar/Bricks/Plugs

Safety cables
E90 Keram



WUM
Support measure

Modular shaft lighting system

Safety cables
E90 Keram

Safety cables
E30-E60 Keram



Flat form cable
with integrated data bus



Cable joints
E30 and E90 for all dimensions

Elevator travelling cables



Fibre optic safety cable,
E30 with reference to
DIN 4102-12, 30 minutes



Distribution box
E30-E90
type "Hercules"



Cable trays and cable ladders
E30/E90
Spacing ≤1500mm


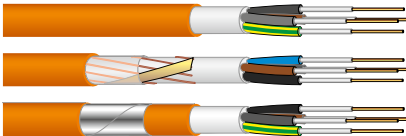
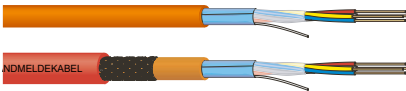


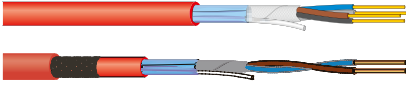

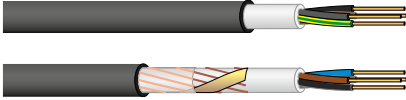


Connection/terminal box
E30-E90








Multi cable support
"Hermanschelle" E30/E90
Spacing ≤600/800mm

CABLE TECHNOLOGY FOR HIGHEST SAFETY REQUIREMENTS

CABLE	APPLICATIONS	PRODUCT RANGE/STANDARDS
Safety cables with extended functional integrity		
<p>Low voltage cables up to 0.6/1 kV E30-E90; FE180; BS 6387 CWZ; PH30-120, Rf-1 1½₂</p>  <p>with mechanical protection</p>	<p>Safety cables with circuit integrity and extended functional integrity to maintain power supplies to sprinkler systems, emergency lighting, smoke and heat extraction systems, emergency lift supplies and fire fighting lifts.</p>	<p>Single core cables from 1.5 to 630 mm² Multi core cables from 1.5 to 300 mm² Also available with mechanical protection</p> <p>Standards/Approvals IEC, EN, CENELEC, BS, DIN VDE, SEV, NBN, VKF, VdS, GOST-R, Ukraine</p>
<p>Wiring and fire alarm cables up to 225 V E30-E90; FE180; BS 6387 CWZ; PH30-120, Rf-1 1½₂</p>  <p>with mechanical protection</p>	<p>Safety cables with circuit integrity and extended functional integrity to maintain power supplies and data transmission to fire alarm systems, public address and voice alarm systems.</p>	<p>Single or multi pair cables, individually or collectively screened. Also available as fire alarm cable and with mechanical protection.</p> <p>Standards/Approvals IEC, EN, CENELEC, DIN VDE, SEV, NBN, GOST-R</p>
<p>Fibre-optic safety cables with reference to DIN 4102-12 30 min. (E30); IEC 60331-25</p> 	<p>Universal fibre-optic cables for indoor and outdoor applications.</p>	<p>Loose tube construction with up to 60 SM or MM fibres with non-metallic rodent protection.</p> <p>Standards/Approvals IEC, EN, CENELEC, DIN VDE</p>
Safety cables with circuit integrity		
<p>Fire alarm cables 300/500 V BS 6387 CWZ; FE180; BS 8434-2, EN 50200 (PH 30-120) and Annex E</p>  <p>with mechanical protection</p>	<p>Safety cables with circuit integrity to maintain power supplies and data transmission to fire alarm systems, emergency lighting, public address and voice alarm systems.</p>	<p>Screened multi core cables from 1.0 mm² to 4 mm². Also available with mechanical protection.</p> <p>Standards/Approvals BS, EN, CENELEC, LPCB, GOST-R</p>
Safety cables with improved characteristics in case of fire		
<p>Low voltage cables up to 0.6/1 kV</p> 	<p>Safety cables with improved characteristics in case of fire – an alternative to traditional PVC cables, where no circuit integrity is required.</p>	<p>Single core cables from 1.5 to 630 mm² Multi core cables from 1.5 to 300 mm² Also available with mechanical protection and as flexible, oil resistant version.</p> <p>Standards/Approvals IEC, EN, CENELEC, DIN VDE, SEV, GOST-R</p>

Are you looking for a building, technology and network management software which enables effective planning, management, documentation and control of all objects and processes around your infrastructure? Feel free to ask for details about "Panorama"!

SYSTEM COMPATIBLE INSTALLATION COMPONENTS

SYSTEM COMPONENTS	APPLICATION
<p>Single clamps, multi cable supports</p> 	<p>Single clamps to install single cables or cable bundles conforming to common practice.</p> <p>Multiple cable supports for a cost effective installation of several cables.</p> <p>These components facilitate the quick and easy retrospective/subsequent installation of cables.</p>
<p>Support systems</p> 	<p>Special support systems to install several cables conforming to common practice.</p> <p>Approved for ceiling and wall mounting with possibility of easy retrospective/subsequent installation of cables.</p> <p>Corresponding fixing devices, such as fire safety dowels, installation screws and setting tools are available for all support systems.</p>
<p>Connecting technology</p> 	<p>Cable joints to connect Datwyler safety cables with system circuit and extended functional integrity. Distribution boxes with extended functional integrity E30-E90. Also available as fire resistant covers to protect standard connections or junction blocks.</p> <p>Distribution boxes with system circuit integrity for high- and low-voltage cables.</p>
<p>Firestop systems</p> 	<p>Firestop systems S90/S120</p> <ul style="list-style-type: none"> - Firestop coated board S100 P - Intumescent firestop paint S100 D - Intumescent firestop mastic S100 SM-K - Firestop bricks TS 90 - Firestop plugs TS 90
<p>Seminars</p>  <p>For further information please visit www.datwyler.com</p>	<p>Datwyler is setting new standards.</p> <p>Our safety cables combined with Datwyler system components make up the perfect and cost effective safety solution.</p> <p>Datwyler regularly holds seminars on cabling systems with integrated circuit and extended functional integrity as well as on firestop systems.</p>

Find our Fire Safety products and solutions in the respective catalogue.

www.datwyler.com

MAXIMUM FLEXIBILITY
in installation

BUILDING AUTOMATION



The modular product portfolio
for optimised system integration

System ECO-A
platform cable system



System ECO-B
products for the decentral,
modular integration



System ECO-C
products for the central,
clear integration



System ECO-D
products for the decentralised,
fast integration



System ECO-E
products for simple,
economic integration



System ECO-F
products for flexible,
efficient integration



System ECO-M
products for
Smart Metering



System ECO-S
software



System ECO-T
SIP door communication



Modern office and administration buildings require future-proof, adaptable electrical systems. Users are no longer willing to be restricted by inflexible solutions. They demand 'plug-and-play' in the form of flexible control and automation of virtually every technical function of the building. With building automation solutions from Datwyler, many functions and systems such as HVAC, lighting, security and load management can be easily integrated. Control tasks can be done centrally, decentrally or automatically.

Leading know-how

As a provider of total solutions for the electrical and communications infrastructure of public and commercial buildings, Datwyler possesses leading know-how acquired over decades. Applying our competence in materials, production and processing in the fabrication of flatform cables, we have developed the ECO-A system, a comprehensive solution combining flexible power distribution with control and automation of all building functions.

Complete system solutions

Decentral, modular and pluggable – Datwyler offers sustainable system solutions tailored to changing customer needs, upcoming technologies and energy-efficient operation. Thus, our building automation solutions ensure high operational reliability and low operational costs.



Sony Center, Berlin

Selected reference projects

MDR	Erfurt	Daimler Chrysler	Stuttgart
NBV UGA	Herongen	Frankfurt Stock Exchange	Frankfurt
Petronas Towers	Kuala Lumpur	Sony Center	Berlin
District hospital	Winterswijk		

Diverse applications

In recent years Datwyler has extended its proven ECO-A portfolio to include eight product groups for building automation based on the KNX standard. These product groups are used in system solutions for basic infrastructure as well as tenant improvements, including a wealth of applications such as responsive lighting, intelligent shading, HVAC, connections to third party systems, visualisation, power data metering and door communication via SIP.

The product groups have a modular structure and can be deployed in any combination. This makes it possible to achieve a cost-effective solution for every project.

Combined with our flatform cable systems for power distribution and data transmission and with our control and visualisation software which makes various systems available on one platform, the Datwyler product portfolio meets all requirements of intelligent building automation.

Customer value in focus

Datwyler stands for more than the production and distribution of high-quality products. For your technical building systems we provide modular total solutions from one source, including consulting, support, logistics, warranty and turn-key responsibility if required.

Integrating these elements into sophisticated overall packages creates added value. As a customer you benefit from:

- drastically reduced cabling
- the use of factory-ready modules
- easier planning and documentation
- reduced installation time
- high flexibility, rapid changeability and adaptability
- higher safety due to lower fire loads
- cost-saving operation, lower power consumption
- cost-effectiveness due to customised total solutions
- long-term investment protection

PRODUCT OVERVIEW

System description

Modern building services installation calls for control and automation of the widest possible range of functions. Whereas conventional electrical building services installation merely distributes power and could be switched if necessary, the ECO-A system meets the higher standards demanded of modern building services.

Compared with conventional electrical installation, modern building management using a Datwyler building automation system features a minimum of cable expenditure, rapid adaptability, and flexible use of space. This guarantees that your investment will retain its value for decades to come.

Our cabling solutions enables the problem-free linking of a very wide variety of building services functions and facilities that have been strictly separated to date – such as heating, air conditioning, ventilation, lighting, building surveillance, and load management. Open and closed-loop control operations can be centralised or decentralised.

The flatform cables and appropriate pre-assembled plug-in and screw components make insulation stripping unnecessary and considerably reduce installation time. The installations can be modified or extended without any major planning effort.

The modular building automation product portfolio enables optimised system integration. The portfolio ranges from pre-configured plug-and-play solutions for decentralised systems, to cost-effective semi-centralised room solutions – e.g. for hotels, hospitals and office buildings – to total solutions for centralised building automation systems.



System ECO-C
products for the central, clear integration



System ECO-E
products for simple, economic integration



Platform cable Data with Data Adapter
outgoing circuit without insulation stripping for inter-connecting the sensors with flatform data transmission cables



Combi Adapter 5x2.5+2x0.5
combined data and power output circuit for flatform cables Combi



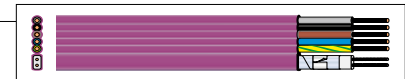
Platform cable Power 5x10
flatform power cable 5x10mm²
e.g. for power supplies



Power I Adapter
power in- and output



Platform cable Power I 7x2,5+5x16mm²
for damp location, flatform power cable system for engine rooms and industrial applications



Platform cable Combi
combined data and power flatform cable, e.g. for lighting supply and switching operations



System ECO-D
compact, plug-in KNX actuators with fast connection technology for error-free assembly in intermediate floors or suspended ceilings



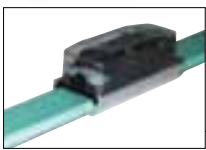
Platform cable Patch
pre-assembled patch cables to connect consumers and to supply office actuators



System ECO-B
products for the decentral, modular integration



KNX IR Remote Control ECO-E ZN11R



Platform cable Power 5x10 with Power 5x10 Adapter out
power output circuit for flatform cable Power 5x10mm² e.g. pre-assembled with floor boxes and output circuit fuse



KNX sensing device
twofold, fourfold














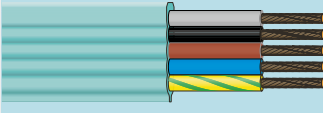



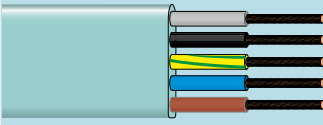


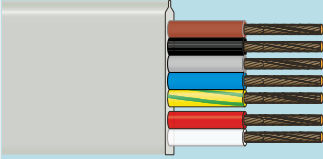

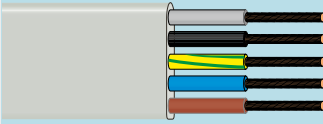

Platform cable Data data cable



Data-R round data cable




PLATFORM CABLE SYSTEMS AND ACCESSORIES (ECO-A)

CABLE	IN- AND OUTPUT	OUTPUT
<p>Platform cable Combi</p>  <p>PVC 5x2,5 mm² + 2x1,5 mm² Art.No.187 028</p> <p>FR/LSOH 5x2,5 mm² + 2x1,5 mm² Art.No.187 034</p>	 <p>Combi Adapter-S 5x Energy+Bus Art.No.1300 235</p>  <p>Combi Adapter-S 5x Energy Art.No. 1300 236</p>  <p>Combi Adapter-S Bus Art.No. 1300 237</p>	 <p>Combi Adapter 3x Energy+Bus EIB/KNX Art.No. 1300 282</p>  <p>Combi Adapter 3x Energy+Bus Art.No. 1300 282</p>  <p>Combi Adapter 3x Energy Art.No. 1300 350</p>
<p>Platform cable Data</p>  <p>PVC 2x1,5 mm² Art.No. 179 669 / 175 475</p> <p>FR/LSOH 2x1,5 mm² Art.No.179 679 / 176 900</p>	 <p>Data Adapter EIB/KNX Art.No. 1300 286</p>  <p>Data Adapter Art.No. 1300 353</p>  <p>Data Adapter Quick Art.No. 1300 303</p>	
<p>Platform cable Power 5x2,5 mm²</p>  <p>PVC 5x2,5 mm² Art.No. 187 048</p> <p>FR/LSOH 5x2,5 mm² Art.No. 187 053</p>	 <p>Power Adapter-S 5x Energy Art.No. 1301 076</p>	 <p>Power Adapter 3x Energy Art.No. 1301 075</p>  <p>Power Adapter 5x Energy Art.No. 1301 077</p>
<p>Platform cable Power 5x10 mm²</p>  <p>PVC 5x10 mm² Art.No. 187 014</p> <p>FR/LSOH 5x2,5 mm² Art.No. 187 022</p>	 <p>Power 10 Adapter 5x Energy Art.No. 1300 295</p>	 <p>Power Adapter 5x Energy Art.No. 1300 302</p>
<p>Platform cable Power I 7x2,5 mm² IP67</p>  <p>PVC 7x2,5 mm² Art.No. 187 039</p> <p>FR/LSOH 7x2,5 mm² Art.No. 187 059</p>	 <p>Power I Adapter for screw-tightened connection 7x2,5 In/Out Art.No.1301 325</p>	<p>Power I cable glands for Power I Adapter</p> <p>Ø 9-16 Art.No. 1301 318 Ø 13-18 Art.No. 1301 319 Ø 11-20,5 Art.No. 1301 320</p> <p>Blind-gland Art.No. 1301 322</p>
<p>Platform cable Power I 5x16 mm² IP65</p>  <p>PVC 5x16 mm² Art.No. 187 045</p> <p>FR/LSOH 5x16 mm² Art.No.187 025</p>	 <p>Power I Adapter for screw-tightened connection 5x16 In/Out Art.No.1301 316</p>	<p>Power I cable glands for Power I Adapter</p> <p>Ø 9-16 Art.No. 1301 318 Ø 13-18 Art.No. 1301 319 Ø 11-20,5 Art.No. 1301 320 Ø 20-26 Art.No. 1301 317</p> <p>Blind-gland Art.No. 1301 322</p>

	FIXING DEVICE	ACCESSORIES	ENDING DEVICE
 <p>Combi Adapter EIB/KNX 5x Energy+Bus EIB/KNX Art.No. 1300 284</p>  <p>Combi Adapter 5x Energy+Bus Art.No. 1300 351</p>  <p>Combi Adapter 5x Energy Art.No. 1300 283</p>	 <p>Uni Fix Art.No. 1300 290</p>  <p>Fix Art.No. 1300 239</p>	 <p>Tape Art.No. 1300 169</p>  <p>Combi Tool stripping tool Art.No. 1300 240</p>	 <p>Combi End Art.No. 1300 238</p>
	 <p>Uni Fix Art.No. 1300 290 / 182 181</p>  <p>Fix Art.No. 1300 239</p>	 <p>Combi Tool stripping tool Art.No. 1300 240</p>	 <p>Data End Art.No. 1300 287</p>
	 <p>Uni Fix Art.No. 1300 290 / 182 181</p>  <p>Fix Art.No. 1300 239</p>	 <p>Tape Art.No. 1300 169</p>  <p>Combi Tool stripping tool Art.No. 1300 240</p>	 <p>Power End Art.No. 1300 875</p>
	 <p>Power Fix Art.No. 1300 289</p>	 <p>Tape Art.No. 1300 169</p>  <p>Power 10 Tool cable stripper Art.No. 1300 306</p>	 <p>Power 10 End Art.No. 1300 354</p>
 <p>Power I Adapter socket 7x2,5 Art.No. 1301 326</p>  <p>Power I Plug IP67 Art.No. 1301 327</p>  <p>Power I Adapter 7x2,5 InOut Art.No. 1301 325</p>	 <p>Fix Art.No. 1300 239</p>	 <p>Tape Art.No. 1300 169</p>	<p>Power I End 7x2,5</p>
 <p>Power I Adapter screw-tightened connection 5x16 Out for single and double branch connection up to 5x6mm² Art.No. 1301 315</p>  <p>Power I Adapter screw-tightened connection 5x16 InOut Art.No. 1301 316</p>	 <p>Fix Art.No. 1300 239</p>	 <p>Tape Art.No. 1300 169</p>	<p>Power I End 5x16 Art.No. 1301 321</p>

BUILDING AUTOMATION

Mounting and installation	 System ECO-B	 System ECO-C	 System ECO-D																
	<p>Products for the decentral, modular integration</p> <p>Project-specific optimised installation box for mounting in false ceilings or raised floors. Use of pre-assembled patch cables to connect consumers and to supply the box.</p>	<p>Products for the central, clear integration</p> <p>System devices, IP and DALI devices and multi-channel KNX sensors and actuators for centralised and decentralised installation in electrical distributors and in rooms.</p>	<p>Products for the decentralised, fast integration</p> <p>Compact, plug-in KNX actuators with fast connection technology for error-free assembly in intermediate floors or suspended ceilings.</p>																
<p>decentralised mounting project-specific configuration modular devices plug-in connections</p>	 <table border="0"> <tr> <td>switching actuator</td> <td>4x 16 A</td> </tr> <tr> <td>DALI actuator</td> <td>2x 8-fold</td> </tr> <tr> <td>Dimmer</td> <td>2x 250 VA</td> </tr> <tr> <td>Blind actuator</td> <td>2-fold</td> </tr> <tr> <td>Binary input</td> <td>8-fold</td> </tr> <tr> <td>Semiconductor switch</td> <td>4-fold</td> </tr> <tr> <td>EnOcean gateway</td> <td>16-fold</td> </tr> </table>			switching actuator	4x 16 A	DALI actuator	2x 8-fold	Dimmer	2x 250 VA	Blind actuator	2-fold	Binary input	8-fold	Semiconductor switch	4-fold	EnOcean gateway	16-fold		
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Binary input	8-fold																		
Semiconductor switch	4-fold																		
EnOcean gateway	16-fold																		
<p>decentralised mounting flat size plug-in connections directly to the Combi cable</p>	 <table border="0"> <tr> <td>Switching actuator</td> <td>4x 16 A</td> </tr> <tr> <td>Switching actuator</td> <td>6x 16 A</td> </tr> <tr> <td>Switching/dimming actuator</td> <td>2-fold</td> </tr> <tr> <td>Blind actuator</td> <td>2-fold</td> </tr> <tr> <td>Combi actuator</td> <td>1x Switch + 2x Blinds</td> </tr> <tr> <td>EnOcean gateway</td> <td>56-fold + 4x 16 A</td> </tr> </table>			Switching actuator	4x 16 A	Switching actuator	6x 16 A	Switching/dimming actuator	2-fold	Blind actuator	2-fold	Combi actuator	1x Switch + 2x Blinds	EnOcean gateway	56-fold + 4x 16 A				
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Combi actuator	1x Switch + 2x Blinds																		
EnOcean gateway	56-fold + 4x 16 A																		
<p>centralised mounting for distribution boards</p>	 <table border="0"> <tr> <td>KNX power supply</td> <td></td> </tr> <tr> <td>KNX/USB interface</td> <td></td> </tr> <tr> <td>KNX/IP interface/router</td> <td></td> </tr> <tr> <td>KNX/DALI gateway</td> <td></td> </tr> <tr> <td>Binary input</td> <td>8 to 16-fold</td> </tr> <tr> <td>Binary output</td> <td>8 to 16-fold</td> </tr> <tr> <td>Load switch</td> <td>8 to 12-fold</td> </tr> <tr> <td>Blind actuator</td> <td>4 to 8-fold</td> </tr> </table>			KNX power supply		KNX/USB interface		KNX/IP interface/router		KNX/DALI gateway		Binary input	8 to 16-fold	Binary output	8 to 16-fold	Load switch	8 to 12-fold	Blind actuator	4 to 8-fold
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Blind actuator	4 to 8-fold																		
<p>decentralised mounting flush- or wall-mounting devices</p>	 <p>KNX push button interface 2-fold/4-fold</p> <p>KNX presence detector with constant light dimming</p> <p>KNX touch panel</p>																		
<p>optional products and accessories</p>	 <p>EnOcean Aerial</p>		 <p>EnOcean Aerial</p>																



System ECO-E

Products for simple, economic integration

Highly functional, but easy to-integrate KNX products with innovative features for central room functions.



System ECO-F

Products for flexible, efficient integration

High-quality user interfaces with touch-sensitive tactile zones and multitouch function. Standard push buttons sensors and EnOcean Wireless sensors.



System ECO-M

Products for Smart Metering

Meters for electrical energy with standardised communication interface, network coupler and versatile temperature sensors for different applications.



System ECO-T

Products for IP door communication

SIP Module System and SIP doorstations for door communication via IP network.



Door Camera Steel



SIP Door Module ECO
and Maxi



Push Button Modules



SIP Door Station IP54

SIP Door Station IP54 Video



KNX power supply

Multi-functional actuator 4x 10 A

Multi-functional actuator 6x 10 A

Multi-functional actuator 4x 16 A

Universal dimming unit 400 VA



3-Phase energy meter
direct/transformer connection

Communication Interface e.g.
KNX, M-Bus, Ethernet et al.

KNX 3-phase energy meter

KNX network interface



KNX touch display

Analog/digital input 4-fold

RS232 Open Interface

Air conditioner controller



KNX Sentido Interface



KNX Push Button Plus



EnOcean RF push button



KNX room temperature sensor

KNX contact temperature sensor

KNX data logger



Frames and housings
for Module System



IR remote control

NTC temperature sensor



Touch sensitive Sentido
2-fold

Touch sensitive Sentido
4-fold



Optical reading device

M-Bus reading software



LAN Secure Adapter

POWER AND DATA
for modern elevators

ELEVATOR CABLE SYSTEMS



Unnoticed by elevator passengers, elevator cables from Datwyler do their job around the world every day. They reliably transfer power and data between the elevator cabin and the control system. Withstanding great mechanical stress, they provide faultless operation round the clock. No wonder Datwyler elevator cables are installed in the fastest elevators and the highest buildings in the world.

Space in cities is limited. High-rises are being erected around the globe. Elevators with ever greater performance are providing rapid access to the upper floors of these tall buildings. And so the requirements for the materials used are becoming increasingly tougher. As a leading manufacturer of elevator cable systems, Datwyler knows the needs. Not only must international standards be met, but knowledge of customers' specific needs is essential. Our reliable elevator cable systems are known for smooth operation that adds significant comfort to the ride.

Leading know-how

Using various test methods, some of which were developed by Datwyler, we produce elevator cables for service under the toughest conditions. Our specialists define materials and designs that even under permanent dynamic loading show no signs of fatigue. We also offer halogen-free materials for special fire safety concepts.



Spinnaker Tower, Portsmouth

Selected reference projects

Shanghai Oriental Pearl Tower	Shanghai	Post Tower, German Post headquarters	Bonn
Canary Wharf	London	Torre Major	Mexiko City
Capital Towers	Dubai	Spinnaker Tower	Portsmouth
New World Trade Center	New York		

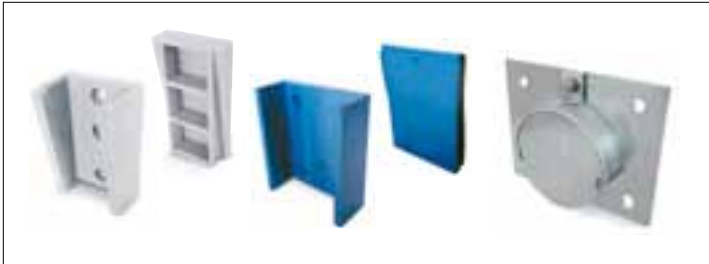
Diverse applications

Datwyler elevator cable systems meet every requirement for electrical connections to the elevator cabin. Aside from power cables, high-quality data cables are being increasingly requested. Integral fibre optic cable can easily handle large volumes of data. These modern system solutions connect the elevator cabin to the controls and to the local data network – so passengers can enjoy television and video services in the elevator.

Customer value in focus

Datwyler has developed innovative system solutions for electrical installations for elevators. Comprehensive harnessing and logistics services with modern B2B connectivity round off the service offering of Datwyler.

PRODUCT OVERVIEW



Suspension devices
for Datwyler FL, FM, FH,
module concept and
compensation weight



Installation tools
for simple installation
of FL, FM and FH
cables



Shaft lighting system

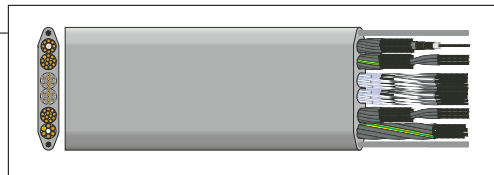




Pre-assembled machine room cabling (MRC)
ready for installation



Flat cables
FL, FM, FH and
module concept
PVC and zero-halogen



Pre-assembled hoistway cables/wires (HW)
ready for connection



Pre-assembled travelling cables (TC)
for travelling heights up to 400m

Find our products and solutions for elevator cable systems in the respective catalogue.

www.datwyler.com

ARTICLE NUMBERS

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182773	62	185732	129	186488	203	190163	215	190700	221
182784	62	185735	163	186497	225	190164	215	190709	221
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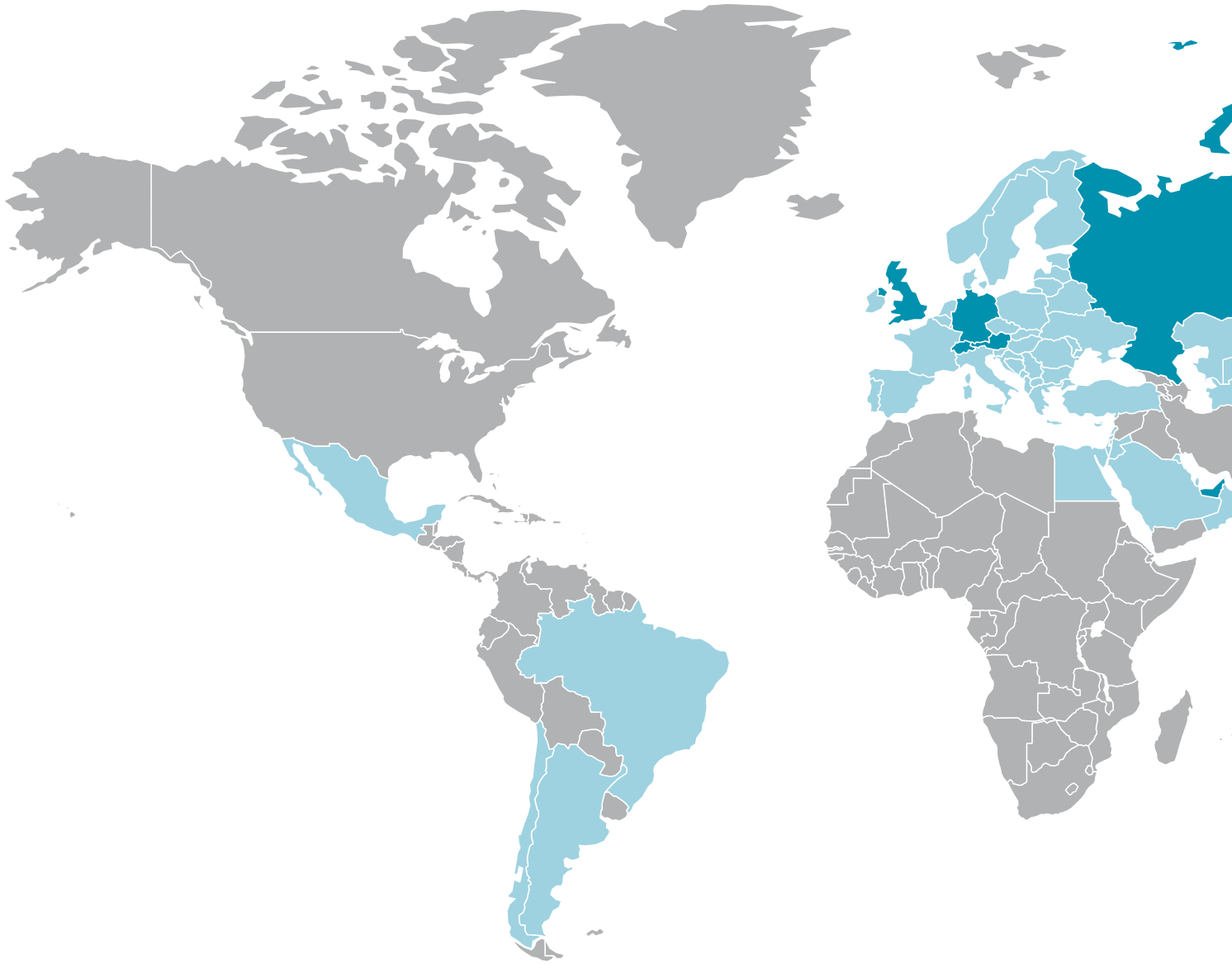
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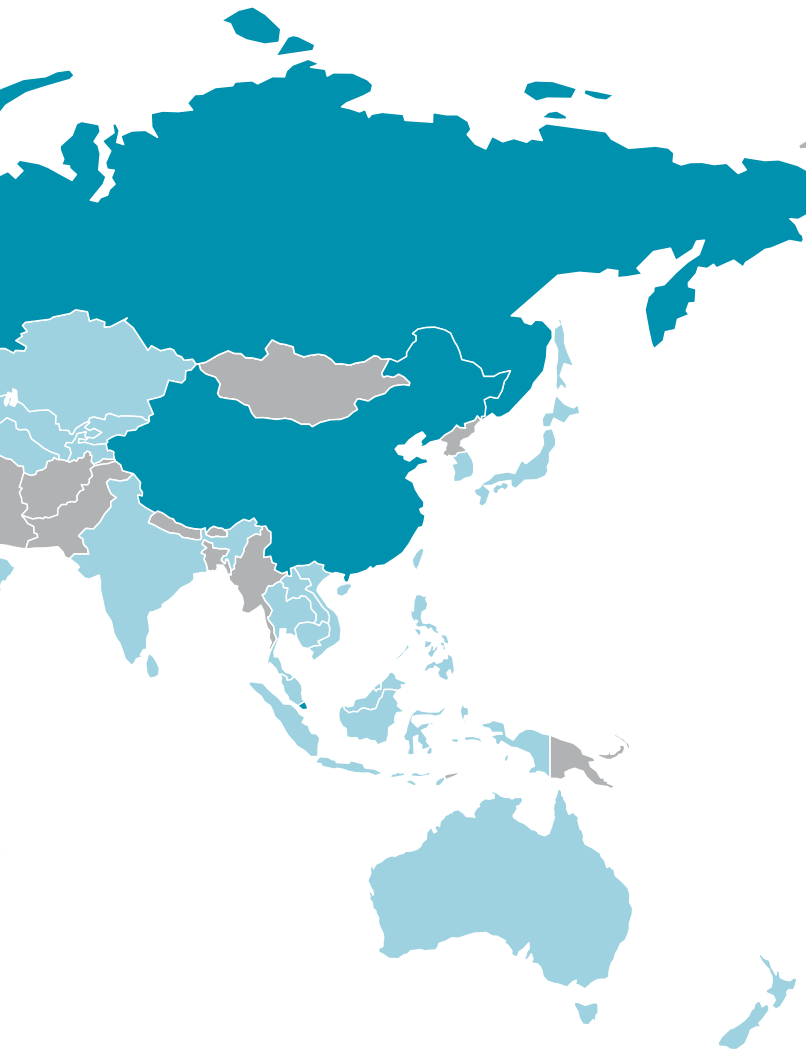
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