about DLL Partners

Dll Partners is one of the fastest-growing companies in Poland providing complex telecommunication and teleinformatics solutions based on fibre optic technology. Our company was founded in 2002 by a group of graduates of the Technical University of Szczecin. We exclusively represent our own capital (100%), have the best engineers and provide proprietary solutions. In the opinion of professionals, technological solutions supplied by DLL Partners are equal in quality to the solutions of world-famous manufacturers. Our engineers and specialists are constantly working to provide new, cutting-edge technology in the fiber optics market. Our success derives from investment in science, development and know-how. DLL Partner is one of the few Polish companies that produce patch cords and pigtailed on all the available fiber optical connectors. Therefore, we can guarantee secure and quick deliveries even in the case of non-standard orders. Our offer also includes a full array of passive elements of fiber-optic trunk lines.

The technical department of Dll Partners develops polishing procedures for patch cords and pigtailed on the basis of technologies for machine polishing of fibre optical connectors. This technology guarantees the highest quality of the fibre optic connectors installed. Dll Partners, as one of the first and the only company in Poland, introduced its own polishing machine XP-I into the production process. With the passage of time, the machine has undergone subsequent modifications. Currently, the production process uses fourth generation machines, equipped with a touch panel display.

Project name:
The purchase of hardware and software for implementation of an innovative production process of passive fibre-optic elements

Beneficiar:
Dll Partners Dziubanowski Leśniewski Ostojski Sp.J.
# Table of Contents

## 4 Prefabricated Cables
5 Pigtail and Patchcords  Q-Fiber
6 Patchcord MC  Q-Fiber
7 Fiber Quick  Q-Fiber
9 Fiber EcoQuick  Q-Fiber
10 Cross Link  Q-Fiber
11 Cross Link Chassis 3"  Q-Fiber
12 Fiber Quick 5/8"  Q-Fiber
13 Launch Box  Q-Fiber

## 16 Fiber Optic Distribution Frames
17 Telescopic fiber optic distribution frame 3"  Q-Fiber
18 Fiber optic distribution frame 3"  Q-Fiber
19 Fiber optic distribution frame 3"  Q-Fiber
20 Fiber optic distribution frame 3"  Q-Fiber
21 Floor-mounted fiber optic distribution frame  Q-Fiber
22 Cable overlength shelf/drawer 3"  Q-Fiber
23 Wall-mounted fiber optic distribution frame MINI  Q-Fiber
24 Wall-mounted fiber optic distribution frame MIDDLE  Q-Fiber
25 Wall-mounted fiber optic distribution frame BIG  Q-Fiber
26 Wall-mounted fiber optic distribution frame LARGE  Q-Fiber
27 FOSC DJS-56II
28 FOSC DJS-58II
29 Industrial splice box ODF DIN  Q-Fiber
30 Chassis ODF DIN  Q-Fiber
31 Industrial splice box MINI ODF DIN  Q-Fiber
32 Module LGX  Q-Fiber
33 Module MPO LGX Single  Q-Fiber
34 Chassis LGX  Q-Fiber
35 Rack DIN-3 4U  Q-Fiber

## 38 Accessories for Fiber Optic Distribution Frames
39 Splice Tray DIN24  Q-Fiber
40 Splice Tray DIN24 WHITE  Q-Fiber
41 Splice Tray DIN24 SLIM  Q-Fiber
42 Other accessories

## 44 Passive Components
45 Optical fibre adapters
46 Optical fibre attenuators
47 Isolators
49 Polarizers
49 Circularizers  Q-Fiber
50 Splice protectors V20 and V24  Q-Fiber
51 Easy Crimp ANT  Q-Fiber

## 54 Wave Division Multiplexing Systems
55 Splitters  Q-Fiber
56 Splitters PLC  Q-Fiber
57 CWDM  Q-Fiber
58 DWDM  Q-Fiber

## 60 Data Communication Cabinets And Housings
61 Cabinet SSJ 30°
62 Cabinet SRS 30°
63 Cabinet SS 30°
64 Cabinet SWJ 30°
65 Cabinet SWD 30°
66 Hanging minicabinets 30°
66 Accessories for data communication cabinets

## 86 Installation instruments
87 Installation instruments

## 90 Fiber Optic Cables
91 BELDEN optical fibres
93 CORNING optical fibres
94 TELE-FONIKA optical fibres

## 96 Fixtures and Tools for the Construction of Data Communication Lines
97 Fixtures and Tools for the Construction of Overhead Data Communication Lines

## 132 Active Components, Industrial Solutions
133 Modules SFP/XSF/GBC/XENPAK
135 Media Converters
137 Switches
138 Ethernet Extenders
139 Converters RS-232/422/485
139 Q2000 FO Monitor

## 132 Microduct System
133 MICRO Micropipes
134 MICRO FP Micropipes
135 MICRO DB Micropipes
136 NET DB Micropipes
137 SPLIT Micropipes
138 NET Di Micropipes
139 SPACE Micropipes
140 SPEED Micropipes
140 FLAT Micropipes
140 NAPPE Micropipes
140 NET FP Micropipes
141 MM Connectors
141 MM DB Connectors
142 MR Connectors
142 MWB Connectors
143 MGB Connectors
143 ME Connectors
144 ME DB Connectors
144 EWB Connectors
145 Knives for Micropipes „John Guest”
145 Knives for Micropipes „Eden”
146 PDC Divided Cable Junction Boxes
147 PDC Divided Branch Tees
148 PDC Divided “Fork” Splitters
149 FF Packing
150 UFC Fiber Optic Cables for Microducts
151 CMT Fiber Optic Cables for Microducts
152 CMTL Fiber Optic Cables for Microducts
153 CUM Fiber Optic Cables for Microducts
154 UFS Fiber Optic Cables for Microducts

## 136 Fiber Optic Splicing Closures for FTTH
137 FOSC DJS-25 closure
138 FOSC DJS-25 closure

## 140 Termination boxes for FTTH
141 FTTH-001 Termination Box
143 FTTH-002 Termination Box
144 FTTH-008 Termination Box
145 FTTH-300 Termination Box
146 FTTH-300A Termination Box
147 FTTH-300B Termination Box

## 150 GPON Active Devices
151 GPON OLT 5i3000 Pons
151 GPON ONT G2400 Series

www.dll.com.pl
Q-Fiber Pigtails and Patchcords

**Description**

Q-Fiber Pigtails and Patchcords are high-class fiber optic technology products. High quality production materials and the involvement of experienced engineers guarantee the best quality transmission. Special apparatus assisted manufacturing process helps maintain the highest performance of our pigtails and patchcords which are perfectly suitable for switching optical circuits as well as connecting transmission equipment. Each product is customized, which means pigtails and patchcords can come in any configuration.

**Application**

Telecommunications, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, Measuring Elements.

**Properties**

- Any length (length tolerance is up to 3 m: 3% above: 1%)
- Cable LSOH
- Ceramic connector ferrule (thermoplastic/termoset for MTRJ and MPO)
- Compliance with the following standards: ZN-05/TP SA-044, ZN-96/TPSA-07, PN-EN 50377, IEC 61754, IEC 61755
- RoHS Compliance

**Polishing standards**

- FLAT
- PC
- UPC
- APC 8°
- APC 9°

**Parameters**

<table>
<thead>
<tr>
<th></th>
<th>MM/PC</th>
<th>MM/FLAT</th>
<th>SM/PC</th>
<th>SM/FLAT</th>
<th>SM/APC</th>
<th>SM/APC 8°</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maximum insertion loss [dB]</strong></td>
<td>≤0.75 (grade M)</td>
<td>≤0.5 (grade D)</td>
<td>≤0.5 (grade C)</td>
<td>≤0.5 (grade C)</td>
<td>≤0.5 (grade C)</td>
<td>≤0.5 (grade C)</td>
</tr>
<tr>
<td><strong>Typical insertion loss [dB]</strong></td>
<td>≥0.25 (grade B)</td>
<td>≥0.25 (grade B)</td>
<td>≥0.25 (grade B)</td>
<td>≥0.25 (grade B)</td>
<td>≥0.25 (grade B)</td>
<td>≥0.25 (grade B)</td>
</tr>
<tr>
<td><strong>Reflection [dB]</strong></td>
<td>≥0.25 (grade C)</td>
<td>≥0.25 (grade C)</td>
<td>≥0.25 (grade C)</td>
<td>≥0.25 (grade C)</td>
<td>≥0.25 (grade C)</td>
<td>≥0.25 (grade C)</td>
</tr>
<tr>
<td><strong>Radius of curvature [mm]</strong></td>
<td>≥5 + 30 (grade C)</td>
<td>≥5 + 30 (grade C)</td>
<td>≥5 + 30 (grade C)</td>
<td>≥5 + 30 (grade C)</td>
<td>≥5 + 30 (grade C)</td>
<td>≥5 + 30 (grade C)</td>
</tr>
<tr>
<td><strong>Apex offset [µm]</strong></td>
<td>≤0.5 (grade B)</td>
<td>≤0.5 (grade B)</td>
<td>≤0.5 (grade B)</td>
<td>≤0.5 (grade B)</td>
<td>≤0.5 (grade B)</td>
<td>≤0.5 (grade B)</td>
</tr>
<tr>
<td><strong>Fiber height</strong> [nm]</td>
<td>≤300 + A°** (grade D)</td>
<td>≤300 + A°** (grade C)</td>
<td>≤300 + A°** (grade C)</td>
<td>≤300 + A°** (grade C)</td>
<td>≤300 + A°** (grade C)</td>
<td>≤300 + A°** (grade C)</td>
</tr>
</tbody>
</table>

* negative value indicates the extension of a fibre
** calculated from the formula based on other geometric parameters, see technical requirements at www.dll.com.pl
*** possibility to order connectors of different parameters, according to the standards of the customer

**Photos**
Q-Fiber Pigtails and Patchcords

**Types of connectors**

- ST
- FC
- SC
- LC
- MU
- E2000
- DIN
- FDDI
- MTRJ
- MPO

**How to order**

**PIG**
- Connector: S=SC, T=ST, F=FC, L=LC, E=E2000, M=MU, D=DIN, I=FDDI, R=MTRJ, P=MPO
- Core type: S2=SM G.652D, S7=SM G657a, M1=MM 62 OM1, M2=MM 50 OM2, M3=MM 50 OM3, M4=MM 50 OM4
- Cable diameter: 09=0.9 mm, 18=1.8 mm, 24=2.4 mm, 28=2.8 mm, X=Other
- Polishing standard: F=Flat, P=PC, U=UPC, A8=APC 8°, A9=APC 9°
- Cable type: S=Simplex, D=Duplex
- Length: 0001=0.1 m, 0010=1 m, 0020=2 m, 0100=10 m
- Core type: S2=SM G.652D

**PAT**
- Connector: S=SC, T=ST, F=FC, L=LC, E=E2000, M=MU, D=DIN, I=FDDI, R=MTRJ, P=MPO
- Core type: S2=SM G.652D, S7=SM G657a, M1=MM 62 OM1, M2=MM 50 OM2, M3=MM 50 OM3, M4=MM 50 OM4
- Cable diameter: 09=0.9 mm, 18=1.8 mm, 24=2.4 mm, 28=2.8 mm, X=Other
- Polishing standard: F=Flat, P=PC, U=UPC, A8=APC 8°, A9=APC 9°
- Cable type: S=Simplex, D=Duplex
- Length: 0001=0.1 m, 0010=1 m, 0020=2 m, 0100=10 m
- Core type: S2=SM G.652D

*In order to order a Pigtail/Patchcord Premium one has to use the catalogue code, i.e. PIG.P or PAT.P

**Information**

- Product packed in a bag
- Each product is accompanied by a measurement protocol
- Ferrule secured cover
Patchcord MC Q-Fiber

Description

The MODE CONDITIONING (MC) cables are applied in systems, in which the modern active devices of the Gigabit Ethernet technology are connected by means of the existing multimode cabling. They make it possible to increase the transmission distance of the 1000BASE-LX technology to 550 m for OM1 cables. MC cables are duplex cables, at the end of which - on the transmission side - there is a section of single-mode cable. Next, a single-mode cable is connected with a multimode cable in a special manner, thus yielding an enhanced quality of signal propagation in the multimode cable. The MC technology consists in the optimum introduction of the signal from a single-mode fibre-optic cable to a multi-mode one, which is achieved by the displacement of cores. A single-mode signal is not introduced in the axis of the multimode fibre-optic core, because in such a situation there are many parallel signals, which interact and cause the so-called Differential Mode Delay (DMD parameter), thus limiting the transmission distance.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- Any length (length tolerance is up to 3 m: 3% above: 1%)
- Various cable types: 50/125 µm or 62.5/125 µm
- Cable Duplex Zipcord (I-VH) or Duplex Round (I-VHH)
- Cable diameters from 1.8 mm to 3.0 mm
- Connectors on the ends: SC, FC, ST, LC, MU, E2000, MT-RJ, DIN, FDDO, other
- Polishing standards: FLAT, PC, UPC, APC 8°, APC 9°

Transmission parameters

- Insertion loss (IL): ≤0.50 dB
- Coupled power ratio (CPR):
  - min 12 dB to max 20 dB for 50/125 µm and wavelength 1310 nm
  - min 28 dB to max 40 dB for 62.5/125 µm and wavelength 1310 nm
- Operating temperature range: -40°C to +85°C

Photos

How to order

Information

- Patchcord MC packed in a bag
- Each product is accompanied by a measurement protocol
- Ferrule secured cover
- Fiber optic fusion secured by an aluminum tube and a shrink-guard
**Fiber Quick Q-Fiber**

**Description**

**Fiber Quick Q-Fiber** is a convenient, mechanical system of cable (outdoor or oniverral) forming involving connections of ready-made terminals in the form of fibre-optic connectors. This technology consists in cutting the central tube or a selected cable with multiple tubes and separating individual fibers. Fibers remain in the 250 um acrylic shell and are placed inside the empty patchcord cables. The fibers are then sealed up in the housing of the Fiber Quick system on the one side and a selected fiber optic connector is put on the other side. In this way we are able to prevent additional loss which causes attenuation. Pigtails may be protected by a casing pipe of the Fiber Guard system or a tie of Simple Guard system. These systems allow safe pulling of a cable in the telecommunication conduit system.

**Application**

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

**Properties**

- Various lengths of pigtails
- 1 to 48 pigtails 2.0 mm diameter (0.9 mm on request) on both sides of the cable
- Any cable length and type
- Connectors on the ends: SC, FC, ST, LC, MU, E2000, MT-RJ, DIN, other
- Polishing standards: Flat, PC, UPC, APC 8°, APC 9°
- Low insertion loss and high return loss
- Available versions of the Fiber Quick system: 4, 12, 24 i 48
- Possibility to mount in a rack cabinet by means of FQ-U holder

**Parameters**

<table>
<thead>
<tr>
<th>Type: Fiber Quick</th>
<th>4 or 12</th>
<th>24</th>
<th>48</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. number of fibers</td>
<td>pcs</td>
<td>4 or 12</td>
<td>24</td>
</tr>
<tr>
<td>FQ outer diameter</td>
<td>mm</td>
<td>21</td>
<td>27</td>
</tr>
<tr>
<td>FG outer diameter</td>
<td>mm</td>
<td>26</td>
<td>26 (33)</td>
</tr>
<tr>
<td>FQ-length</td>
<td>mm</td>
<td>125</td>
<td>155</td>
</tr>
<tr>
<td>Max. cable diameter</td>
<td>mm</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Max. drawing load</td>
<td>N</td>
<td>1000</td>
<td>1000</td>
</tr>
</tbody>
</table>

**Photos**

![Fiber Quick Q-Fiber Photos](image1)

**How to order**

**FQ**

<table>
<thead>
<tr>
<th>Cable type:</th>
<th>Z=External</th>
<th>Un=Universal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of fibers:</td>
<td>0=No pcs</td>
<td>02=2 pcs</td>
</tr>
<tr>
<td>01=1 pcs</td>
<td>04=4 pcs</td>
<td></td>
</tr>
<tr>
<td>06=6 pcs</td>
<td>12=12 pcs</td>
<td></td>
</tr>
<tr>
<td>16=16 pcs</td>
<td>20=20 pcs</td>
<td></td>
</tr>
<tr>
<td>24=24 pcs</td>
<td>28=28 pcs</td>
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</tr>
<tr>
<td>32=32 pcs</td>
<td>48=48 pcs</td>
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<table>
<thead>
<tr>
<th>Core type:</th>
<th>S2=SM G.652d</th>
<th>S7=SM G657a</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1=MF 62 OM1</td>
<td>M2=MF 50 OM2</td>
<td></td>
</tr>
<tr>
<td>M3=MF 50 OM3</td>
<td>M4=MF 50 OM4</td>
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<table>
<thead>
<tr>
<th>Connector A:</th>
<th>0=None</th>
<th>S=SC</th>
</tr>
</thead>
<tbody>
<tr>
<td>T=ST</td>
<td>F=FC</td>
<td></td>
</tr>
<tr>
<td>L=LC</td>
<td>E=E2000</td>
<td></td>
</tr>
<tr>
<td>M=MU</td>
<td>D=DIN</td>
<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Polishing standards A:</th>
<th>0=None</th>
<th>S=SC</th>
</tr>
</thead>
<tbody>
<tr>
<td>F=flat</td>
<td>P=PC</td>
<td></td>
</tr>
<tr>
<td>U=UPC</td>
<td>A=APC 8°</td>
<td></td>
</tr>
<tr>
<td>A9=APC 9°</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A8=APC 8°</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A9=APC 9°</td>
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<td></td>
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</table>

<table>
<thead>
<tr>
<th>Connector B:</th>
<th>0=None</th>
<th>S=SC</th>
</tr>
</thead>
<tbody>
<tr>
<td>T=ST</td>
<td>F=FC</td>
<td></td>
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<tr>
<td>L=LC</td>
<td>E=E2000</td>
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<tr>
<td>M=MU</td>
<td>D=DIN</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Polishing standards B:</th>
<th>0=None</th>
<th>S=SC</th>
</tr>
</thead>
<tbody>
<tr>
<td>F=flat</td>
<td>P=PC</td>
<td></td>
</tr>
<tr>
<td>U=UPC</td>
<td>A=APC 8°</td>
<td></td>
</tr>
<tr>
<td>A9=APC 9°</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A8=APC 8°</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A9=APC 9°</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Pigtail type:</th>
<th>P=Straight</th>
<th>X=Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>K=Cascade</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Pigtail length:</th>
<th>06=6 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>10=10 m</td>
<td>20=20 m</td>
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</table>

<table>
<thead>
<tr>
<th>Protection:</th>
<th>0=None</th>
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</thead>
<tbody>
<tr>
<td>P=Cable in a flexible protective conduit</td>
<td></td>
</tr>
<tr>
<td>G=Fiberguard</td>
<td></td>
</tr>
<tr>
<td>S=Simple Guard</td>
<td></td>
</tr>
<tr>
<td>Z=Cable in a flexible protective conduit</td>
<td></td>
</tr>
<tr>
<td>Pigtails in Fiber Guard</td>
<td></td>
</tr>
<tr>
<td>X=Other</td>
<td></td>
</tr>
</tbody>
</table>

**Information**

- Each product is accompanied by a measurement protocol
- Possibility to protect the cable by means of a flexible protective conduit and the pigtails by means of the Fiber Guard system
- Each product is customized / produced strictly according to the customer’s order
Fiber EcoQuick Q-Fiber

Description

Fiber EcoQuick Q-Fiber is a convenient, mechanical system of cable (outdoor or onivelal) forming involving connections of ready-made terminals in the form of fibre-optic connectors. This technology consists in cutting the central tube or a selected cable with multiple tubes and separating individual fibers. Fibers remain in the 250 um acrylic shelland are placed inside the empty patchcord cables. The fibers are then sealed up in the housing of the Fiber Quick system on the one side and a selected fiber optic connector is put on the other side. In this way we are able to prevent additional loss which causes attenuation. Pigtails may be protected by a casing pipe of the Fiber Guard system or a tie of Simple Guard system. These systems allow safe pulling of a cable in the telecommunication conduit system.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FT Tx, PON.

Properties

- Various lengths of pigtails
- 1 to 12 pigtails 2.0 mm diameter (0.9 mm or 3.0 mm on request) on both sides of the cable
- Any cable length and type
- Connectors on the ends: SC, FC, ST, LC, MU, E2000, MT-RJ, DIN, other
- Polishing standards: Flat, PC, UPC, APC 8°, APC 9°
- Low insertion loss and high return loss

Parameters

<table>
<thead>
<tr>
<th>Type</th>
<th>Fiber EcoQuick</th>
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</thead>
<tbody>
<tr>
<td>Max. number of fibers</td>
<td>12</td>
</tr>
<tr>
<td>Outer diameter</td>
<td>13 mm</td>
</tr>
<tr>
<td>Length</td>
<td>90 mm</td>
</tr>
<tr>
<td>Max. cable diameter</td>
<td>8 mm</td>
</tr>
<tr>
<td>Max. drawing load</td>
<td>500 N</td>
</tr>
</tbody>
</table>

Photos

区 Various lengths of pigtails
1 to 12 pigtails 2.0 mm diameter (0.9 mm or 3.0 mm on request) on both sides of the cable
Any cable length and type
Connectors on the ends: SC, FC, ST, LC, MU, E2000, MT-RJ, DIN, other
Polishing standards: Flat, PC, UPC, APC 8°, APC 9°
Low insertion loss and high return loss

How to order

<table>
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<tbody>
<tr>
<td>Cable type:</td>
<td>Z=External</td>
<td>U=Universal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of fibers:</td>
<td>01=1 pc</td>
<td>02=2 pcs</td>
<td>12=12 pcs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core type:</td>
<td>S2=G652D</td>
<td>S7=G657a</td>
<td>M1=OM1 62 OM3</td>
<td>M2=OM2 50 OM4</td>
<td>M3=OM3 50 OM5</td>
<td>M4=OM4 50 OM4</td>
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</tr>
<tr>
<td>Connector A:</td>
<td>0=None</td>
<td>S=SC</td>
<td>T=ST</td>
<td>F=FC</td>
<td>L=LC</td>
<td>E=E2000</td>
<td>M=MU</td>
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<td>Polishing standards A:</td>
<td>0=None</td>
<td>F=Flat</td>
<td>P=PC</td>
<td>A=UPC</td>
<td>A9=APC 8°</td>
<td>A9=APC 9°</td>
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<tr>
<td>Connector B:</td>
<td>0=None</td>
<td>S=SC</td>
<td>T=ST</td>
<td>F=FC</td>
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<td>Polishing standards B:</td>
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<td>F=Flat</td>
<td>P=PC</td>
<td>A=UPC</td>
<td>A8=APC 8°</td>
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<td>S2=SM G652D</td>
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</table>

Information

- Each product is accompanied by a measurement protocol
- Possibility to protect the cable by means of a flexible protective conduit and the pigtails by means of the Fiber Guard system
- Each product is customized / produced strictly according to the customer's order
Cross Link Q-Fiber

Description

Cross Link Q-Fiber is a mechanical system of fibre-optic cable forming used for quick and convenient construction of fibre-optic relations between Server Cabinets (Data Center). It may also be used for connecting distribution frames and local points. Compact solution facilitates the use of up to 12 connections of the LC-type in one module. The chassis 19” 1U may house up to 8 modules, which generates 96 fibre-optic connections. Modules may be equipped with external holders UZCL, thanks to which they may be mounted on a wall, in an energy cabinet, on the machine housing, etc. The universal solution makes it possible to use single-mode cables and multimode cables alike, with coatings, such as PE, LSOH as well as E30, E90 and E180.

Application

Data Center, Telecommunication, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- 1 to 12 pins on both sides of the cable
- Any cable length and type
- Adapters: LC (MM), LC/PC (SM), LC/APC (SM)
- Polishing standards: PC, UPC, APC 8°
- Low insertion loss and high return loss
- Possibility to terminate up to 96 fibres in the Chassis 1U housing
- It is possible to be mounted on a wall (by means of UZCL holders)
- Available colours: black, silver

Parameters

<table>
<thead>
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<th>Type</th>
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<td>Dimensions:</td>
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<td>Wall mounting:</td>
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<td>Max. cable diameter:</td>
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<td>Max. drawing load:</td>
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Photos and dimensions

![Cross Link Q-Fiber Photos and Dimensions](image)

How to order

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<tr>
<th>CL</th>
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</thead>
<tbody>
<tr>
<td>Number of fibers:</td>
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<td>02=2 pcs</td>
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<td>U=LC/PC SM</td>
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<td>P=LC/PC MM</td>
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<td>U=LC/PC SM</td>
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<tr>
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<td>U=Universal</td>
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<td>W=Internal</td>
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<td>M=Mini Breakout</td>
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<td>Length:</td>
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<td>0035=5.5 m</td>
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<td>1000=100 m</td>
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Information

- Each product is accompanied by a measurement protocol
- Possibility to protect the cable by means of a flexible protective conduit
- Each product is customized / produced strictly according to the customer’s order
- Possibility to produced hybrid Cross Link - Fiber Quick
Cross Link Chassis 19" 1U Q-Fiber

Description

**Cross Link Chassis 19" 1U Q-Fiber** is a rack box designed for mounting in a data communication cabinet by means of rack bolts. Compact solution facilitates the use of up to 12 connections of the LC-type in one module. The chassis 19" 1U may house up to 8 modules, which generates 96 fibre-optic connections. Modules are installed by means of the latching disc. Such solution facilitates very quick installation and dismantling of the modules, without the need to use additional tools. Cross Link system may be used for quick and convenient construction of fibre-optic relations between Server Cabinets (Data Center). It may also be used for connecting distribution frames and local points.

Application

Data Center, Telecommunication, Industry, LAN, MAN, WAN, FTTx.

Properties

- Made of 15 mm steel sheet
- Possibility to mount in a data communication cabinet
- Dimensions [H x W x D]: 44.5x485x166 mm
- Standard powder painting RAL 7035 (grey) glossy or RAL 9005 (black) glossy, other colours on demand
- Chassis houses 8 Cross Link modules

Wymiary

![Dimensions diagram](image)

How to order

CH-CL-1U Chassis Cross Link 1U

Additional equipment

- Rack bolts
- Cross Link

Information

- Chassis houses 8 Cross Link modules
- Possibility to mount in a data communication cabinet
Fiber Quick 5/8" Q-Fiber

Description

Fiber Quick 5/8" Q-Fiber is designed as a solution used in CATV networks. The 5/8" thread used in the conduit allows the screwing of cable form to the cable termination typically used in CATV devices. The whole makes for a compact and tight structure.

Application

Telecommunication, CATV, Other.

Properties

- Made of aluminium
- Water-resistant protection of the cable form
- Dimensions: 88.5 x 25.2 [mm] length x diameter
- Possibility to introduce a cable with the diameter of up to 11.5 mm
- Various lengths of pigtails
- Any cable length and type

Photos and dimensions

![Photos of Fiber Quick 5/8" Q-Fiber](image)

- 88.5 mm length x diameter
- Possibility to introduce a cable with a diameter of up to 11.5 mm

How to order

FQ.5/8

| Cable type: | Z=External | U=Universal |
| Core type: | S2=SM G.652D | S7=SM G657a | M1=MM 62 OM1 | M2=MM 50 OM2 | M3=MM 50 OM3 | M4=MM 50 OM4 |
| Number of fibers: | 0=1 pc | 02=2 pcs | 12=12 pcs |
| Connector A: | 0=None | S=SC | T=ST | F=FC | L=LC | E=E2000 | M=MU | D=DIN |
| Polishing standards A: | 0=None | F=Flat | P=PC | U=UPC | A8=APC 8° | A9=APC 9° |
| Connector B: | 0=None | S=SC | T=ST | F=FC | L=LC | E=E2000 | M=MU | D=DIN |
| Polishing standards B: | 0=None | F=Flat | P=PC | U=UPC | A8=APC 8° | A9=APC 9° |
| Pigtail length: | 06=0.6 m | 10=1 m | 20=2 m |
| Pigtail type: | 0=Straight | P=Cascade | X=Other |
| Protection: | O=None | P=Cable in a flexible protective conduit | G=Pigtails in Fiber Guard | S=Pigtails in Simple Guard | Z=Cable in a flexible protective conduit, Pigtails in Fiber Guard |
| Length: | 0020=2 m | 0055=5.5 m | 100=50 m |

Information

- Each product is accompanied by a measurement protocol
- Possibility to protect the cable by means of a flexible protective conduit and the pigtails by means of the Fiber Guard system
- Each product is customized / produced strictly according to the customer's order
Launch Box Q-Fiber

Description

Launch Box Q-Fiber is a section of a fibre-optic cable of a proper length ended with connectors, through which we connect the reflectometer to the measured line. At the beginning section of the fibre-optic connection measured by a reflectometer we encounter coat-type modes, which are strongly attenuated and cause the reverse distribution of high intensity. For this reason the detector is in a saturated state and does not react to light intensity changes. The beginning part of an optic fibre is the so-called “dead zone”, in which no events are detected. The application of a tape leader Q-Fiber by complete covering of the dead zone makes it possible to correctly measure the fibre-optical line.

Application

OTDR Launch Cable, Equipment Calibration, System emulation of loss, Length, Time delay and Reflectance.

Properties

- Housing made of plastic 2.5 mm, as a standard in white (on demand other colours available: yellow, light-blue, blue, and green)
- Prevents fiber damage and stress during use or transportation
- Handle makes it convenient to move
- Custom length configurations available
- Various connector types
- The possibility of placing multiple fibers in one housing
- Dimensions [H x W x D]: 67x266x169 mm

Photos and dimensions

How to order

Information

- The Launch Box is entirely custom-made
- Product in a solid and comfortable housing
- Launch Box sealed with the label guarantee
- Product is accompanied by a measurement protocol
Fiber Optic Distribution Frames
Telescopic Fiber Optic Distribution Frame 19" 1U Q-Fiber

Description

Telescopic Fiber Optic Distribution Frame 19" 1U Q-Fiber consists of the box and distribution board. A box with a distribution board installed on telescopes (extension 110%) guarantees the highest comfort of work both at the installation process and during subsequent maintenance works. The front panel is available in the version integrated with the drawer or as a replaceable element. Cable outlet adapted for installation of cable glands M16, M20 as well as cables ending with the Fiber Quick form. Movable side holders make it possible to withdraw the ODF by 30 mm from the mounting plane.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- Made of 1.2 mm steel sheet
- Extension 110% on telescopic rails
- Extension 110% on telescopic rails
- Embossing to attach cables inside the box
- Boltless mounting of adapters
- Standard color: RAL 7035 (light grey) glossy, RAL 9005 (black) glossy, other colors on request
- Dimensions (H x W x D): 4445 x 483 x 230 (mm)
- Temporary side handles allow the withdrawal of ODF 19" by 30 mm

Photos and dimensions

How to order

| ODF-19-1U-T* | Telescopic fiber optic distribution frame 19" 1U |
| ODF-19-1U-T-Z* | Telescopic fiber optic distribution frame 19" 1U with a lock |
| FP191U12ST-T | 19" 1U 12xST/FC/DIN d-hole Panel |
| FP191U24ST-T | 19" 1U 24xST/FC/DIN d-hole Panel |
| FP191U12CS-T | 19" 1U 12xCS/E2000 simplex Panel** |
| FP191U24CS-T | 19" 1U 24xSC/E2000 simplex Panel** |
| FP191U12CD-T | 19" 1U 12xCS/ST/FC duplex / LC quad Panel |
| FP191U24CD-T | 19" 1U 24xSC/ST/FC duplex / LC quad Panel |

* It is possible to order a ODF with an integrated front panel as well as with extended (bolted) adapters
** Suitable for LC/LX/S/MTRJ duplex SC foot print adapters

Information

- The ODF houses two cassettes DIN24, three cassettes DIN24 SLIM or four cassettes DIN24 WHITE
- Product adapted to the FiberQuick system
- 1U ODF 19" packed in a cardboard box

Standard equipment

- Cable gland M16x15 (cable ø5.5 + ø10 mm) (1pc)
- Mounting screw M6 (4 pcs)
- Knurled nut M5 (1pc)
- Snaps (2 pcs)

Additional equipment

- Cable gland M20x15 (cable ø6 + ø13 mm)
- Nylon cable tie 80x2.5 mm
- Pigtails
- Splice trays
- Adapters
Fiber Optic Distribution Frame 19" 1U Q-Fiber

Description

Fiber Optic Distribution Frame 19" 1U Q-Fiber consists of the box and distribution board. The installation of a drawer (DS) makes it possible to extend the ODF to an extendable version. The embossments on the bottom of the ODF as well as the organisational fans (optionally) make it possible to organise cables and fibre-optic pigtails in an easy, functional and aesthetic way. Replaceable plugs make it possible to install various cable conduits. Movable side holders make it possible to withdraw the ODF by 35 mm from the mounting plane.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTtx, PON.

Properties

- Made of 1.2 mm steel sheet
- Interchangeable hole plugs allow the installation of various cable glands
- Embossing to attach cables inside the box
- Small fans making it possible to organise the tubes or pigtails fibres (optional)
- Standard color: RAL7035 (light grey) glossy, RAL 9005 (black) glossy, other colors on request
- Dimensions [H x W x D]: 44x485x230 [mm]
- Temporary side handles allow the withdrawal of ODF 19" by 35 mm

Photos and dimensions

How to order

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<tr>
<td>FP191U24CS</td>
<td>19&quot; 1U 12xSC/E2000 simplex Panel*</td>
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<td>FP191U24CS</td>
<td>19&quot; 1U 24xSC/E2000 simplex Panel*</td>
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<td>FP191U24CD</td>
<td>19&quot; 1U 24xSC/ST/FC duplex / LC quad Panel</td>
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</tbody>
</table>

* Suitable for LC/LX.5/MTRJ duplex SC foot print adapters

Information

- Custom-made hole plugs
- The ODF houses two cassettes DIN24, three cassettes DIN24 SLIM or four cassettes DIN24 WHITE
- Product adapted to the FiberQuick system
- 1U ODF 19" packed in a cardboard box

Standard equipment

- Cable gland M35x1.5 (cable ø5.5 - ø10 mm) (1pc)
- Mounting screw M6 (4 pcs)
- Hole plug 1x2/16+1x2/02 (1pc)
- Full hole plug (1pc)

Additional equipment

- Cable gland M20x1.5 (cable ø6 - ø13 mm)
- Nylon cable tie 80x2.5 mm
- Small fans organising the optical fibres
- Pigtails
- Splice trays
- Adapters
**Fiber Optic Distribution Frame 19" 2U Q-Fiber**

**Description**

Fiber Optic Distribution Frame 19" 2U Q-Fiber consists of the box and distribution board. Also available in an extendable version. The embossments on the bottom of the ODF as well as the organisational fans (optionally) make it possible to organise cables and fibre-optic pigtails in an easy, functional and aesthetic way. In the ODF one can install the majority of fibre-optic cassettes.

**Application**

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

**Properties**

- Made of 15 mm steel sheet
- Embossing to attach cables inside the box
- Standard color: RAL7035 (light grey) glossy, other colors on request
- In the rear part 2x open and 2x closed openings for conduits M20x1.5 (ø of the cable 6÷13 mm)
- Hook-like holders for keeping cables in place
- The ODF has not got an integrated front panel
- Dimensions [H x W x D]: 88x483x240 [mm]

**Photos and dimensions**

![Fiber Optic Distribution Frame 19" 2U Q-Fiber](image)

**How to order**

- ODF-19-2U
- ODF-19-2U-DS
- FP192U24ST
- FP192U24CD
- FP192U48ST
- FP192U48CD
- FP192U48CS

**Fiber optic distribution frame 19" 2U n-draw style**

**Fiber optic distribution frame 19" 2U draw style**

- 19" 2U 24xST/FC/DIN d-hole Panel
- 19" 2U 24xSC/E2000 duplex Panel
- 19" 2U 48xST/FC/DIN d-hole Panel
- 19" 2U 48xSC/E2000 duplex Panel
- 19" 2U 48xSC/E2000 simplex Panel*

* Suitable for LC/LX.5/MTRJ duplex SC foot print adapters

**Technical data**

- Assembly height: 2U
- Depth: 240 mm
- Manner of mounting: 19" profile
- Material: steel sheet 15 mm
- Color: RAL7035 (light grey)

**Information**

- The ODF houses five cassettes DIN24, seven cassettes DIN24 SLIM or eight cassettes DIN24 WHITE
- Product adapted to the FiberQuick system
- 2U ODF 19" packed in a cardboard box

**Additional equipment**

- Small fans organising the optical fibres
- Cable gland
- Pigtails
- Splice trays
- Adapters
Fiber Optic Distribution Frame 19" 3U Q-Fiber

Description

Fiber Optic Distribution Frame 19" 3U Q-Fiber consists of the box and distribution board. Available in an extendable version. The embossments on the bottom of the ODF as well as the organisational fans (optionally) make it possible to organise cables and fibre-optic pigtails in an easy, functional and aesthetic way. In the ODF one can install the majority of fibre-optic cassettes.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- Made of 15 mm steel sheet
- Embossing to attach cables inside the box
- Standard color: RAL7035 (light grey) glossy, other colors on request
- In the rear part 2x open and 2x closed openings for conduits M20x1.5 (ø of the cable 6÷13 mm)
- Hook-like holders for keeping cables in place
- The switch has not got an integrated front panel
- Dimensions [H x W x D]: 132x483x240 [mm]

Photos and dimensions

How to order

ODF-19-3U-DS
FP193U72ST
FP193U72CS
FP193U144CS
Fiber optic distribution frame 19" 3U draw style
19" 3U 72xST/FC/DIN d-hole Panel
19" 3U 72xSC/E2000 simplex Panel*
19" 3U 144xSC/E2000 simplex Panel*
* Suitable for LC/LX5/MTRJ duplex SC foot print adapters

Information

- The ODF houses five cassettes DIN24, seven cassettes DIN24 SLIM or eight cassettes DIN24 WHITE
- Product adapted to the FiberQuick system
- 3U ODF 19" packed in a cardboard box

Technical data

- Assembly height: 3U
- Depth: 240 mm
- Manner of mounting: 19" profile
- Material: steel sheet 15 mm
- Color: RAL7035 (light grey) glossy

Additional equipment

- Small fans organising the optical fibres
- Cable gland
- Pigtails
- Splice trays
- Adapters
**Floor-mounted Fibre Optic Distribution Frame Q-Fiber**

**Description**

Floor-mounted Fiber Optic Distribution Frame Q-Fiber consists of the box and distribution board. The installation of a drawer (DS) makes it possible to extend the ODF to an extendable version. The embossments on the bottom of the ODF as well as the organisational fans (optionally) make it possible to organise cables and fibre-optic pigtails in an easy, functional and aesthetic way. Replaceable plugs make it possible to install various cable conduits. Side holders making it possible to mount the ODF to the floor.

**Application**

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

**Properties**

- Made of 1.2 mm steel sheet
- Interchangeable hole plugs allow the installation of various cable glands
- Embossing to attach cables inside the box
- Small fans making it possible to organise the tubes or pigtail fibres (optional)
- Standard color: RAL7035 (light grey) glossy, other colors on request
- Dimensions [H x W x D]: 75x530x230 [mm]
- Side holders making it possible to mount the switch to the floor

**Photos and dimensions**

![Image of the floor-mounted fiber optic distribution frame]

**How to order**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ODF-FLOOR</td>
<td>Floor-mounted fiber optic distribution frame n-draw style</td>
</tr>
<tr>
<td>ODF-FLOOR-DS</td>
<td>Floor-mounted fiber optic distribution frame draw style</td>
</tr>
<tr>
<td>FP 19 U12ST</td>
<td>12xST/FC/DIN d-hole Panel</td>
</tr>
<tr>
<td>FP 19 U24ST</td>
<td>24xST/FC/DIN d-hole Panel</td>
</tr>
<tr>
<td>FP 19 U12CS</td>
<td>12xSC/E2000 simplex Panel*</td>
</tr>
<tr>
<td>FP 19 U24CS</td>
<td>24xSC/E2000 simplex Panel*</td>
</tr>
<tr>
<td>FP 19 U12CD</td>
<td>12xSC/ST/FC duplex / LC quad Panel</td>
</tr>
<tr>
<td>FP 19 U24CD</td>
<td>24xSC/ST/FC duplex / LC quad Panel</td>
</tr>
</tbody>
</table>

* Suitable for LC/LX/5(MTR) duplex SC foot print adapters

**Information**

- Custom-made hole plugs
- The ODF houses two cassettes DIN24, three cassettes DIN24 SUM or four cassettes DIN24 WHITE
- Product adapted to the FiberQuick system
- 1U ODF 19" packed in a cardboard box

**Standard equipment**

- Cable gland M16x15 (cable ø5.5 ø11 mm) (1pc)
- Mounting bolt ø10x15 (4 pcs)
- Full hole plug (1pc)
Cable Overlength Shelf/Drawer 19" 1U Q-Fiber

Description

Cable Overlength Shelf/Drawer 19" 1U Q-Fiber consists of the box and distribution board with an oval opening. The installation of a drawer (DS) makes it possible to extend the cable slack shelf to an extendable version, called a cable overlength shelf. The embossments on the bottom of the ODF as well as the organisational fans (optionally) make it possible to organise cables and fibre-optic pigtails in an easy, functional and aesthetic way. Replaceable plugs make it possible to install various cable conduits. Movable side holders make it possible to withdraw the ODF by 35 mm from the mounting plane. Additional equipment may also include the cable overlength guide.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- Made of 12 mm steel sheet
- Interchangeable hole plugs allow the installation of various cable glands
- Embossing to attach cables inside the box
- Small fans making it possible to organise the tubes or pigtail fibres (optional)
- Standard color: RAL7035 (light grey) glossy, RAL 9005 (black) glossy, other colors on request
- Dimensions [H x W x D]: 44x485x230 (mm)
- Temporary side handles allow the withdrawal of ODF 19" by 35 mm

Photos and dimensions

How to order

- ODF-19-1U-PZK: Cable overlength shelf 19" 1U non-extendable
- ODF-19-1U-SZK: Cable overlength drawer 19" 1U extendable
- FP-19-1U-OVAL: Front panel 19" 1U with an oval opening
- PK-19-1U-70: Cable overlength guide 70 mm
- PK-19-1U-100: Cable overlength guide 100 mm

Information

- Custom-made hole plugs
- Product adapted to the FiberQuick system
- 1U ODF 19" packed in a cardboard box

Standard equipment

- Cable overlength shelf or drawer 19" 1U (1 pc)
- Front panel with an oval opening (1 pc)
- Full hole plug (2 pcs)
- Mounting screw M6 (4 pcs)

Additional equipment

- Cable overlength guide PK70 (70 mm)
- Cable overlength guide PK300 (100 mm)
- Cable gland M16x15 (cable ø 5÷10 mm)
- Cable gland M20x15 (cable ø 6÷13 mm)
- Nylon cable tie 80x2.5 mm
- Small fans organising the optical fibres
- Oval plugs
- Plugs for cable conduits
Fiber Optic Distribution Wall Box MINI Q-Fiber

Description

Fiber Optic Distribution Wall Box MINI Q-Fiber is composed of a box and a panel. Wall-mounting ODF-MINIs are used to terminate and distribute optical fiber cables; they are convenient equipment to organize and connect fiber optic links. The door and panel are hinged with locks. ODF is two-sectional, which enables separation of the cables and switches. The embossments on the bottom of the box make it possible to organize cables and fibre-optic pigtails in an easy, functional and aesthetic way.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- Made of 12 mm steel sheet
- Door and panel are hinged with locks
- Interchangeable hole plugs enable the installation of various cable glands
- Embossing to attach cables inside the box
- Standard color: RAL7035 (light grey), other colors on request
- Dimensions [H x W x D]: 280x200x60 mm

Photos and dimensions

How to order

<table>
<thead>
<tr>
<th>ODF-MINI</th>
<th>Fiber Optic Distribution Wall Box MINI</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPM10BST</td>
<td>8xST/FC/DIN d-hole MINI Panel</td>
</tr>
<tr>
<td>FPM10B5ST</td>
<td>16xST/FC/DIN d-hole MINI Panel</td>
</tr>
<tr>
<td>FPM106CS</td>
<td>6xSC/E2000 simplex MINI Panel*</td>
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<tr>
<td>FPM102CS</td>
<td>12xSC/E2000 simplex MINI Panel*</td>
</tr>
<tr>
<td>FPM104CD</td>
<td>4xSC/ST/FC duplex / LC quad MINI Panel*</td>
</tr>
<tr>
<td>FPM108CD</td>
<td>8xSC/ST/FC duplex / LC quad MINI Panel</td>
</tr>
</tbody>
</table>

* Suitable for LC/LX5/MTR| duplex SC foot print adapters

Information

- Custom-made hole plugs
- ODF with a distribution plate houses one DIN 24 cassette
- ODF without a distribution plate houses 3 cassettes DIN24, 5 cassettes DIN24 SLIM or 5 cassettes DIN24 WHITE
- Keys in the two codes, can be ordered in a single code
- Product adapted to the FiberQuick system
- ODF packed in a cardboard box

Standard equipment

- Cable gland M36x15 (a cable 5.5÷10 mm) (1pc)
- Mounting bolt ø6x60 (4 pcs)
- Nylon cable tie 75x2.5 mm (8 pcs)
- Adhesive organizer (2 pcs)
- Hole plug 2xZ16 (1pc)
- Oval hole plug (1pc)
- Full hole plug (2 pcs)
Fiber Optic Distribution Wall Box MIDDLE Q-Fiber

Description

Fiber Optic Distribution Wall Box MIDDLE Q-Fiber is composed of a box and a panel. Wall-mounting ODF-MIDDLEs are used to terminate and distribute optical fiber cables; they are convenient equipment to organize and connect fiber optic links. The door and panel are hinged with locks. ODF is two-sectional, which enables separation of the cables and switches. The embossments on the bottom of the box make it possible to organize cables and fibre-optic pigtails in an easy, functional and aesthetic way.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- Made of 12 mm steel sheet
- Door and panel are hinged with locks
- Interchangeable hole plugs enable the installation of various cable glands
- Embossing to attach cables inside the box
- Standard color: RAL7035 (light grey) glossy, other colors on request
- Dimensions [H x W x D]: 316 x 418 x 50 mm

Photos and dimensions

How to order

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ODF-MIDDLE</td>
<td>Fiber Optic Distribution Wall Box MIDDLE</td>
</tr>
<tr>
<td>FP-MD-12ST</td>
<td>12xST/FC/DIN d-hole MIDDLE Panel</td>
</tr>
<tr>
<td>FP-MD-24ST</td>
<td>24xST/FC/DIN d-hole MIDDLE Panel</td>
</tr>
<tr>
<td>FP-MD-12CS</td>
<td>12xSC/E2000 simplex MIDDLE Panel*</td>
</tr>
<tr>
<td>FP-MD-24CS</td>
<td>24xSC/E2000 simplex MIDDLE Panel*</td>
</tr>
<tr>
<td>FP-MD-12CD</td>
<td>12xSC/ST/FC duplex / LC quad MIDDLE Panel</td>
</tr>
</tbody>
</table>

* Suitable for LC/LX.5/MTRJ duplex SC foot print adapters

Information

- Custom-made hole plugs
- ODF houses 3 cassettes DIN24, 5 cassettes DIN24 SLIM or 5 cassettes DIN24 WHITE
- Keys in the two codes, can be ordered in a single code
- Product adapted to the FiberQuick system
- ODF packed in a cardboard box

Standard equipment

- Cable gland M16x15 (ø cable 5.5÷10 mm) (1 pc)
- Mounting bolt ø6x60 (4 pcs)
- Nylon cable tie 75x2.5 mm (8 pcs)
- Small fans organizing the optical fibres (1 pc)
- Hole plug 1xZ16+1O16 (1 pc)
- Oval hole plug (1 pc)
- Full hole plug (2 pcs)
Fiber Optic Distribution Wall Box BIG Q-Fiber

**Description**

Fiber Optic Distribution Wall Box **BIG Q-Fiber** is composed of a box and a panel. Wall-mounting ODF-BIGs are used to terminate and distribute optical fiber cables; they are convenient equipment to organize and connect fiber optic links. The door and panel are hinged with locks. ODF is two-sectional, which enables separation of the cables and switches. The embossments on the bottom of the box make it possible to organize cables and fibre-optic pigtails in an easy, functional and aesthetic way.

**Application**

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

**Properties**

- Made of 15 mm steel sheet
- Door and panel are hinged with locks
- Interchangeable hole plugs enable the installation of various cable glands
- Embossing to attach cables inside the box
- Standard color: RAL7035 (light grey), other colors on request
- Dimensions [H x W x D]: 316 x 418 x 85 mm

**Photos and dimensions**

![Image](image_url)

- **How to order**
  - ODF-BIG
  - FP-BG-48ST
  - FP-BG-24CD
  - FP-BG-48CS

  **Fiber Optic Distribution Wall Box BIG**
  - Fiber optic distribution wall box BIG
  - 48xST/FC/DIN d-hole BIG Panel
  - 24xSC/ST/FC duplex / LC quad BIG Panel
  - 48xSC/E2000 simplex * BIG Panel

  * Suitable for LC/LX.5/MTRJ duplex SC foot print adapters

- **Information**
  - Custom-made hole plugs
  - ODF houses 4 cassettes DIN24, 6 cassettes DIN24 SLIM or 6 cassettes DIN24 WHITE
  - Keys in the two codes, can be ordered in a single code
  - Product adapted to the FiberQuick system
  - ODF packed in a cardboard box

- **Standard equipment**
  - Cable gland M16x15 (ø cable 5.5÷10 mm) (1 pc)
  - Mounting bolt ø6x60 (4 pcs)
  - Nylon cable tie 75x2.5 mm (8 pcs)
  - Hole plug 1xZ16+1Ø16 (2 pcs)
  - Oval hole plug (2 pcs)
  - Full hole plug (4 pcs)
**Fiber Optic Distribution Wall Box LARGE Q-Fiber**

**Description**

Fiber Optic Distribution Wall Box LARGE Q-Fiber is composed of a box and a panel. Wall-mounting ODF-LARGEs are used to terminate and distribute optical fiber cables; they are convenient equipment to organize and connect fiber optic links. The door and panel are hinged with locks. ODF is two-sectional, which enables separation of the cables and switches. The embossments on the bottom of the box make it possible to organize cables and fibre-optic pigtails in an easy, functional and aesthetic way.

**Application**

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

**Properties**

- Made of 15 mm steel sheet
- Door and panel are hinged with locks
- Interchangeable hole plugs enable the installation of various cable glands
- Embossing to attach cables inside the box
- Standard color: RAL7035 (light grey), other colors on request
- Dimensions (H x W x D): 316x418x152 mm

**Photos and dimensions**

![Photo of Fiber Optic Distribution Wall Box LARGE Q-Fiber](image)

**How to order**

<table>
<thead>
<tr>
<th>ODF-LARGE</th>
<th>Fiber Optic Distribution Wall Box LARGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FP-LG-96ST</td>
<td>LARGE 96xST/FC/DIN d-hole LARGE Panel</td>
</tr>
<tr>
<td>FP-LG-48CD</td>
<td>48xSC/ST/FC duplex / LC quad LARGE Panel</td>
</tr>
<tr>
<td>FP-LG-96CS</td>
<td>96xSC/E2000 simplex LARGE Panel</td>
</tr>
</tbody>
</table>

* Suitable for LC/LX5/MTRJ duplex SC foot print adapters

**Information**

- Custom-made hole plugs
- ODF houses 11 cassettes DIN24, 15 cassettes DIN24 SLIM or 15 cassettes DIN24 WHITE
- Keys in the two codes, can be ordered in a single code
- Product adapted to the FiberQuick system
- ODF packed in a cardboard box

**Standard equipment**

- Cable gland M16x15 (ø cable 5.5÷10 mm) (1 pc)
- Mounting bolt ø6x60 (4 pcs)
- Nylon cable tie 75x2.5 mm (8 pcs)
- Hole plug 3xZ16+I036 (4 pcs)
- Oval hole plug (4 pcs)
- Full hole plug (8 pcs)
FOSC DJS 56II

Description

The Hermetic Fiber Optic Splice Closure DJS-56II may be used as a cable terminal or a connecting sleeve. The coupler may be installed both in a vertical and in a horizontal position. It consists of the cabinet and distribution board. The door is mounted on hinges. Air-tight closure is fulfilled by 5 galvanised screws and a rubber sealing washer, which protects the fibre-optic splices against the influence of adverse atmospheric conditions. The FOSC is suitable for installation on walls and on poles. The packing of the introduced cables is made by means of air-tight glands. The placement of a switching field makes it possible to swiftly organise and cross fibre-optic connections.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- High quality material ABS
- Airtight closure
- Cable port: 2 x ø14 mm
- Core capacity: 24
- 12xSC/E2000 simplex or 12xST/FC Panel
- Internal handle cables
- Size (L x W x H): 280x200x90 mm

Photos and dimensions

How to order

| DJS-56II | Hermetic Fiber Optic Splice Closure MINI |
| FOST D23 | DIN24 Splice Tray (24 cores) |
| FP-56-12SC | DJS-56II 12xSC/E2000 simplex Panel* |
| FP-56-12ST | DJS-56II 12xST/FC Panel |

* Suitable for LC/LX5/MTRJ duplex SC foot print adapters

Information

- FOSC holds one FOST D23 DIN24 cassette
- FOSC has internal handle cables
- FOSC is packed in a cardboard box

Standard equipment

- FOST D23 DIN24 Splice tray (1pc)
- 12xSC/E2000 simplex* or 12xST/FC panels (1pc)
- Earthing wire ø1.5 mm (0.3 m)
- Labeling paper (1pc)
- Mounting bolt ø7 mm (3 pcs)
- Nylon tie (4 pcs)
- Flat key ø36 mm (1pc)
- Cable seals (0.5 m)
FOSC DJS 58II

Description

The Hermetic Fiber Optic Splice Closure DJS-58II may be used as a cable terminal or a connecting sleeve. The coupler may be installed both in a vertical and in a horizontal position. It consists of the cabinet and distribution board. The door is mounted on hinges. Air-tight closure is fulfilled by 5 galvanised screws and a rubber sealing washer, which protects the fibre-optic splices against the influence of adverse atmospheric conditions. The FOSC is suitable for installation on walls and on poles. The packing of the introduced cables is made by means of air-tight glands. The placement of a switching field makes it possible to swiftly organise and cross fibre-optic connections.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- High quality material ABS
- Airtight closure
- Cable port: 6 x ø22 mm
- Core capacity: 72
- 32xSC/E2000 simplex or 32xST/FC Panel
- Internal handle cables
- Size (L x W x H): 490x252x127 mm

Photos and dimensions

How to order

DJS-58II
FOSC DJS-58II 32xST/FC Panel
FOSC FP-58-12SC DJS-58II 32xSC/E2000 simplex Panel*
FP-58-12ST DJS-58II 32xST/FC Panel

Information

- FOSC holds three FOST D23 DIN24 cassettes
- FOSC has internal handle cables
- FOSC is packed in a cardboard box

Standard equipment

- FOST D23 DIN24 Splice tray (1pc)
- 32xSC/E2000 simplex* or 32xST/FC panels (1pc)
- Key to the M8 bolt (1pc)
- Earthing wire ø15 mm (0.3 m)
- Labeling paper (1pc)
- Mounting holders (4 pcs)
- Mounting sling (2 pcs)
- Nylon tie (8 pcs)
- Bolt ø 4x34 mm (8 pcs)
- Allen wrenches (6 mm, 4 mm)
- Flat key 36x26 mm (1pc)

* Suitable for LC/LX/MTRJ duplex SC foot print adapters
ODF-DIN Industrial Splice Box Q-Fiber

Description

The ODF-DIN Industrial Splice Box is used for crossing-over cables in large-scale automation systems. Its small size and a grip on the rail (TS35) make the splice box suitable for mounting in every cabinet. ODF DIN can be fitted with a bracket for mounting on the wall. The embossing for attaching fiber optic cables inside the splice box enable easy, functional and aesthetic organization of cables and fiber optic pigtails. ODF-DIN holds up to 12 fiber optic fusion splice protector sleeves or up to 12 easy crimp ANT clamps.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON, Automation.

Properties

- Made of 12 mm steel sheet
- Embossing to attach cables inside the box
- The possibility of mounting a bracket to mount the splice box on a DIN rail
- The possibility of mounting a bracket to mount the splice box on a wall
- Two holes for cable glands M16x1.5 and two holes for cable glands M20x1.5
- Cable gland protection against fracture possible
- Color: RAL7035 (light grey) glossy, other colors on request
- Dimensions (H x W x D): 120x120x32 mm

Photos and dimensions

How to order

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ODFW8DIN</td>
<td>ODF DIN Industrial Splice Box</td>
</tr>
<tr>
<td>FPN08SCG</td>
<td>ODF-DIN 8xSC/E2000 simplex Panel</td>
</tr>
<tr>
<td>FPN08STG</td>
<td>ODF-DIN 8xST/FC/DIN d-hole Panel</td>
</tr>
<tr>
<td>FPN06CDG</td>
<td>ODF-DIN 6xSC duplex Panel</td>
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<tr>
<td>UDDN</td>
<td>DIN clip for ODF DIN</td>
</tr>
<tr>
<td>USDN</td>
<td>Wall clip for ODF-DIN</td>
</tr>
</tbody>
</table>

Information

- The ODF holds up to 12 fibre optic fusion splice protector sleeves or up to 12 easy crimp ANT clamps (to be chosen)
- The possibility to route 12 connections onto the front panel

Standard equipment

- Cable gland M20x15 (ø cable 6÷13 mm) (1pc)
- Mounting bolt ø4x40 mm (3 pcs)
- Nylon cable tie 80x2.5 mm (6 pcs)
- Round cap (3 pcs)
- Holder for 12 splice protector sleeves or 12 easy crimp ANT clamps (to be chosen) (1pc)
- Holder for installation on the DIN rail or for wall mounting (to be chosen) (1 set)

Additional equipment

- Pigtails
- Adapters
- Fibre optic fusion splice protector sleeves
- Easy Crimp ANT 30 mm
**Chassis ODF DIN 1U Q-Fiber**

**Description**

*Chassis ODF DIN 1U Q-Fiber* is a rack box designed for mounting in a data communication cabinet by means of rack bolts. It has been designed to hold one (in the 10'' option) or three (in the 19'' option) industrial splice box ODF DIN. The ODF in the chassis is installed by means of a latching disc. Such solution facilitates very quick installation and dismantling of the ODF, without the need to use additional tools. The ODF placed in chassis may be used for crossing fibre-optic cables, patchcords and pigtails. It is also a good solution for splitter adaptation. Thanks to its compact size, it occupies little space inside the data communication cabinet.

**Application**

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON, Automation.

**Properties**

- Made of 1.5 mm steel sheet
- Possibility to mount in a data communication cabinet
- Dimensions [H x W x D]: 10'' 1U - 44 x 258 x 126.5 [mm], 19'' 1U - 44 x 485 x 126.5 [mm]
- Color: RAL7035 (light grey) glossy, other colors on request
- Chassis 10'' 1U holds one ODF DIN
- Chassis 19'' 1U holds three ODF DIN

**Photos and dimensions**

![Photos and dimensions](image-url)

**How to order**

- CH-ODFDIN-10-1U: Rack box Chassis ODF DIN 10'' 1U
- CH-ODFDIN-19-1U: Rack box Chassis ODF DIN 19'' 1U

**Additional equipment**

- Rack bolts
- ODF DIN Industrial Splice Box

**Information**

- Possibility to mount in a data communication cabinet
- Chassis 10'' 1U holds one ODF DIN Industrial Splice Box
- Chassis 19'' 1U holds three ODF DIN Industrial Splice Box
MINI ODF-DIN Industrial Splice Box Q-Fiber

Description

The MINI ODF-DIN Q-Fiber is mainly designed for crossing fibre-optic cables in spatially restricted places. Thanks to its compact size and the holder for the DIN rail (TS35), it is suitable for mounting in the majority of data communication cabinets. The MINI ODF-DIN can be fitted with a bracket for mounting on the wall.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTC, PON, Automation.

Properties

- Made of 10 mm steel sheet
- Possibility to mount on one of the three blocks of the holder for installing the ODF-DIN on the DIN rail
- Possibility to mount on one of the three blocks of the holder for installing the ODF-DIN on a wall
- Two cable openings with the diameter of 8 mm
- Color: RAL7035 (light grey) glossy, other colors on request
- Dimensions [H x W x D]: 70x65x33 mm

Photos and dimensions

How to order

- MODFWBDIN: MINI ODF-DIN Industrial Splice Box with 2xSC duplex front panel *
- UDDIN: DIN clip for MINI ODF-DIN
- MUSDIN: Wall clip for MINI ODF-DIN

Information

- The ODF holds up to 12 fibre optic fusion splice protector sleeves or up to 12 easy crimp ANT clamps (to be chosen)
- The possibility to route 8 connections onto the front panel

Standard equipment

- Nylon cable tie 80x2.5 mm (2 pcs)
- Rubber cable casing (2 pcs)
- Holder for 12 splice protector sleeves or 12 easy crimp ANT clamps (to be chosen) (1pc)

Additional equipment

- Pigtails
- Adapters
- Fibre optic fusion splice protector sleeves
- Easy Crimp ANT
Module LGX Q-Fiber

Description

The LGX Q-Fiber Module may be used for crossing fibre-optic cables, patchcords and pigtails. It is also a good solution for splitter adaptation and Wave Division Multiplexing Systems (WDM, CWDM, and DWDM). It consists of the box, the distribution board and the cover. The embossments on the side wall of the box make it easy and functional to organise cables in an aesthetic way. Modules are installed in the Chassis by means of the snap. Such solution facilitates very quick installation and dismantling of the modules, without the need to use additional tools. Thanks to its compact size, it permits a very efficient use of space inside the data communication cabinet.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- Available sizes: LGX SINGLE, LGX DOUBLE
- Dimensions (H x W x D): SINGLE - 29.0 x 129.5 x 165.0 mm, DOUBLE - 58.3 x 129.5 x 165.0 mm
- Possibility to describe the ports on the front panel
- Types of connectors: SC, ST, FC, LC, E2000
- Polishing standards: PC, UPC, APC 8°
- Possibility to mount a cable gland M16
- Holders in the LGX are designed for placement in the following housings: Chassis LGX 19” 1U (3 modules), 2U (6 modules), 3U (12 modules)
- Color: RAL7035 (light grey) glossy, other colors on request

Photos and dimensions

How to order

| LGX-S | BOX LGX SINGLE |
| LGX-D | BOX LGX DOUBLE |
| FP-LGX-S-1+2 | LGX-S 1+2xSC sx Panel |
| FP-LGX-S-1+3 | LGX-S 1+3xSC sx Panel |
| FP-LGX-S-1+4 | LGX-S 1+4xSC sx Panel |
| FP-LGX-S-1+5 | LGX-S 1+5xSC sx Panel |
| FP-LGX-S-06 | LGX-S 06xSC sx Panel |
| FP-LGX-S-08 | LGX-S 08xSC sx Panel |
| FP-LGX-S-09 | LGX-S 09xSC sx Panel |
| FP-LGX-S-1+6 | LGX-S 1+6xSC sx Panel |
| FP-LGX-S-12 | LGX-S 12xSC sx Small Flange Panel |
| FP-LGX-S-2+2 | LGX-S 2+2xSC sx Panel |
| FP-LGX-S-2+4 | LGX-S 2+4xSC sx Panel |
| FP-LGX-S-0 | LGX-S Chassis Hole Plug Single Panel |
| FP-LGX-D-2+8 | LGX-D 2+8xSC sx Panel |
| FP-LGX-D-1+10 | LGX-D 1+10xSC sx Panel |
| FP-LGX-D-12 | LGX-D 12xSC sx Panel |
| FP-LGX-D-16 | LGX-D 16xSC sx Panel |
| FP-LGX-D-1+16 | LGX-D 1+16xSC sx Panel |
| FP-LGX-D-2+16 | LGX-D 2+16xSC sx Panel |
| FP-LGX-D-0 | LGX-D Chassis Hole Plug Double Panel |

Standard equipment

- Box LGX (1pc)
- Front panel (to be chosen) (1pc)
- Top cover (1pc)
- Latching discs (for the cover) (6 pcs)
- Snaps (mounted in Chassis) (2 sets)
- Holder for 12 splice protector sleeves or 12 easy crimp ANT clamps (to be chosen) (1pc)

Additional equipment

- Pigtails
- Adapters
- Fibre optic fusion splice protector sleeves
- Easy Crimp ANT
- The second holder for splice protector sleeves or easy crimp ANT clamps

* Possibility to order a module with holders for 24 easy crimp ANT clamps

www.dll.com.pl
Module MPO LGX Single Q-Fiber

Description

The Q-Fiber MPO technology is designed for systems using ribbon multi-fibre optical cables ended with the MPO-type connectors. The MPO LGX SINGLE module is placed in the Chassis LGX. Chassis mounted in the data communication cabinet. The module is primarily used for changing the standard of the multi-fibre connection MPO into a single-fibre standard, e.g. SC. Thanks to its small sizes and a proper mounting system, it permits a very functional, aesthetic and easy to install organisation of cables and patchcords in the data communication cabinet.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- Made of 12 mm steel sheet
- Possibility to select a front panel
- Possibility to choose the type and quantity of optical fibre adapters
- The modules is adapted to be mounted in Chassis LGX
- Dimensions [H x W x D]: 29x129x165 mm
- Color: RAL7035 (light grey) glossy, other colors on request

Photos and dimensions

How to order

![Photos and dimensions]

Standard equipment

- Module LGX SINGLE (1pc)
- Adapters (type and quantity as per order)
- Adapter MPO (1pc)
- Snaps (2 sets)
- Round cap (1pc)

Information

- The module contains up to 12 optical fibre adapters.
- The cassette is adapted to be mounted in Chassis LGX
- Possibility to describe the ports on the front panel
Chassis LGX Q-Fiber

Description

LGX Chassis (1U, 2U, 3U) Q-Fiber are rack boxes designed for mounting in a data communication cabinet by means of rack bolts. They have been designed to house from 3 to 12 LGX-S modules (single) depending on the type of box, and from 3 to 6 LGX-D modules (double). The module in the chassis is installed by means of a latching disc. Such solution facilitates very quick installation and dismantling of the ODF, without the need to use additional tools. The LGX system may be used for crossing fibre-optic cables, patchcords and pigtails. It is also a good solution for splitter adaptation and Wave Division Multiplexing Systems WDM, CWDM and DWDM. Thanks to its compact size, it permits a very efficient use of space inside the data communication cabinet.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- Made of 15 mm steel sheet
- Possibility to mount in a data communication cabinet
- Placement of the modules in a depression facilitates the organisation of patchcords
- Side embossment makes it possible to conveniently route the patchcords
- Dimensions [H x W x D]: 1U - 44.5 x 485 x 180 mm, 2U - 88.5 x 485 x 180 mm, 3U - 133 x 485 x 180 mm
- Color: RAL7035 (light grey) glossy, other colors on request

Chassis 1U holds 3 LGX-S modules (single)
Chassis 2U holds 6 LGX-S modules (single) or 3 LGX-D modules (double)
Chassis 3U holds 12 LGX-S modules (single) or 6 LGX-D modules (double)

Photos and dimensions

How to order

CH-LGX-1U  Rack box Chassis LGX 1U
CH-LGX-2U  Rack box Chassis LGX 2U
CH-LGX-3U  Rack box Chassis LGX 3U

Standard equipment

- Rack bolts
- Snaps
- Modules LGX

Information

- Possibility to mount in a data communication cabinet
- Chassis 1U holds 3 LGX-S modules (single)
- Chassis 2U holds 6 LGX-S modules (single) or 3 LGX-D modules (double)
- Chassis 3U holds 12 LGX-S modules (single) or 6 LGX-D modules (double)
Rack DIN-3 4U Q-Fiber

Description

Rack DIN-3 4U Q-Fiber designed for installation in a data communication cabinet by means of rack bolts. It has been designed to hold passive elements (up to 13 industrial switches MINI ODF-DIN or ODF-DIN, etc.), active elements equipped in mounting holders for the DIN-3 rail (media converters, switches, fibre-optic extenders, etc.). Such solution facilitates very quick installation and dismantling elements, without the need to use additional tools.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON, Automation.

Properties

- Made of 1.5 mm steel sheet
- Opening in the rear wall making it possible to lead cables (wires) out from the back
- Color: RAL7035 (light grey) glossy, other colors on request
- Dimensions [H x W x D]: 177.8x481x202 mm
- Possibility to move the DIN rail by 100 mm

Photos and dimensions

How to order

PRDIN4U Rack DIN-3 4U*
* possibility to make a rack shelf 1U, 2U and 3U

Information

- Rack DIN-3 4U holds up to 13 Industrial Splice Box MINI ODF-DIN or up to 13 Industrial Splice Box ODF-DIN

Standard equipment

- Mounting bolt M6 (4 pcs)
- DIN-3 rail (1 pc)

Additional equipment

- Industrial Splice Box MINI ODF-DIN
- Industrial Splice Box ODF-DIN
- Media converter
- Switch
- Ethernet Extender
DIN24 Splice Tray Q-Fiber

Description

The DIN24 Q-Fiber Splice Tray is designed to store heat-shrink splice fibers. It is compatible both with splice protector sleeves 45 mm, 60 mm as well as with mechanical casings. DIN24 is used for crossing over cables, patchcords and pigtails. Its small size and a special clamp system make it possible to place DIN24 in most fiber optic distribution frames. The embossing made to attach fiber optic tubes and pigtails inside the Splice Tray enable an easy, functional and aesthetic organization of fibers and pigtails. DIN24 can accommodate up to 24 fiber splices. DIN24 holds up to 24 fiber optic fusion splice protector sleeves or up to 24 easy crimp ANT clamps. The cassette cover is mounted by means of latching discs.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- Made of 1.2 mm steel sheet
- Embossing to attach tubes and pigtails
- The possibility of mounting a splice tray in the ODF 19"
- Standard color: RAL7035 (light grey) glossy, other colors on request
- Dimensions (H x W x D): 13.5x140x117 mm
- Core capacity: 24

Photos and dimensions

How to order

DIN24 DIN24 Splice Tray

Information

- The DIN24 holds up to 24 fibre optic fusion splice protector sleeves or up to 24 easy crimp ANT clamps (to be chosen)
- Cassette designed for housing optic fusion splice protector sleeves 45 mm and 60 mm
- The possibility of mounting a splice tray in the ODF 19"

Standard equipment

- Cover (1 pc)
- Latching disc mounting the cover (2 pcs)
- Screw for fixing the cover (2 pcs)
- Spacing bolt (2 pcs)
- Holder for 12 splice protector sleeves or 12 easy crimp ANT clamps (to be chosen) (2 pcs)
- Sticker: Attention Laser Radiation (1 pc)

Additional equipment

- Fibre optic fusion splice protector sleeves
- Easy Crimp ANT clamps
- Pigtails
- Patchcords
DIN24 WHITE Splice Tray Q-Fiber

**Description**

The DIN24 WHITE Q-Fiber Splice Tray is designed to store heat-shrink splice fibers. It is compatible with splice protector sleeves 45 mm. DIN24 WHITE is used for crossing over cables, patchcords and pigtails. Its small size and a special clamp system make it possible to place DIN24 WHITE in most fiber optic distribution frames. The embossing made to attach fiber optic tubes and pigtails inside the Splice Tray enable an easy, functional and aesthetic organization of fibers and pigtails. DIN24 WHITE can accommodate up to 24 fiber splices. DIN24 WHITE holds up to 24 fiber optic fusion splice protector sleeves or up to 24 easy crimp ANT clamps.

**Application**

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

**Properties**

- Made of plastic 1.5 mm
- Embossing to attach tubes and pigtails
- The possibility of mounting a splice tray in the ODF 19"
- Dimensions [H x W x D]: 10x155x92 mm
- Core capacity: 24

**Photos and dimensions**

![Photo of DIN24 WHITE Splice Tray]

**How to order**

DIN24-W DIN24 WHITE Splice Tray

*Possibility to order a splice tray with holders for 24 easy crimp ANT clamps

**Standard equipment**

- Cover (1pc)
- Screw M3x10 mm (2 pcs)
- Holder for 12 splice protector sleeves or 12 easy crimp ANT clamps (to be chosen) (2 pcs)

**Information**

- The DIN24 holds up to 24 fibre optic fusion splice protector sleeves or up to 24 easy crimp ANT clamps (to be chosen)
- Cassette designed for housing optic fusion splice protector sleeves 45 mm
- The possibility of mounting a splice tray in the ODF 19"

**Additional equipment**

- Fibre optic fusion splice protector sleeves
- Easy Crimp ANT clamps
- Pigtails
- Patchcords
DIN24 SLIM Splice Tray Q-Fiber

Description

The DIN24 SLIM Q-Fiber Splice Tray is designed to store heat-shrink splice fibers. It is compatible both with splice protector sleeves 45 mm, 60 mm as well as with mechanical casings. DIN24 is used for crossing over cables, patchcords and pigtails. Its small size and a special clamp system make it possible to place DIN24 in most fiber optic distribution frames. The embossing made to attach fiber optic tubes and pigtails inside the Splice Tray enable an easy, functional and aesthetic organization of fibers and pigtails. DIN24 can accommodate up to 24 fiber splices. DIN24 holds up to 24 fiber optic fusion splice protector sleeves or up to 24 easy crimp ANT clamps. The cassette cover is mounted by means of didymium magnets.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- Made of 10 mm steel sheet
- Embossing to attach tubes and pigtails
- The possibility of mounting a splice tray in the ODF 19”
- Standard color: RAL7035 (light grey) glossy, other colors on request
- Dimensions [H x W x D]: 10.5x140x117 mm
- Core capacity: 24

Photos and dimensions

How to order

DIN24-S DIN24 SLIM Splice Tray

*Possibility to order a splice tray with holders for 24 easy crimp ANT clamps

Standard equipment

- Cover (1pc)
- Magnet mounting the cover (4 pcs)
- Holder for 12 splice protector sleeves or 12 easy crimp ANT clamps (to be chosen) (2 pcs)
- Sticker: Attention Laser Radiation (1pc)

Information

- The DIN24 holds up to 24 fibre optic fusion splice protector sleeves or up to 24 easy crimp ANT clamps (to be chosen)
- Cassette designed for housing optic fusion splice protector sleeves 45 mm and 60 mm
- The possibility of mounting a splice tray in the ODF 19”

Additional equipment

- Screws for fixing the cover
- Fibre optic fusion splice protector sleeves
- Easy Crimp ANT clamps
- Pigtails
- Patchcords
Other Accessories

Holders for splice protector sleeves

Holders make it possible to fix the sleeves inside the ODF.
Available holders:

ASU1: protective holder for 12 splices without a heat shrink casing
ASU2: protective holder for 6 splices with a heat shrink casing

Cable glands

HP-ECO M16x1.5:
Thread: ø 16 mm
Thread length: 8 mm
Cable ø: 5.5 - 10 mm
Height: 35 mm

HP-ECO M20x1.5:
Thread: ø 20 mm
Thread length: 8 mm
Cable ø: 6 - 13 mm
Height: 37 mm

Front panel plugs

SC Duplex
SC Simplex
ST Simplex

Nylon cable ties

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<tr>
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<th>Size 2.5x80 mm:</th>
<th>Cable tie</th>
<th>Size 2.5x80 mm:</th>
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<th>Size 4.8x200 mm:</th>
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Mounting bolts

Rack bolts M6
The set contains: a bolt, a plastic washer and a basket nut
Packing: 20 sets

Bolts for adapter mounting
Length: 10 mm
Packing: 50 pcs

Bolts with nuts for adapter mounting
Length: 11.75 mm
The set contains: a bolt, a nut
Packing: 50 pcs
Single-Mode Optical Fibre Adapters

Description

Fibre-Optic Adapters form a part of the fibre-optic trunk line and connect two fibre-optic connectors. Adapters can be divided into multi-mode and single-mode ones. These, in turn, are further divided into simplex, duplex and others. Adapters may connect the same type of connectors (e.g. SC with SC or FC with FC) and these are standard adapters, or various types (e.g. SC with FC or SC with ST) and these are hybrid adapters.

### Single-Mode Adapters SM PC - Simplex

<table>
<thead>
<tr>
<th>Type</th>
<th>Index</th>
<th>Housing</th>
<th>Centring Element</th>
<th>Colour</th>
<th>Fixing</th>
<th>Properties</th>
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<tr>
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### Single-Mode Adapters SM PC - Simplex Hybrid

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### Single-Mode Adapters SM PC - Duplex

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### Single-Mode Adapters SM PC - Duplex Hybrid

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# Single-Mode Optical Fibre Adapters

## Single-Mode Adapters SM APC - Simplex

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<th>Properties</th>
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## Single-Mode Adapters SM APC - Simplex Hybrid

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## Single-Mode Adapters SM APC - Duplex

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## Multi-Mode Optical Fibre Adapters

**Description**

Fibre-Optic Adapters form a part of the fibre-optic trunk line and connect two fibre-optic connectors. Adapters can be divided into multi-mode and single-mode ones. These, in turn, are further divided into simplex, duplex and others. Adapters may connect the same type of connectors (e.g., SC with SC or FC with FC) and these are standard adapters, or various types (e.g., SC with FC or SC with ST) and these are hybrid adapters.

### Multi-Mode Adapters MM - Simplex

<table>
<thead>
<tr>
<th>type</th>
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### Multi-Mode Adapters MM - Duplex

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### Multi-Mode Adapters MM - Duplex Hybrid

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**Optical Fibre Attenuators**

**Description**

The Fibre-Optic Attenuator is a passive element of the fibre-optic trunk line, the role of which is to limit the optical power of the transmitted signal. This element is placed in front of the detector. The level of optical power after going through a fibre-optic attenuator is within the working range of the receiver.

**Fixed Attenuators**

The Junction Fibre-Optic Attenuator is a passive element of the fibre-optic trunk line, the role of which is to limit the optical power of the transmitted signal. This element is placed in front of the detector. The level of optical power after going through a fibre-optic attenuator is within the working range of the receiver. The attenuating component for the signal is a fibre placed in the fibre optic connector (male-female type). The attenuation value of such a connector is strictly specified. The offer includes the following connector attenuators: SC, FC, ST, LC and MU.

The Adapter Fibre-Optic Attenuator is a passive element of the fibre-optic trunk line, the role of which is to limit the optical power of the transmitted signal. This element is placed in front of the detector. The level of optical power after going through a fibre-optic attenuator is within the working range of the receiver. The attenuating component for the signal is an optical fibre adapter. The attenuation value of such an adapter is strictly specified. They are available in three versions: SC, ST and FC.

The “In-line” Fibre-Optic Attenuator is a passive element of the fibre-optic trunk line, the role of which is to limit the optical power of the transmitted signal. This element is placed in front of the detector. The level of optical power after going through a fibre-optic attenuator is within the working range of the receiver. The attenuating component for the signal is a custom-made optical fibre weld. The attenuation value of such an attenuator is strictly specified. The ending of the fibre-optic cable may be terminated by any fibre-optic connectors, as per customer’s order.

**Adjustable Attenuators VOA**

The VOA Attenuator in the Patchcord is an adjustable fibre optic attenuator built in the optical fibre. It comes with the following connectors: SC, ST, FC, LC, E2000, MU and hybrids of any length and any type of polishing: PC, SPC, UPC, APC. The attenuator is located in the middle of the patchcord.

**Properties:**

- high precision of finishing
- small size
- good stability
- strictly established attenuation

**Application:**

- telecommunication
- CATV
- data transmission network
- control and signalling systems
- computer networks
- measuring networks
Isolators

Opis

Fibre-Optical Isolator is a component of the fibre-optic trunk line, responsible for the attenuation of any reflections, dispersed signals which negatively affect the work of the optical transmitter, and may even lead to its damage. We distinguish polarisation-dependent optical isolators and polarisation-independent optical isolators.

Polarisers

Description

Fibre-Optic Polariser is an element, whose optic transmittance depends on the polarisation of the incident wave. For one type of polarisation, the transmittance is maximal and for the other type - it is minimal. They are used in transmission systems for the construction of polarisation compensators. This type of devices are used for regulating the status of optical signal polarisation. The structure of this type of optical devices is based on the structure of the optical fibre, which has undergone a partial removal of the fibre-optic coat, and then - in the empty space - a metallic base has been introduced. The length of such element is between ten and twenty centimetres.

Circulators Q-Fiber

Description

Optical Circulator is a passive element of the fibre-optic trunk line equipped, in most cases, in 3 or 4 ports. Transmission of signals between the individual ports is possible only in one direction. The 3-port version permits two-directional transmission in a single optical fibre at one wavelength. The circulator may be ended with any type of connector.

Application

Telecommunication, WDM systems, Optical amplifiers, FTTX, PON.

Properties

- Available housings: LGX, ODF 19", splice tray, housing ABS
- Pigtail length: 0.5 m - 2 m
- Legible port description
- Types of connectors: SC, ST, E2000, FC, LC, MU, other
- Polishing standards: PC, UPC, APC 8°

Information

- Each circulator is manufactured according to the strict demands of the customer
- All circulators are sealed with a guarantee label
- Circulators packed in a protective carton during transportation
- A 3-year warranty

How to order
V20 and V24 Q-Fiber

**Description**

Fibre Optic Fusion Splice Protection Sleeves Q-Fiber found their application in almost every area of the fibre-optic technology. They are used for securing connections in fiber optic splice closures, fiber optic distribution frames, stand switches and hanging switches. Excellent climatic and thermal properties make it ideal for use in closed as well as open spaces. The main goals during the design phase were: full protection of the fiber optic splices, a small size after recovery and a short assembly time. The initial shrinking of the outer tube was taken into account during the production process to reduce the gap between the tubes. This protects the internal tube and pin from falling out as well as facilitates entering the optical fiber into the hole. The final product is checked to meet the requirements set by the GR-1380-CORE standard of Telcordia Technologies Inc and the ZN-96TPSA-006 standard of Polish Telecom (TP). The sleeves we produce offer full protections of the fiber optic splices. They do not cause additional insert losses and offer protection against mechanical damage, pollution and weather conditions.

**Application**

Internet, Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

**Dimensions**

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<th>Part No.</th>
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<th>D</th>
<th>Dp</th>
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Available colors

- 00 - clear
- 01 - black
- 02 - brown
- 03 - red
- 04 - orange
- 05 - yellow
- 06 - green
- 07 - blue
- 08 - purple
- 09 - grey
- 10 - white
- 11 - pink
- 12 - turquoise

**Properties Sleeves V20**

- Outer diameter after recovery: ø 2 mm +/- 0.2 mm
- Hole diameter before recovery: ø 1.2 mm
- Pin diameter: ø 0.75 mm
- Minimum installation temperature: 110 °C
- Max. installation time: 60 seconds
- Standard color: Clear
- Compliant norms: UL224, MIL-I-23053, GR-1380-CORE
- The product conforms with the requirements of the RoHS Directive
- Packing: Ziploc bags 100 pieces

**Properties Sleeves V24**

- Outer diameter after recovery: ø 2.4 mm +/- 0.2 mm
- Hole diameter before recovery: ø 1.4 mm
- Pin diameter: ø 1 mm
- Minimum installation temperature: 110 °C
- Max. installation time: 60 seconds
- Standard color: Clear
- Compliant norms: UL224, MIL-I-23053, GR-1380-CORE
- The product conforms with the requirements of the RoHS Directive
- Packing: Ziploc bags 100 pieces

www.dll.com.pl
Easy Crimp ANT Q-Fiber

Description

Easy Crimp ANT Q-Fiber is a mechanical system for securing fibre-optic splices. It is an aluminium clamp, covered with glue for easier placement of the fibre-optic splice inside the clamp. The clamp is bent by means of a special clamping device. Proper clamping ensures that Easy Crimp Q-Fiber introduces no additional attenuation and offers better protection for the fibre-optic splice. It is an alternative that does not require the use of heat in comparison to the commonly used heat shrink casings of fibre-optic splices.

Application

Internet, Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- Made of aluminium plate
- Glue: modified PIB
- Maximum fibre diameter 250 µm
- Maximum length of fibre trimming 25 mm
- Dimensions after clamping (W x H x L): 10x3.0x31 mm
- Installation temperature from -5°C to 45°C
- Operating temperature from -20°C to 70°C

Photos and dimensions

How to order

| EC-30 | Easy Crimp ANT 30 mm |

Information

- Heating of the splice not required
- Battery life maximiser in the splicing machine
- Quick installation in less than 30 seconds
- Good fibre protection
Wave Division Multiplexing Systems
Q-Fiber Splitter

Description

Q-Fiber Splitter is a passive device that splits the optical power carried by an input (inputs) fiber into output fibers. It is ideal for sharing signal transmitters or bringing signal to multiple points. It is characterized by a configurable power-sharing in the production process. This means that the splitter can be configured in accordance with the customer’s requirements. The splitter can be terminated in any different type of connector.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

» Packaging: LGX, ODF 19”, splice tray, ABS
» Various lengths of pigtails: 0.5 - 2 m
» Description of outputs / inputs
» Types of connectors: SC, ST, E2000, FC, LC, MU, other
» Polishing standards: PC, UPC, APC 8°
» Holders in LGX making it possible to mount the module in the Chassis 19”
» A 3-year warranty

Photos and dimensions

![Q-Fiber Splitter Photos and Dimensions](image)

How to order

<table>
<thead>
<tr>
<th>SPLIT</th>
<th>Number of input ports:</th>
<th>01=1</th>
<th>02=2</th>
<th>04=4</th>
<th>08=8</th>
<th>16=16</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Number of output ports:</td>
<td>02=2</td>
<td>03=3</td>
<td>04=4</td>
<td>08=8</td>
<td></td>
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<td></td>
<td>Packaging:</td>
<td>LGX</td>
<td>ODF 19”</td>
<td>Splice Tray</td>
<td>ABS</td>
<td>Other</td>
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<td></td>
<td>Pigtail length:</td>
<td>0.5m</td>
<td>1m</td>
<td>1.5m</td>
<td>2m</td>
<td>3m</td>
</tr>
<tr>
<td></td>
<td>Connector:</td>
<td>None</td>
<td>SC</td>
<td>ST</td>
<td>FC</td>
<td>LC</td>
</tr>
<tr>
<td></td>
<td>Polishing standards:</td>
<td>PC</td>
<td>UPC</td>
<td>APC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Standard equipment

» A 3-year warranty
» Measurements at different wavelengths
» Description of outputs / inputs

Information

» Each product is custom-made
» All modules are sealed with a label guarantee
» Modules are packed in a protective cardboard box
Q-Fiber Splitter PLC

Description

Q-Fiber Splitter PLC is a passive device that splits the optical power carried by an input (inputs) fiber into output fibers. It is ideal for sharing signal transmitters or bringing signal to multiple points. It is characterized by a configurable power-sharing in the production process. This means that the splitter can be configured in accordance with the customer's requirements. The splitter can be terminated in any different type of connector.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- Various lengths of pigtails: 0.5 - 2 m
- Description of outputs / inputs
- Types of connectors: SC, ST, E2000, FC, LC, MU, other
- Polishing standards: PC, UPC, APC 8°
- Band: 1260 nm - 1650 nm
- A 3-year warranty

Parameters

<table>
<thead>
<tr>
<th></th>
<th>1x2</th>
<th>1x4</th>
<th>1x8</th>
<th>1x16</th>
<th>1x32</th>
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<th>2x4</th>
<th>2x8</th>
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<tr>
<td>Operation Wavelength Range (nm)</td>
<td>1260 - 1650</td>
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<td>Core Type</td>
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<tr>
<td>Insertion Loss Max. (dB)</td>
<td>4.0</td>
<td>7.3</td>
<td>11.5</td>
<td>13.7</td>
<td>16.9</td>
<td>21.0</td>
<td>4.2</td>
<td>7.6</td>
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<td>Loss Uniformity Max. (dB)</td>
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<td>0.6</td>
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<td>1.2</td>
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<td>0.3</td>
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<td>Directivity (dB)</td>
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<td>&gt;55</td>
<td>&gt;55</td>
<td>&gt;55</td>
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<tr>
<td>UniformityMax. (dB)</td>
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<td>ReturnLoss (dB)</td>
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<td>Operating Temperature (°C)</td>
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<td>Storage Temperature (°C)</td>
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<td>Packaged Dimension (mm)</td>
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<tr>
<td>Module Dimension (mm)</td>
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<td>100x80x10</td>
<td>100x80x10</td>
<td>120x10x10</td>
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<td>140x15x10</td>
<td>140x15x10</td>
<td>140x15x10</td>
<td>140x15x10</td>
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<td>Mini Module Dimension (mm)</td>
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<td>100x80x10</td>
<td>100x80x10</td>
<td>120x10x10</td>
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<td>140x15x10</td>
<td>140x15x10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How to order

- Number of input ports:
  - 1=1
  - 2=2
- Number of output ports:
  - 02=2
  - 04=4
  - 08=8
  - 64=64
- Packaging:
  - P=PLC
  - M=Modul
  - MM=MiniModul
  - L=LGX
  - O=ODF 19''
  - A=ABS
  - X=Other
- Pigtail length:
  - 01=0.1 m
  - 02=0.2 m
  - 06=0.6 m
  - 08=0.8 m
  - 10=1.0 m
  - 60=6.0 m
  - 64=6.4 m
- Cable diameter:
  - 09=0.9 mm
  - 10=1.0 mm
  - 20=2.0 mm
  - 28=2.8 mm
- Connector:
  - S=SC
  - T=ST
  - F=FC
  - L=LC
  - E=E2000
  - X=Other
- Polishing standards:
  - 0=None
  - P=PC
  - U=UPC
  - A=APC 8°

Information

- Each product is custom-made
- Each product is accompanied by a measurement protocol
- All modules are sealed with a label guarantee
Q-Fiber CWDM

Description

Q-Fiber CWDM is a wavelength division multiplexing technology which allows transmission of up to 10 optical channels through a single fiber. The channel spacing is 20 nm. The ability to transfer information in one fiber makes it possible to build low-cost metropolitan and wide area networks. CWDM technology enables the transmission of up to 10 Gb/s per channel, as well as any configuration in the following modes: ADD & DROP, MUX and DMUX.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- Packaging: LGX, ODF 19'', splice tray, ABS
- Description of the wavelength on the front panel
- Any configuration of fiber optic connectors
- Wavelength range from 1270 nm to 1610 nm

Information

- Each product is custom-made
- All modules are sealed with a label guarantee
- Modules are packed in a protective cardboard box

Photos and dimensions

How to order

| CWDM | Type: M=Mux, D=Dmux, MD=Mux/ Dmux | Channel: 1=1Ch, 2=2Ch, 3=3Ch, 4=4Ch, 5=5Ch; 8=8Ch | Packaging: L=LGX, K=Splice Tray, A=ABS, X=Other | Starting wavelength: 270=1270 nm; 330=1330 nm; 610=1610 nm | Connector: 0=None, S=SC, T=ST, F=FC, L=LC, E=E2000, A=APC 8° |

Standard equipment

- A 3-year warranty
- Measurements at different wavelengths
- Description of outputs / inputs
Q-Fiber DWDM

Description

Q-Fiber DWDM is a wavelength division multiplexing technology which allows transmission of up to 160 optical channels through a single fiber. The channel spacing is 1.6 nm for DWDM 200 GHz, 0.8 nm for DWDM 100 GHz and 0.4 nm for DWDM 50 GHz. The ability to transfer information in one fiber makes it possible to build low-cost metropolitan and wide area networks. DWDM technology enables the transmission of up to 100 Gb/s per channel, as well as any configuration in the following modes: ADD & DROP, MUX and DMUX.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- Packaging: LGX, ODF 19'', splice tray, ABS
- Description of the wavelength on the front panel
- Any configuration of fiber optic connectors
- Wavelength range from 1528.77 nm to 1610.49 nm (C-band & L-band)

Information

- Each product is custom-made
- All modules are sealed with a label guarantee
- Modules are packed in a protective cardboard box

Photos and dimensions

How to order

<table>
<thead>
<tr>
<th>DWDM</th>
<th>Type:</th>
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<tbody>
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<td></td>
<td>M=Mux</td>
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<tr>
<td></td>
<td>D=DMux</td>
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<tr>
<td></td>
<td>MD=MDmux/M</td>
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<tr>
<td></td>
<td>A=AUX</td>
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<tr>
<td></td>
<td>DR=DROP</td>
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<tr>
<td></td>
<td>AD=ADD/</td>
</tr>
<tr>
<td></td>
<td>DRP=</td>
</tr>
<tr>
<td></td>
<td>Channel:</td>
</tr>
<tr>
<td></td>
<td>1=1Ch</td>
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<td></td>
<td>2=2Ch</td>
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<td>3=3Ch</td>
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<td>6=6Ch</td>
</tr>
<tr>
<td></td>
<td>8=8Ch</td>
</tr>
<tr>
<td></td>
<td>Frequency:</td>
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<tr>
<td></td>
<td>5=50 GHz</td>
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<tr>
<td></td>
<td>3x30 GHz</td>
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<tr>
<td></td>
<td>2x200 GHz</td>
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<td>Packaging:</td>
</tr>
<tr>
<td></td>
<td>L=LGX</td>
</tr>
<tr>
<td></td>
<td>O=ODF 19''</td>
</tr>
<tr>
<td></td>
<td>K=Splice Tray</td>
</tr>
<tr>
<td></td>
<td>A=ABS</td>
</tr>
<tr>
<td></td>
<td>X=Other</td>
</tr>
<tr>
<td></td>
<td>Starting wavelength (ITU):</td>
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<tr>
<td></td>
<td>60=1529.55 nm</td>
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<td>21=1560.61 nm</td>
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<td>Connector:</td>
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<tr>
<td></td>
<td>0=None</td>
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<tr>
<td></td>
<td>S=SC</td>
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<tr>
<td></td>
<td>T=ST</td>
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<td></td>
<td>F=FC</td>
</tr>
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<td></td>
<td>L=LC</td>
</tr>
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<td></td>
<td>E=E2000</td>
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<tr>
<td></td>
<td>X=Other</td>
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<td>Polishing standards:</td>
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<td>P=PC</td>
</tr>
<tr>
<td></td>
<td>U=UPC</td>
</tr>
<tr>
<td></td>
<td>X=Other 8°</td>
</tr>
</tbody>
</table>

Standard equipment

- A 3-year warranty
- Measurements at different wavelengths
- Description of outputs / inputs
Data Communication Cabinets And Housings
Cabinet SSJ 19"

Application
Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties
- Standard painting: RAL 7035 (grey)
- Door (right- and left-side mounted) equipped with a one-point lock
- Protection IP20
- Two vertical assembly profiles 19"
- Integrated pedestal with the height of 100 mm
- Completely assembled cabinet
- It is designed for interiors
- Welded frame
- Levelling feet M10
- Removable back wall

How to order

<table>
<thead>
<tr>
<th>W x D x H [mm]</th>
<th>Weight [kg]</th>
<th>Capacity [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>24U 600x600x1210</td>
<td>42</td>
<td>150</td>
</tr>
<tr>
<td>24U 600x800x1210</td>
<td>51</td>
<td>150</td>
</tr>
<tr>
<td>24U 800x800x1210</td>
<td>60</td>
<td>150</td>
</tr>
</tbody>
</table>

Standard equipment
- Brush strip (1pc)
- Set of rack bolts M6 (16 pcs)
- Set of self-levelling feet M10 (4 pcs)
- Edge covers (15 m)
- Key to the front door (2 pcs)

Additional equipment
- Shelves
- Ventilation panels, lighting panels and power supply panels
- Elements for guiding and routing cables
Cabinet SRS 19"

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- Standard painting: RAL 7035 (grey)
- Door (right- and left-side mounted) equipped with a one-point lock
- Protection IP20
- Two mounting planes 19"
- Completely assembled cabinet
- It is designed for interiors
- Welded frame
- Levelling feet M10
- Removable side walls

How to order

<table>
<thead>
<tr>
<th>W x D x H [mm]</th>
<th>Weight [kg]</th>
<th>Capacity [kg]</th>
</tr>
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<tbody>
<tr>
<td>SRS191566</td>
<td>Standing rack cabinet 15U 600x600x780</td>
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<tr>
<td>SRS191568</td>
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<td>SRS191588</td>
<td>Standing rack cabinet 15U 800x800x780</td>
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<td>SRS191589</td>
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<td>SRS344588</td>
<td>Standing rack cabinet 45U 800x800x2120</td>
<td>127</td>
</tr>
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</table>

Additional equipment

- Pedestals
- Shelves
- Ventilation panels, lighting panels and power supply panels
- Elements for guiding and routing cables
Cabinet SS 19"

Application
Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties
- Standard painting: RAL 7021 (black)
- Door (right- and left-side mounted) equipped with a three-point lock
- Protection IP20
- Two mounting planes 19"
- Completely assembled cabinet
- It is designed for interiors
- Possibility to set the cabinets in rows
- Welded frame
- Levelling feet M10
- Removable side walls and rear wall

How to order

<table>
<thead>
<tr>
<th>Model</th>
<th>W x D x H [mm]</th>
<th>Weight [kg]</th>
<th>Capacity [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS3942610</td>
<td>Single-wing server cabinet 42U 600x1000x1980</td>
<td>136</td>
<td>1000</td>
</tr>
<tr>
<td>SS3942810</td>
<td>Single-wing server cabinet 42U 800x1000x1980</td>
<td>139</td>
<td>1000</td>
</tr>
<tr>
<td>SS3942812</td>
<td>Single-wing server cabinet 42U 800x1200x1980</td>
<td>145</td>
<td>1000</td>
</tr>
<tr>
<td>SS3945812</td>
<td>Single-wing server cabinet 45U 800x1200x1980</td>
<td>159</td>
<td>1000</td>
</tr>
<tr>
<td>SS3947810</td>
<td>Single-wing server cabinet 47U 800x1000x2186</td>
<td>165</td>
<td>1000</td>
</tr>
<tr>
<td>SS3947812</td>
<td>Single-wing server cabinet 47U 800x1200x2186</td>
<td>175</td>
<td>1000</td>
</tr>
<tr>
<td>SS3942810D</td>
<td>Single-wing server cabinet 42U 800x1000x1980</td>
<td>139</td>
<td>1000</td>
</tr>
</tbody>
</table>

Additional equipment
- Pedestals
- Shelves
- Ventilation panels, lighting panels and power supply panels
- Elements for guiding and routing cables
Cabinet SWJ 19"

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- Standard painting: RAL 7035 (grey)
- Door opened on the right or on the left (the function is obtained by the possibility of hanging the cabinet on a wall in any arrangement - up or down)
- Door equipped with a one-point lock
- The standard cabinet without the rear wall
- The standard cabinet without removable side walls
- Protection IP20
- Two vertical assembly profiles 19"
- Completely assembled cabinet
- It is designed for interiors

How to order

<table>
<thead>
<tr>
<th>W x D x H [mm]</th>
<th>Weight [kg]</th>
<th>Capacity [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWJ 1904</td>
<td>13</td>
<td>50</td>
</tr>
<tr>
<td>SWJ 1906</td>
<td>16</td>
<td>50</td>
</tr>
<tr>
<td>SWJ 1909</td>
<td>18</td>
<td>50</td>
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<td>SWJ 1912</td>
<td>21</td>
<td>50</td>
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<td>SWJ 1915</td>
<td>25</td>
<td>50</td>
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<tr>
<td>SWJ 1918</td>
<td>28</td>
<td>50</td>
</tr>
<tr>
<td>SWJ 1921</td>
<td>31</td>
<td>50</td>
</tr>
</tbody>
</table>

Standard equipment

- Brush strip (1pc)
- Set of rack bolts M6 (12 pcs)
- Sheet-metal screw M2.9x9.5 (12 pcs)
- Key to the front door (2 pcs)

Additional equipment

- Back wall
- Shelves
- Ventilation panels, lighting panels and power supply panels
- Elements for guiding and routing cables
- It is possible to order the cabinet with removable side walls
Cabinet SWD 19"

**Application**

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

**Properties**

- Standard painting: RAL 7035 (grey)
- Door opened on the right or on the left (the function is obtained by the possibility of hanging the cabinet on a wall in any arrangement - up or down)
- Door equipped with a one-point lock
- Possibility to open the rear part of the cabinet
- Protection IP20
- Two vertical assembly profiles 19"
- Completely assembled cabinet
- It is designed for interiors

**How to order**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>W x D x H [mm]</th>
<th>Weight [kg]</th>
<th>Capacity [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWD1904</td>
<td>Two-element hanging cabinet 19” 4U 600x500x240</td>
<td>16</td>
<td>30</td>
<td></td>
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<tr>
<td>SWD1906</td>
<td>Two-element hanging cabinet 19” 6U 600x500x330</td>
<td>19</td>
<td>30</td>
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</tr>
<tr>
<td>SWD1909</td>
<td>Two-element hanging cabinet 19” 9U 600x500x465</td>
<td>22</td>
<td>40</td>
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<tr>
<td>SWD1912</td>
<td>Two-element hanging cabinet 19” 12U 600x500x600</td>
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<tr>
<td>SWD1915</td>
<td>Two-element hanging cabinet 19” 15U 600x500x730</td>
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<td>50</td>
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<tr>
<td>SWD1918</td>
<td>Two-element hanging cabinet 19” 18U 600x500x860</td>
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<td>50</td>
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<tr>
<td>SWD1921</td>
<td>Two-element hanging cabinet 19” 21U 600x500x997</td>
<td>37</td>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>

**Standard equipment**

- Brush strip (1 pc)
- Set of rack bolts M6 (12 pcs)
- Key to the front door (2 pcs)

**Additional equipment**

- Shelves
- Ventilation panels, lighting panels and power supply panels
- Elements for guiding and routing cables
Hanging Minicabinets 10"

6U „INTER” Cabinet

- Standard painting: RAL 7035 (grey)
- A structure made of aluminium plate
- Door equipped with two single-point locks
- In the upper and lower parts, there are three openings (for PG13.5) that make it possible to introduce cable bundles in a tight manner
- Protection IP20
- One mounting plane 10"
- Completely assembled cabinet

How to order

<table>
<thead>
<tr>
<th>W x D x H [mm]</th>
<th>Weight [kg]</th>
<th>Capacity [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS161032 Minicabinet 10&quot; 6U 305x250x324</td>
<td>6</td>
<td>20</td>
</tr>
</tbody>
</table>

7U „OFFICE” Cabinet

- Standard painting: RAL 7035 (grey)
- A structure made of aluminium plate
- Door equipped with two single-point locks
- In the upper, lower and rear side, there are four openings (120 x 35 mm) allowing the introduction of cable bundles
- Protection IP20
- One mounting plane 10"
- Grounded door
- Completely assembled cabinet

How to order

<table>
<thead>
<tr>
<th>W x D x H [mm]</th>
<th>Weight [kg]</th>
<th>Capacity [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSO41033 Minicabinet 10&quot; 4U 300x300x340</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>MSO61033 Minicabinet 10&quot; 6U 300x300x330</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>MSO91033 Minicabinet 10&quot; 9U 300x300x465</td>
<td>6</td>
<td>20</td>
</tr>
</tbody>
</table>

Accessories for data communication cabinets

Accessories

Our offer encompasses the following accessories for data communication cabinets:

- Mounting frames
- Assembly profiles
- Shelves
- Ventilation panels
- Filtration plates
- Lighting panels 19"
- Outlet power strips 19"
- Outlet power strips 19"
- Filling plates 19"
- External cable holders 19"
- Cable hooks
- Strips of cable conduits 19"
- Brush conduits
- Earthing busbars
- Rack bolts M6
- Potential-equalization bars
- Mounting miniframes
- Pedestals of rack cabinets
- Supply columns
Fiber Optic Splicing Closures
**FOSC DJ-75II**

**Description**

*The Vertical Hermetic Fiber Optic Splicing Closure* is a complete set of accessories used for connecting permanently two (or more) fiber optic cables. A closure is installed in a vertical position. Air-tight closure is fulfilled by a rubber sealing washer, which protects the fibre-optic fusion splices against the influence of adverse working conditions. It is an ideal solution for works in the telecommunication manholes and data communication containers. It is possible to install the closure on a wall or on a pole. The packing of the introduced cables is made by means of heat shrink pipes (shrinks).

**Application**

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

**Properties**

* High quality ABS material
* Airtight closure
* Cable port: 3 × ø 12 mm + 1 × ø 13 mm (oval)
* Core capacity: 48
* Organizer tube
* Metal handles of the central element
* Size (H x W): 288 x ø 178 [mm]

**Photos and dimensions**

**How to order**

| FOSC DJ-75II | DJ-75II Vertical Hermetic Fiber Optic Splicing Closure DIN12 Splice Tray (12 cores) |

**Information**

> FOSC holds up to four FOST D37 DIN12 cassettes
> FOSC has an additional handle cable
> FOSC is packed in a cardboard box

**Standard equipment**

* FOST D37 DIN12 (1pc)
* Key to the M8 bolt (1pc)
* Self-adhesive aluminium foil (1 sheet 190×160 mm)
* Earthing wire ø15 mm (0.3 m)
* Labeling paper (1 set)
* Heat shrinkable fixing sleeve (3 round + 1 oval)
* Clip for an oval shrink (1pc)
* Nylon tie (8 pcs)
* Clamping ring for poles (1pc)
* Organizer tube (1pc)
FOSC DJS-7III

Description

The Vertical Hermetic Fiber Optic Splicing Closure is a complete set of accessories used for connecting permanently two (or more) fiber optic cables. A closure is installed in a vertical position. Air-tight closure is fulfilled by a rubber sealing washer, which protects the fibre-optic fusion splices against the influence of adverse working conditions. It is an ideal solution for works in the telecommunication manholes and data communication containers. It is possible to install the closure on a wall or on a pole. The packing of the introduced cables is made by means of heat shrink pipes (shrinks).

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- High quality ABS material
- Airtight closure
- Cable port: 3 x ø 16 mm + 1 x ø 25 mm (oval)
- Core capacity: 96
- Organizer tube
- Metal handles of the central element
- Cable holders
- Size (H x W): 435 x ø 190 [mm]

Photos and dimensions

How to order

FOSC DJS-7III
FOST D32
DJS-7III Vertical Hermetic Fiber Optic Splicing Closure
DIN24 Splice Tray (24 cores)

Information

- FOSC holds up to four FOST D32 DIN24 cassettes
- FOSC has an additional handle cable
- FOSC is packed in a cardboard box

Standard equipment

- FOST D32 DIN24 (1pc)
- Key to the M8 bolt (1pc)
- Self-adhesive aluminium foil (1sheet ø90x170 mm)
- Earthing wire ø15 mm (0.3 m)
- Labeling paper (1set)
- Heat shrinkable fixing sleeve (3 round + 1oval)
- Clip for an oval shrink (1pc)
- Nylon tie (8 pcs)
- Clamping ring for poles (1pc)
- Organizer tube (1pc)
The Vertical Hermetic Fiber Optic Splicing Closure is a complete set of accessories used for connecting permanently two (or more) fiber optic cables. A closure is installed in a vertical position. Air-tight closure is fulfilled by a rubber sealing washer, which protects the fibre-optic fusion splices against the influence of adverse working conditions. It is an ideal solution for works in the telecommunication manholes and data communication containers. It is possible to install the closure on a wall or on a pole. The packing of the introduced cables is made by means of heat shrink pipes (shrinks).

**Properties**

- High quality ABS material
- Airtight closure
- Cable port: 4 x ø 24 mm + 1 x ø 42 mm (oval)
- Core capacity: 288
- Organizer tube
- Metal handles of the central element
- Cable holders
- Size (H x W): 500 x ø 228 [mm]

**How to order**

- FOSC DJS-74II
- FOST D27

**FOSC DJS-74II** Vertical Hermetic Fiber Optic Splicing Closure DIN348 Splice Tray (48 cores)

**Standard equipment**

- FOST D27 DIN48 (1pc)
- Key to the M8 bolt (1pc)
- Self-adhesive aluminium foil (1 sheet 260x220 mm)
- Earthing wire ø15 mm (0.3 m)
- Labeling paper (1 set)
- Heat shrinkable fixing sleeve (4 round + 1 oval)
- Clip for an oval shrink (1 pc)
- Nylon tie (8 pcs)
- Clamping ring for poles (1pc)
- Organizer tube (1pc)

**Information**

- FOSC holds up to six FOST D27 DIN48 cassettes
- FOSC has an additional handle cable
- FOSC is packed in a cardboard box

**Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.**
**FOSC DJ S-714III**

**Description**

The **Vertical Hermetic Fiber Optic Splicing Closure** is a complete set of accessories used for connecting permanently two (or more) fiber optic cables. A closure is installed in a vertical position. Air-tight closure is fulfilled by a rubber sealing washer, which protects the fibre-optic fusion splices against the influence of adverse working conditions. It is an ideal solution for works in the telecommunication manholes and data communication containers. It is possible to install the closure on a wall or on a pole. The packing of the introduced cables is made by means of heat shrink pipes (shrinks).

**Application**

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

**Properties**

- High quality ABS material
- Airtight closure
- Cable port: 6 x ø 25 mm + 1 x ø 41 mm (oval)
- Core capacity: 504
- Organizer tube
- Metal handles of the central element
- Cable holders
- Size (H x W): 510 x ø 250 [mm]

**Photos and dimensions**

**How to order**

| FOSC DJ S-714III | DJS-714III Vertical Hermetic Fiber Optic Splicing Closure DIN172 Splice Tray (72 cores) |

**Information**

- FOSC holds up to seven FOST D29 DN72 cassettes
- FOSC has an additional handle cable
- FOSC is packed in a cardboard box

**Standard equipment**

- FOST D29 DIN72 (1pc)
- Key to the M8 bolt (1pc)
- Self-adhesive aluminium foil (1sheet 390x170 mm)
- Earthing wire ø15 mm (0-3 m)
- Labeling paper (1set)
- Heat shrinkable fixing sleeve (6 round +1oval)
- Clip for an oval shrink (1pc)
- Nylon tie (8 pcs)
- Clamping ring for poles (1pc)
- Organizer tube (1pc)
The Vertical Hermetic Fiber Optic Splicing Closure is a complete set of accessories used for connecting permanently two (or more) fiber optic cables. A closure is installed in a vertical position. Air-tight closure is fulfilled by a rubber sealing washer, which protects the fibre-optic fusion splices against the influence of adverse working conditions. It is an ideal solution for works in the telecommunication manholes and data communication containers. It is possible to install the closure on a wall or on a pole. The packing of the introduced cables is made by means of elastic rings and plastic sealing washers.

**Application**

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

**Properties**

- High quality ABS material
- Airtight closure
- Cable port: 4 x ø 16 mm
- Core capacity: 48
- Organizer tube
- Metal handles of the central element
- Cable holders
- Size (H x W): 288 x ø 178 [mm]

**Photos and dimensions**

![Photos and dimensions](image)

**How to order**

<table>
<thead>
<tr>
<th>FOSC DJS-84II</th>
<th>DJS-84II Vertical Hermetic Fiber Optic Splicing Closure DIN12 Splice Tray (12 cores)</th>
</tr>
</thead>
</table>

**Information**

- FOSC holds up to four FOST D37 DIN12 cassettes
- FOSC has an additional handle cable
- FOSC is packed in a cardboard box

**Standard equipment**

- FOST D37 DIN12 (1pc)
- Special wrench (2 pc)
- Earthing wire ø 15 mm (0.3 m)
- Labelling paper (1set)
- Elastic ring (4 pcs)
- Nylon tie (8 pcs)
- Plastic gasket (4 pcs)
- Organizer tube (1 pc)
- Desiccant (1pc)
FOSC DJS-61-102

Description

The Horizontal Hermetic Fiber Optic Splicing Closure is a complete set of accessories used for connecting permanently two (or more) fiber optic cables. A closure is installed in a horizontal position. Air-tight closure is fulfilled by a rubber sealing washer, which protects the fibre-optic fusion splices against the influence of adverse working conditions. It may be placed in the air, underground or on walls. It is a perfect solution for works in telecommunication manholes, data communication containers and in the ground.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- High quality ABS material
- Airtight closure
- Cable port: 2 x ø 16 mm + 4 x ø 13 mm
- Core capacity: 96
- Metal handles of the central element
- Cable holders
- Size (H x W x D): 90 x 185 x 400 [mm]

Photos and dimensions

How to order

FOSC DJS-61-102
FOST D102
DJS-61-102 Horizontal Hermetic Fiber Optic Splicing Closure
DIN24 Splice Tray (24 cores)

Information

- FOSC holds up to four FOST D102 DIN24 cassettes
- FOSC has an additional handle cable
- FOSC is packed in a cardboard box

Standard equipment

- FOST D102 DIN24 (1pc)
- Special wrench (2 pc)
- Earthing wire ø15 mm (0.3 m)
- Labeling paper (1 set)
- Nylon tie (6 pcs)
- Abrasive cloth (1pc)
- Self-vulcanizing tape (1pc)
- Protective tube (1m)
- Desiccant (1pc)
- Additional mounting hook (2 pcs)
**FOSC DJ S-61-104**

**Description**

The Horizontal Hermetic Fiber Optic Splicing Closure is a complete set of accessories used for connecting permanently two (or more) fiber optic cables. A closure is installed in a horizontal position. Air-tight closure is fulfilled by a rubber sealing washer, which protects the fibre-optic fusion splices against the influence of adverse working conditions. It may be placed in the air, underground or on walls. It is a perfect solution for works in telecommunication manholes, data communication containers and in the ground.

**Application**

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

**Properties**

- High quality ABS material
- Airtight closure
- Cable port: 2 x ø 23 mm + 2 x ø 20 mm + 2 x ø 16 mm
- Core capacity: 192
- Metal handles of the central element
- Cable holders
- Size (H x W x D): 160 x 216 x 450 [mm]

**Photos and dimensions**

![Photos and dimensions](image)

**How to order**

FOSC DJ S-61-104  
FOST D104  
DJ S-61-104 Horizontal Hermetic Fiber Optic Splicing Closure  
DIN24 Splice Tray (24 cores)

**Information**

- FOSC holds up to eight FOST D104 DIN24 cassettes
- FOSC has an additional handle cable
- FOSC is packed in a cardboard box

**Standard equipment**

- FOST D104 DIN24 (1pc)
- Special wrench (3 pcs)
- Earthing wire ø15 mm (0.3 m)
- Labeling paper (1set)
- Nylon tie (24 pcs)
- Abrasive cloth (1pc)
- Self-vulcanizing tape (1pc)
- Protective tube (1m)
- Desiccant (1pc)
- Additional mounting hook (2 pcs)
FOSC DJ S-61-108

Description

The Horizontal Hermetic Fiber Optic Splicing Closure is a complete set of accessories used for connecting permanently two (or more) fiber optic cables. A closure is installed in a horizontal position. Air-tight closure is fulfilled by a rubber sealing washer, which protects the fibre-optic fusion splices against the influence of adverse working conditions. It may be placed in the air, underground or on walls. It is a perfect solution for works in telecommunication manholes, data communication containers and in the ground.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

- High quality ABS material
- Airtight closure
- Cable port: 2 x ø 23 mm + 2 x ø 20 mm + 2 x ø 16 mm
- Core capacity: 96
- Metal handles of the central element
- Cable holders
- Size (H x W x D): 110 x 216 x 450 [mm]

Photos and dimensions

How to order

FOSC DJ S-61-108          | DJ S-61-108 Horizontal Hermetic Fiber Optic Splicing Closure
FOST DJ08                  | DIN24 Splice Tray (24 cores)
FOST D02                   | DIN24 Splice Tray (24 cores)

FOSC holds up to four FOST D02 DIN24 cassettes
FOSC has an additional handle cable
FOSC is packed in a cardboard box

Standard equipment

- FOST DJ08 DIN24 (1pc)
- Special wrench (3 pc)
- Earthing wire ø15 mm (0.3 m)
- Labeling paper (1set)
- Nylon tie (8 pcs)
- Abrasive cloth (1pc)
- Self-vulcanizing tape (1pc)
- Protective tube (1m)
- Desiccant (1pc)
- Additional mounting hook (2 pcs)
Linear fixtures
Support Frame for Cable Overlength Q-Fiber

Description

The Support Frame for Cable Overlength Q-Fiber is designed for placement in the telecommunication manholes or cable cellars. It is used for arranging and winding the cable overlength, it guarantees correct bend radius of the wound cable. It protects the cable against mechanical damage. The support frame holds 220 m of cable with 10 mm in diameter.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

SZK1-O:
- Dimensions: 500 x 500 x 95 mm, 600 x 600 x 95 mm, 700 x 700 x 95 mm, 500 x 500 x 135 mm, 600 x 600 x 135 mm, 700 x 700 x 135 mm
- Capacity: 150 m of cable with 10 mm in diameter
- Support frame made of galvanised steel

SZK2-O:
- Dimensions: 395 x 395 x 95 mm
- Capacity: 50 m of cable with 10 mm in diameter
- Support frame made of galvanised steel

SZK3-O:
- Dimensions: 700 x 700 x 95 mm, 800 x 800 x 95 mm, 900 x 900 x 95 mm, 700 x 700 x 95 mm, 800 x 800 x 95 mm, 900 x 900 x 95 mm,
- Capacity: 220 m of cable with 10 mm in diameter
- Support frame made of galvanised steel

Dimensions

<table>
<thead>
<tr>
<th>SZK1-O</th>
<th>SZK2-O</th>
<th>SZK3-O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>Dimensions</td>
<td>Dimensions</td>
</tr>
<tr>
<td>500 x 500 x 95 mm</td>
<td>395 x 395 x 95 mm</td>
<td>700 x 700 x 95 mm</td>
</tr>
<tr>
<td>600 x 600 x 95 mm</td>
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<td>500 x 500 x 135 mm</td>
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<tr>
<td>700 x 700 x 135 mm</td>
<td></td>
<td>900 x 900 x 95 mm</td>
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</tbody>
</table>

How to order

<table>
<thead>
<tr>
<th>SZK1-O-95</th>
<th>SZK1-O-135</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable overlength support frame 500-700 mm height 95 mm</td>
<td>Cable overlength support frame 500-700 mm height 135 mm</td>
</tr>
<tr>
<td>SZK2-O-95</td>
<td>SZK2-O-135</td>
</tr>
<tr>
<td>Cable overlength support frame 395 mm height 95 mm</td>
<td>Cable overlength support frame 395 mm height 135 mm</td>
</tr>
<tr>
<td>SZK3-O-95</td>
<td>SZK3-O-135</td>
</tr>
<tr>
<td>Cable overlength support frame 700-900 mm height 95 mm</td>
<td>Cable overlength support frame 700-900 mm height 135 mm</td>
</tr>
</tbody>
</table>

Additional equipment

- Cover for the support frame of the cable overlength
- Pin
- Fixing knob

Information

- The support frame holds 220 m of cable with 10 mm in diameter
- Holders for wall mounting
- Support frame made of galvanised steel
Cable Overlength Box SZK1-Q-Fiber

**Description**

The **Cable Overlength Box Q-Fiber** is designed for placement in the telecommunication manholes or cable cellars. It is used for arranging and winding the cable overlength, it guarantees correct bend radius of the wound cable. It protects the cable against mechanical damage. The cable overlength box holds 120 m of cable with 10 mm in diameter. The box consists of the support frame and the cover. It is possible to order the support frame or the cover alone.

**Application**

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

**Properties**

- Dimensions: 610 x 610 x 100 mm
- Capacity: 120 m of cable with 10 mm in diameter
- Support frame made of galvanised steel
- Corrosion-protected external housing
- Equipped with a knob holding the cover to the frame
- Possibility to order fixing knob with key

**Photos and dimensions**

![Photos and dimensions](image)

**How to order**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SZK1</td>
<td>Cable Overlength Box (set)</td>
</tr>
<tr>
<td>SZK1-O-95</td>
<td>Cable Overlength Support Frame 500-700 mm (galvanised steel)</td>
</tr>
<tr>
<td>PSZK1</td>
<td>Cover for the Support Frame for Cable Overlenght</td>
</tr>
</tbody>
</table>

**Information**

- Box holds 120 m of cable with 10 mm in diameter
- Box has holders for wall mounting
- Cable overlength box is packed in a cardboard box

**Standard equipment**

- Cable overlength support frame 500-700 mm (galvanised steel)
- Cover for the support frame 610x610x100 mm
- Pin
- Fixing knob
Cable Overlength Box SZK2 Q-Fiber

Description

The Cable Overlength Box Q-Fiber is designed for placement in the telecommunication manholes or cable cellars. It is used for arranging and winding the cable slack, it guarantees correct bend radius of the wound cable. It protects the cable against mechanical damage. The cable slack cabinet holds 50 m of cable with 10 mm in diameter. The box consists of the support frame and the cover. It is possible to order the support frame or the cover alone.

Application

Telecommunication, CATV, Monitoring, Industry, LAN, MAN, WAN, FTTx, PON.

Properties

» Dimensions: 400 x 400 x 100 mm,
» Capacity: 50 m of cable with 10 mm in diameter
» Support frame made of galvanised steel
» Corrosion-protected external housing
» Equipped with a knob holding the cover to the frame
» Possibility to order fixing knob with key

Photos and dimensions

How to order

<table>
<thead>
<tr>
<th>SZK2</th>
<th>Cable Overlength Box (set)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SZK2-O-95</td>
<td>Cable Overlength Support Frame 395 mm (galvanised steel)</td>
</tr>
<tr>
<td>PSZK2</td>
<td>Cover for the Support Frame of the Cable Overlength</td>
</tr>
</tbody>
</table>

Information

» Box holds 50 m of cable with 10 mm in diameter
» Box has a holders for wall mounting
» Cable overlength box is packed in a cardboard box

Standard equipment

» Cable overlength support frame 385 mm (galvanised steel)
» Cover for the support frame 400x400x100 mm
» Pin
» Fixing knob
Telecommunications Containers

Description

Data communication containers made of polyethylene constitute a perfect alternative for their counterparts executed in a traditional manner, e.g. from concrete. They are used for installation in telecommunications networks and designed for the protection of connector sleeve and the fibre-optic cable slack laid in the cable conduit. The container consists of the body, polyethylene cover and a sealing washer under the cover. The front flat inlets in the corners make it possible to introduce pipes into the containers. The pipes have standard diameters of ø 32 mm, ø 40 mm and ø 50 mm.

Application

Telecommunication, MAN, WAN, Protection of the connecting sleeve, Protection of the optical fibre slack.

Properties

» Small weight
» Excellent tightness
» Easy and quick assembly
» Possibility to assemble in difficult conditions
» Easy network extension
» Easy to maintain in a clean condition
» Stability of the product
» Resistance to low temperatures
» Possibility of recycling

Photos and dimensions

How to order

| DLL-ZT-00W | Telecommunications container of the cable slack |
| DLL-ZT-01W | Telecommunications containers with one connection |
| DLL-ZT-02W | Data communication container with two connections |

Standard equipment

» Body
» Cover
» Gasket under the cover
Linear Fixtures

Warning tapes

» Orange tape with warning inscriptions (various texts)
» Locality tapes with an insert made of acid resistant steel for marking underground optical fibre cabling duct systems
» White/red tapes for marking dangerous places

Cable markers

» Available sizes: 97x67 mm (OZK-1-ENG, OZK-2-ENG, OZK-3-ENG, OZK-4-ENG), 195x45 mm (OZK-5) other sizes on demand
» Many patterns of the markers
» Mounting by means of two clips
» Markers resistant to environmental conditions
» Possibility to make markers tailor-made to the individual needs of a client
» Aesthetic finishing

Glass fibre

» Available fibre diameters: 3 mm, 6 mm, 9 mm, 11 mm, 15 mm
» A fibre available in bulk or on a stand
» Various stand sizes

Cable socks

» Diameters available: 12-19 mm, 15-25 mm, 25-35 mm, 35-50 mm, 50-65 mm, 65-80 mm, 80-100 mm
» Available socks - single- or double-eared
» Available socks with or without a patent eye
Installation Instruments

Dust-free Kimwipes

Small wires for cleaning the ferrules
» Available for adapters with a ferrule 2.5 mm (ST/FC/SC) as well as for adapters with a ferrule 1.25 mm (LC/MU/MT).

Marker 3M ScotchCode

Cable markers

Scissors IDEAL 45-344

Plates for cutting the fibres

Stripper of the optical fibre tube
Installation Instruments

Crimping device for optical fibre connectors

Available with different types of jaws for various types of fibre-optic connectors.
Available jaws: (.213"/.178"/.151" Hex), (.178"/.128"/.068" Hex), (.128"/.151"/.215"/.197"/.178" Hex), (.190" Hex/.105" Round/.090" Round), (.120"/.137"/.190" Round).

Stripper Miller FO 103s

A tool for removing the outer layer of the cable and reinforcement RIPLEY ACS

Stripper Miller FO 101s

A tool for cutting the HDPE pipe
Fiber Optic Cables
Belden Fiber Optic Cables

Description

Our offer contains a full array of the Belden fibre-optic cables. We invite everyone to become familiar with our offer at www.dll.com.pl. Should you have any further questions, contact our trading department.

Interconnect Cables

The interconnect fibre-optic cables may be used as a cabling inside buildings, particularly under the floor between distribution frames, to work stations (Fiber-to-the-desk), as well as for the production of connecting cables (patchcords). A tight tube is a very good solution for applications that do not require great number of fibres in the LAN network, thus eliminating the need to use the fun out kits. Cables may be installed in cable troughs.

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIOT, GIOS</td>
<td>900 Micron Buffered Fibers</td>
</tr>
<tr>
<td>GiPT, GPS</td>
<td>INTERCONNECT cable with LSNH jacket</td>
</tr>
</tbody>
</table>

Internal Cables

MiniBreakout and Breakout fibre-optic cables may be installed inside buildings as a backbone of the cabling, as well as between distribution frames on the floors. A tight tube is a very good solution for applications that do not require great number of fibres in the LAN network, thus eliminating the need to use the fun out kits. Cables may be installed in cable troughs.

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIMT</td>
<td>Mini-Breakout Cable with LSNH jacket</td>
</tr>
<tr>
<td>GiBT</td>
<td>Breakout Cable with LSNH jacket</td>
</tr>
</tbody>
</table>

Central Loose Tube Cables

Single-tube fibre-optic cables constitute an economical solution for a small number of fibres (up to 24 fibres). The structure of the cable offers smaller internal diameter, which makes it possible to use the cable pathways and telecommunication conduit systems more efficiently. The structure of the cable is based on the central tube, which houses optical fibres. The tube is filled with a water repellent gel. Thanks to this solution, the tube is not in direct contact with the optic fibres, which gives them perfect protection against damage. Single-tube cables are available with the LSNH and PE layers. The great advantage of these cables is the possibility to place them directly in the ground.

Central Loose Tube, Universal (LSNH jacket)

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GUSN</td>
<td>Central Loose Tube, Universal (LSNH jacket), Max. drawing load - 1500 N</td>
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<tr>
<td>GURN</td>
<td>Central Loose Tube, Universal (LSNH jacket), Max. drawing load - 3500 N</td>
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</tbody>
</table>

Central Loose Tube, Outdoor (PE jacket)

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOSN</td>
<td>Central Loose Tube, Outdoor (PE jacket), Max. drawing load - 1500 N</td>
</tr>
<tr>
<td>GORN</td>
<td>Central Loose Tube, Outdoor (PE jacket), Max. drawing load - 3500 N</td>
</tr>
</tbody>
</table>
BELDEN Fiber Optic Cables

Description

Our offer contains a full array of the BELDEN fibre-optic cables. We invite everyone to become familiar with our offer at www.dll.com.pl. Should you have any further questions, contact our trading department.

Multi Loose Tube Outdoor and Universal

Multi-tube cables are designed for greater quantities of fibres (above 24 fibres). The structure of such a cable consists of tubes organised around the central reinforcing element. Multi-tube outdoor cables have been designed from a very resistant polyethylene layer, which ensures protection against such factors as rubbing, crushing strength or temperature changes. The structure of multi-tube cables prevents water from getting inside in case of cable failure. Outdoor and universal multi-tube cables are primarily mounted in telecommunication conduit systems or directly in the ground.

- Multi Loose Tube, dry core, LSNH jacket
- Multi Loose Tube, filled core, LSNH jacket
- Multi Loose Tube, dry core, PE jacket
- Multi Loose Tube, filled core, PE jacket

Special Cables

Special cables form a perfect combination of single-tube cables with reinforced external layers in the form of a steel wire, steel wavy tape or an armour FRP. Cables may work in very difficult conditions. They are a perfect solution in environments with a lot of rodents.

- Central Loose Tube. Universal (LSNH jacket) Steel Wire Braid
- Central Loose Tube. Universal (LSNH jacket) Steel Wire Armouring
- Central Loose Tube. Universal (LSNH jacket) Corrugated Steel Tape Armouring
- Central Loose Tube. Universal (LSNH jacket) FRP Armouring
- Central Loose Tube. Outdoor (PE jacket) Steel Wire Braid
- Central Loose Tube. Outdoor (PE jacket) Steel Wire Armouring
- Central Loose Tube. Outdoor (PE jacket) Corrugated Steel Tape Armouring
- Central Loose Tube. Outdoor (PE jacket) FRP Armouring
**CORNING Fiber Optic Cables**

**Description**

Our offer contains a full array of the CORNING fibre-optic cables. We invite everyone to become familiar with our offer at www.dll.com.pl. Should you have any further questions, contact our trading department.

**Interconnect Cables LANscape® J-VH**

The interconnect fibre-optic cables may be used as a cabling inside buildings, particularly under the floor between distribution frames, to work stations (Fiber-to-the-desk), as well as for the production of connecting cables (patchcords). A tight tube is a very good solution for applications that do not require great number of fibres in the LAN network, thus eliminating the need to use the fun out kits. Cables may be installed in cable troughs.

**Internal Cables LANscape® MiniBreakout J-VH i Breakout T-VHH**

MiniBreakout and Breakout fibre-optic cables may be installed inside buildings as a backbone of the cabling, as well as between distribution frames on the floors. A tight tube is a very good solution for applications that do not require great number of fibres in the LAN network, thus eliminating the need to use the fun out kits. Cables may be installed in cable troughs.

**TELE-FONIKA Fiber Optic Cables**

**Description**

Our offer contains a full array of the TELE-FONIKA fibre-optic cables. We invite everyone to become familiar with our offer at www.dll.com.pl. Should you have any further questions, contact our trading department.

**Outdoor Cables Z-XOTKtsd, Z-XOTKtd, Z-XzOTKts**

The cables are designed for the transmission of digital and analogue signals in the entire optical spectrum, used in all transmission systems: data, voice and image, used in long-distance networks, Wide Area Networks, Local Area Networks, in any spatial configuration. Cables are designed for placement in the outer ducting and inner ducting. Cables may be laid in the vicinity of high voltage lines.

**Universal Cables ZW-NOTKtsd, W-YnOTKtsd, W-YOTKtsd**

The cables are designed for the transmission of digital and analogue signals in the entire optical spectrum, used in all transmission systems: data, voice and image, used in long-distance networks, Wide Area Networks, Local Area Networks, in any spatial configuration. Cables are designed for placement in closed buildings as well as in railway and road tunnels.
Fixtures and Tools for the Construction of Overhead Data Communication Lines
Fixtures and Tools

DLZOM Tension Clamp for Quadded Pair Cables

It is used for mounting self-supporting, quadded pair cables, with a steel lifting line with copper or fibre-optic trunk lines. It does not require the use of mounting tools.

DLZOO Tension Clamp for ADSS Cables

It is used for mounting an optical fibre cable which is suspended and reinforced by an aramid fibre, with a concentric structure. It does not require the use of mounting tools.

DLZOC/JP Terminal Tension Clamp (Subscriber)

It is used for mounting a single-pair, self-supporting, flat data communication cable. It does not require the use of mounting tools.

DLZPM/T-o Suspension Anchor

It is used for mounting a single-pair, self-supporting, flat data communication cable. It does not require the use of mounting tools.

DLZDS Distance Anchor for the Pole

It is used for guiding the cable on supporting structures. Fitted with a band of steel tape with clamps.

DLRPF Distance Anchor for the Wall

It is used for mounting the cable on walls or facades. The crevice in the lower part of the holder makes it possible to mount another cable with the use of an additional 9 mm wide tie.
Fixtures and Tools

**DLC Cable Tie**

Use for tying bundles of wires and mounting cables in distance holders on a wall.

**DLWKT Pole Bracket**

It is used for constructing overhead data communication lines. Mounted on a pole by means of two ties made of steel tape and clamps. Installation by means of a tape allows us to use a bracket on all types of poles. The support bracket is made of high-resistance aluminium alloy.

**DLWDT Distance Pole Bracket**

It is used for constructing overhead data communication lines. Mounted on a pole by means of two ties made of steel tape and clamps. Installation by means of a tape allows us to use a bracket on all types of poles. The support bracket is made of high-resistance aluminium alloy.

**DL5/19 Transverse Pole Bracket**

It is mainly used for constructing multiple lines. It is installed on a base DL5/39 (concrete pole) or DLPB (wooden pole) by means of DLH14x30 AG bolts.

**DL5/39 Holder for Pole Brackets**

It is used for mounting the transverse bracket on a concrete pole. They are made of hot-galvanised steel. Two pieces must be used for the installation of the transverse beam.

**DLTSM Steel Tape**

It is used for mounting the equipment of poles (support brackets, distance holders, troughs, etc.). It is made of stainless steel.
# Fixtures and Tools

## DLTSK Steel Clamps
Used for mounting the equipment of poles (support brackets, distance holders, troughs, etc.). It is made of stainless steel.

## DLHA 66 Anchor Clamp of the Down Guy
It is used for mounting the wire or tension line with the diameter of 6.6 mm. It is made of aluminium alloy and stainless steel.

## DLAT Anchor Ring of the Down Guy
It is used as the anchor of the down guy. They are made of hot-galvanised steel. The mounting plate is installed on the bar by means of a nut.

## DLPC Protective Cable Troughs
They are used for mechanical protection of cables and ducts placed on support structures and walls. The installation of troughs is made with a tape along with clamps or by means of screws.

## DLO 105 Eye Bolt
It is used as a tensioning element. Mounted to the transverse support. They are made of hot-galvanised steel.

## DLS 60 Shackle
It is used for oscillating connections.
Fixtures and Tools

**DLPV A Tool for Mounting Steel Tape**

A screw-type tensioner is used for tensioning and trimming the steel tape used for the installation of fixtures and holders.

**DLPC Scissors for Cutting Steel Tape**

It is used for cutting off the steel tape. It is made of heat-processed steel.

**DLM 1023 Scissors for Cutting Cables**

Used for cutting telecommunication cables with a steel lifting line or for concentric cables. The maximum diameter of the steel lifting line is 10 mm, and the maximum diameter of a concentric cable is 23 mm.

**DLO 150 Mounting Roll**

Roller used for stretching overhead line. Roller made of aluminium alloy, hook and arm made of corrosion-protected steel. Maximum working load 150 daN. Maximum cable diameter 30 mm.

**DLT 546P Cable Terminal**

It is used for holding the cable while performing the tension of the overhead line. Suspension cable diameter: 6 ÷ 14 mm
Length of clamping: 370 mm
Max. working load: 800 daN
Material: Aluminium alloy
Mass: 1.5 kg

**DLC 13T Earthing Clamp**

It is used for galvanic connection of the steel lifting line of the cable with the earthing wire or with another lifting line of the cable. Suspension cable diameter: 3 ÷ 13 mm
Mass: 0.09 kg
## Modules SFP/XSF/GBIC/XENPAK

### SFP Modules

<table>
<thead>
<tr>
<th>Catalogue No.</th>
<th>Type</th>
<th>Speed (b/s)</th>
<th>Wavelength [nm]</th>
<th>Source</th>
<th>Distance</th>
<th>Temperature [°C]</th>
<th>Connector</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>WDM SM 20 km:</td>
<td>SF-B532-20</td>
<td>SFP BI-DI</td>
<td>1550/1310</td>
<td>DFB</td>
<td>20 km</td>
<td>0-70</td>
<td>LC</td>
<td>ROHS</td>
</tr>
<tr>
<td>WDM SM 40 km:</td>
<td>SF-B542-40</td>
<td>SFP BI-DI</td>
<td>1550/1310</td>
<td>DFB</td>
<td>40 km</td>
<td>0-70</td>
<td>LC</td>
<td>ROHS</td>
</tr>
<tr>
<td>WDM SM 80 km:</td>
<td>SF-B612-80</td>
<td>SFP BI-DI</td>
<td>1550/1310</td>
<td>DFB</td>
<td>80 km</td>
<td>0-70</td>
<td>LC</td>
<td>ROHS</td>
</tr>
<tr>
<td>WDM SM 120 km:</td>
<td>SF-B612-120</td>
<td>SFP BI-DI</td>
<td>1550/1310</td>
<td>DFB</td>
<td>120 km</td>
<td>0-70</td>
<td>LC</td>
<td>ROHS</td>
</tr>
<tr>
<td>CWDM 20 km:</td>
<td>SW-29-20</td>
<td>SFP CWDM</td>
<td>1590</td>
<td>DFB</td>
<td>20 km</td>
<td>0-70</td>
<td>LC</td>
<td>ROHS, CWDM</td>
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<tr>
<td>CWDM 40 km:</td>
<td>SW-43-40</td>
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<td>0-70</td>
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<tr>
<td>CWDM 80 km:</td>
<td>SW-85-80</td>
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<td>1590</td>
<td>DFB</td>
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<td>LC</td>
<td>ROHS, CWDM</td>
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<tr>
<td>CWDM 120 km:</td>
<td>SW-129-120</td>
<td>SFP CWDM</td>
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<td>120 km</td>
<td>0-70</td>
<td>LC</td>
<td>ROHS, CWDM</td>
</tr>
</tbody>
</table>

### SFP CWDM Laser Types
- **DFB**: Distributed Feedback Laser
- **ROHS**: Restriction of Hazardous Substances
- **CWDM**: Coarse Wavelength Division Multiplexing
- **SC**: SC Connector
- **LC**: LC Connector

### SFP CWDM Wavelengths
- 80 km: 1590 nm
- 40 km: 1590 nm
- 40 km: 1550 nm
- 20 km: 1550 nm
- 20 km: 1310 nm
### Modules SFP/XSF/GBIC/XENPAK

#### SFP Modules

<table>
<thead>
<tr>
<th>Catalogue No.</th>
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<th>Wavelength (nm)</th>
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<th>Connector</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>DWDM 80 km:</td>
<td>SD-xx-80</td>
<td>125 G</td>
<td>1520.25 - 1577.03</td>
<td>DFB</td>
<td>80 km</td>
<td>0 - 70</td>
<td>SC</td>
<td>ROHS</td>
</tr>
<tr>
<td>DWDM 20 km:</td>
<td>SD-xx-10</td>
<td>125 G</td>
<td>1520.25 - 1577.03</td>
<td>DFB+APD</td>
<td>20 km</td>
<td>0 - 70</td>
<td>SC</td>
<td>ROHS</td>
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<tr>
<td>DWDM 50 km:</td>
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<td>1520.25 - 1577.03</td>
<td>DFB+APD</td>
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<td>0 - 70</td>
<td>SC</td>
<td>ROHS</td>
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<td>ROHS</td>
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<tr>
<td>SFP RJ-45:</td>
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<td>ROHS</td>
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<tr>
<td>SFP RJ-45:</td>
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<td>10 km</td>
<td>0 - 70</td>
<td>RJ-45</td>
<td>ROHS</td>
</tr>
</tbody>
</table>

xx - provide the number of channel in which the DWDM module is to work.

* All modules are also available in the version implemented diagnostic module DDM and in a version compatible with the HP devices.

#### XSF Modules

<table>
<thead>
<tr>
<th>Catalogue No.</th>
<th>Type</th>
<th>Speed (b/s)</th>
<th>Wavelength (nm)</th>
<th>Source</th>
<th>Distance</th>
<th>Temperature (°C)</th>
<th>Connector</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
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<td>XSF-1596-60D</td>
<td>125 G</td>
<td>1520.25 - 1577.03</td>
<td>DFB</td>
<td>80 km</td>
<td>0 - 70</td>
<td>SC</td>
<td>ROHS</td>
</tr>
<tr>
<td>DWDM 20 km:</td>
<td>XSF-1596-60D</td>
<td>125 G</td>
<td>1520.25 - 1577.03</td>
<td>DFB</td>
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<tr>
<td>DWDM 50 km:</td>
<td>XSF-1596-60D</td>
<td>125 G</td>
<td>1520.25 - 1577.03</td>
<td>DFB</td>
<td>50 km</td>
<td>0 - 70</td>
<td>SC</td>
<td>ROHS</td>
</tr>
<tr>
<td>DWDM 20 km:</td>
<td>XSF-1596-60D</td>
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</tr>
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#### GBIC Modules

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<th>Temperature (°C)</th>
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<th>Other</th>
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<tbody>
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<td>GBIC</td>
<td>125 G</td>
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<td>SC</td>
<td>ROHS</td>
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<tr>
<td>CWDM 80 km:</td>
<td>GB-BS152-62</td>
<td>GBIC</td>
<td>1520.25 - 1577.03</td>
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</tbody>
</table>

* All modules are also available in the version implemented diagnostic module DDM and in a version compatible with the HP devices.

www.dll.com.pl
## Modules SFP/XSF/GBIC/XENPAK

### GBIC Modules

<table>
<thead>
<tr>
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### XENPAK Modules

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<th>Distance</th>
<th>Temperature [°C]</th>
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<td>0-70</td>
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<td>ROHS</td>
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</table>

* All modules are also available in the version with implemented diagnostic module DDM and in a version compatible with the HP devices.

* All modules are also available in the version with implemented diagnostic module DDM and in a version compatible with the HP devices.
### Media Converters

**Description**

A **Media Converter** is an active component of the fibre-optic trunk line, which makes it possible to directly connect the cabling made by a Twisted Pair cable with the fibre-optic cabling or the connection of multi-mode cabling with single-mode one in a fibre-optic cabling in the Ethernet Network segment. Thanks to the use of a converter, it is possible to extend the Twisted Pair segment beyond the limit of 100 m. Connection of various transmission media by means of media converters has the added advantage that there are no additional limits with regard to the maximum number of repeaters. The device is also available in the version with an in-built Link Through function. This means that in the case of the connection is cut in the fibre-optical line, there is an automatic break of signal on the side of the twisted pair (and vice versa). The Converter status is indicated by LED. They may be used for localising faults or network diagnosis.

### Fast Ethernet Media Converter

<table>
<thead>
<tr>
<th>Type</th>
<th>Index</th>
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<tbody>
<tr>
<td>EL1341 Series</td>
<td>IEC61850/IEEE313 (-40°C to 75°C) 10/100BASE-TX to 100BASE-FX Media converter</td>
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<tr>
<td>EL1900 Series</td>
<td>(-40°C to 75°C) 10/100BASE-TX to 100BASE-FX Media converter</td>
</tr>
<tr>
<td>EMX00 Series</td>
<td>(-7°C to 65°C) Industrial 10/100BASE-TX to 100BASE-FX Media converter with PoEPSE</td>
</tr>
<tr>
<td>EM1343 Series</td>
<td>(-7°C to 65°C) Industrial 10/100BASE-TX to 100BASE-FX Media converter with PoEPD</td>
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### Gigabit Media Converter

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<td>EMX9100 Series</td>
<td>3/10/100BASE-TX to 100BASE-SX/LX/BX Media converter</td>
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<tr>
<td>EMX900 Series</td>
<td>3/10/100BASE-T to 100BASE-SX/LX/BX Media converter</td>
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<td>EMX9120 Series</td>
<td>3/10/100BASE-TX to 100BASE-FX Media converter</td>
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<td>EMX1005 Series</td>
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### Multiple Channel Media Converter

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<td>EMM120 Series</td>
<td>3-port Media converter and Ethernet Extender Chassis</td>
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<tr>
<td>EMM200 Series</td>
<td>2-port Media converter system</td>
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<tr>
<td>EXB05SFP1 Series</td>
<td>5/8-port 3/100BASE-TX Ethernet Non-manageable Switch</td>
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<tr>
<td>EMCCC00M Series</td>
<td>8-port Manageable Media converter Chassis System</td>
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<tr>
<td>EMCC00W Series</td>
<td>2/100BASE-TX to 100BASE-FX Media converter and Chassis Manager</td>
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<tr>
<td>EMCC00C Series</td>
<td>2/100BASE-TX to 100BASE-FX Media converter (CO)</td>
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<td>EMCC00P Series</td>
<td>2/100BASE-TX to 100BASE-FX Media converter (CPE)</td>
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## Switches

### Managed Switches with Increased Temperature Resistance

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<tr>
<td>EX7700 Series</td>
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<tr>
<td>EX87000 Series</td>
<td>IEC61850/IEEE1613 Modulized Managed (-40°C to 75°C) 24-port 10/100BASE and 4-port Gigabit Ethernet Switch + SFP</td>
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<tr>
<td>EX97000 Series</td>
<td>Managed (-40°C to 75°C) 8-port 10/100BASE PoE + 2-port Gigabit combo Ethernet Switch</td>
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<td>EX73000 Series</td>
<td>Managed (-40°C to 75°C) 16-port 10/100BASE + 2-port Gigabit Ethernet Switch + SFP</td>
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<td>EX63000 Series</td>
<td>Managed (-10°C to 60°C) 8-port 10/100BASE + 2-port Gigabit Ethernet Switch + SFP</td>
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<tr>
<td>EX72000 Series</td>
<td>Managed (-40°C to 75°C) 8-port 10/100BASE 2-port Gigabit Ethernet Switch + SFP</td>
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<td>EX62000 Series</td>
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### Unmanaged Switches with Increased Temperature Resistance

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<td>EX95000 Series</td>
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<td>EX94000 Series</td>
<td>Unmanaged (-40°C to 75°C) 5/8-port 10/100BASE PoE Ethernet Switch</td>
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<td>EX46100 Series</td>
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<td>EX48000A Series</td>
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<tr>
<td>EX46000 Series</td>
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### Managed Switches

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### Unmanaged Switches

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<td>EX772 Series</td>
<td>Web-smart 24-port 10/100BASE-TX PoE +2-port combo Gigabit SFP Ethernet Switch</td>
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<td>EX72B Series</td>
<td>24-port PoE 10/100BASE-TX + 2-port combo Gigabit SFP Ethernet Switch</td>
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<td>EX71B Series</td>
<td>Web-Smart 8-port PoE (IEEE802.3at) 10/100BASE-TX &amp; 2-port combo Gigabit SFP Ethernet Switch</td>
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<tr>
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<td>XM103M Series</td>
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# Ethernet Extenders

## Converters Ethernet Extenders

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<td>ED3175 Series</td>
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<td>ED3146 Series</td>
<td>Managed 4-port 10/100BASE-TX Ethernet Extender</td>
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<tr>
<td>ED3171 Series</td>
<td>Managed (-40°C to 75°C) 10/100BASE-TX Ethernet Extender</td>
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<td>ED3142 Series</td>
<td>Managed 10/100BASE-TX IEEE802.3at PoE Ethernet Extender</td>
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<td>(-40°C to 75°C) 10/100BASE-TX Ethernet Extender Over Copper Pair</td>
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<td>ED3101 Series</td>
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## Converters RS-232/422/485

## Converters Serial Device Servers

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<td>SE6300 Series</td>
<td>(-40°C to 75°C) 2/4 ports Serial Device Server</td>
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<tr>
<td>SE5300 Series</td>
<td>(-40°C to 60°C) 2/4 ports Serial Device Server</td>
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<td>SE6300 Series</td>
<td>(-40°C to 75°C) 1-port Serial Device Server</td>
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<td>SE5300 Series</td>
<td>(-10°C to 65°C) 1-port Serial Device Server</td>
</tr>
<tr>
<td>TS9000 Series</td>
<td>(-40°C to 75°C) 3 port Serial Device Server</td>
</tr>
<tr>
<td>SW5400 Series</td>
<td>(-10°C to 60°C) 6 port Serial to Wireless Device Server</td>
</tr>
</tbody>
</table>
Q2000 FO Monitor

Description

Q2000 FO Monitoring System increases workforce productivity and facilitates the management of fiber optic access networks (AC) and core networks (CN) through fiber remote testing and accurate fiber plant documentation. The system automatically detects and locates precisely fiber degradation, alerting operators and managers with the details of faults. The process is managed by SCADA System. It’s functions allow to garner the system performance data with visualizing, alarming and data backup.

Application

Telecommunications, CATV, Monitoring, Industry, LAN, MAN, WAN, Automation.

Operational Scheme

Properties

- Monitoring of multimode and single mode optical networks
- Modular construction allows free configuration
- Access to the distributed networks via internet (TCP/IP)
- Redundant power feeds

Key Features

- Monitoring of the multimode and single mode fiber optic networks condition
- Monitoring of transceivers condition (only if the transmission signal will be used for network monitoring)
- Alarming in case of crest
- Backup using MySQL Storage
- Graphical visualizing with linear charts
- Occurrences notification by e-mail and SMS
- Network visualizing on the GOOGLE map

Standard equipment

- Power cable (1pc)
- Mounting screws M6 (4 pcs)
- Manual (1pc)
**Information**

The catalogue card itself is insufficient to present all the System Q2000 capabilities. Each fiber optic network has its unique parameters. System Q2000 is universal and may be adapted to work under different conditions. We strongly recommend our system presentation which is the best way of becoming familiar with all the measurement functions of System Q2000.
MICRO Micropipes

Description

Micropipes for the construction of inner or master ducting for fibre-optic cables
» They are produced of high-density polyethylene (HDPE)
» Pneumatic resistance up to 12 bar allows to blow the cables to great distances
» Coextruded separating layer and internal timbers reduce the friction coefficient to the level below 0.1 u
» For diameters of 4 and 5 mm, the anti-electrostatic separating layer
» They may be blown in or suctioned from the existing cable conduits
» Production in 12 colours
» Supplied on wooden drums

Properties

<table>
<thead>
<tr>
<th>Symbol</th>
<th>D [mm]</th>
<th>D_i [mm]</th>
<th>E [mm]</th>
<th>L [m]</th>
</tr>
</thead>
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<td>MICRO 7</td>
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<td>8.0</td>
<td>1.00</td>
<td>2300</td>
</tr>
<tr>
<td>MICRO 12</td>
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<td>9.6</td>
<td>1.20</td>
<td>1700</td>
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<tr>
<td>MICRO 15</td>
<td>15.0</td>
<td>12.0</td>
<td>1.50</td>
<td>1000</td>
</tr>
</tbody>
</table>

Dimensions

How to order

MICRO X <colour> where:
X - diameter [mm]
<colour> - selected colour
MICRO FP Micropipes

Description

Micropipes flame retardant made from halogen-free material
- They are available only in the natural polyethylene colour, distinguished by an individually designed print
- Made in the FRLSOH standard - not distributing flames, low-smoke and halogen-free
- It is used for constructing microconduits inside buildings

Properties

<table>
<thead>
<tr>
<th>Symbol</th>
<th>D₁ (mm)</th>
<th>D₂ (mm)</th>
<th>E (mm)</th>
<th>L (m)</th>
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<td>MICRO FP 5</td>
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<td>0.75</td>
<td>500</td>
</tr>
<tr>
<td>MICRO FP 7</td>
<td>7.0</td>
<td>5.5</td>
<td>0.75</td>
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</tr>
<tr>
<td>MICRO FP 10</td>
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<td>8.0</td>
<td>1.00</td>
<td>500</td>
</tr>
</tbody>
</table>

Dimensions

How to order

MICRO FP X, where: X - diameter D₁ (mm)
MICRO DB Micropipes

Description

> Micropipes with reinforced wall for direct placement in the ground
> The use of proper thickness of MICRO DB walls makes it possible to connect them with suitable MICRO micropipes with the same internal diameters, by means of reduction connectors
> Thickened wall increases the compressive strength above 450 N according to PN-EN 50086-2-4
> Thanks to high stretching strength, the DB micropipes are also used during mechanical tensioning of the existing, partially occupied telecommunication conduit system

Properties

<table>
<thead>
<tr>
<th>Symbol</th>
<th>D (mm)</th>
<th>D (mm)</th>
<th>E (mm)</th>
<th>L (m)</th>
</tr>
</thead>
<tbody>
<tr>
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<td>5.5</td>
<td>2.25</td>
<td>2300</td>
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<tr>
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<td>12.0</td>
<td>8.0</td>
<td>2.00</td>
<td>1500</td>
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<tr>
<td>MICRO DB 15</td>
<td>15.0</td>
<td>9.6</td>
<td>2.70</td>
<td>1000</td>
</tr>
</tbody>
</table>

Dimensions

How to order

MICRO DB X, where: X - diameter D, [mm]
NET DB Micropipes

Description

Prefabricated packs of micropipes for direct placement in the ground
» An ideal solution for the construction of urban rings with great number of openings. It makes it possible to develop the network for many years without the need of executing the costly and troublesome earthworks
» Double external coat ensures compressive strength above 750 N according to PN-EN 50086-2-4
» The structure of a bundle in the form of a tight tube helps to prevent the so-called “spaghetti” effect, which consists in the spiral twisting of micropipes during the prefabrication process, as a result of which the maximum sections of microcable blowing undergo drastic shortening

Properties

<table>
<thead>
<tr>
<th>Symbol</th>
<th>D_x [mm]</th>
<th>D_y [mm]</th>
<th>E [mm]</th>
<th>D_i [mm]</th>
<th>D_y1 [mm]</th>
<th>L [m]</th>
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<td>2000</td>
</tr>
<tr>
<td>NET DB 13/5+16</td>
<td>33.0</td>
<td>26.0</td>
<td>3.50</td>
<td>5.0</td>
<td>3.8</td>
<td>2000</td>
</tr>
<tr>
<td>NET DB 19/5</td>
<td>33.4</td>
<td>25.0</td>
<td>4.20</td>
<td>5.0</td>
<td>3.8</td>
<td>2000</td>
</tr>
<tr>
<td>NET DB 24/5+18</td>
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<td>4.20</td>
<td>5.0</td>
<td>3.8</td>
<td>2000</td>
</tr>
<tr>
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<td>12.1</td>
<td>2.70</td>
<td>7.0</td>
<td>5.5</td>
<td>2000</td>
</tr>
<tr>
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<td>7.0</td>
<td>5.5</td>
<td>2000</td>
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<tr>
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<td>2.90</td>
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<td>8.0</td>
<td>2000</td>
</tr>
<tr>
<td>NET DB 4/10+4</td>
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<td>3.20</td>
<td>10.0</td>
<td>8.0</td>
<td>2000</td>
</tr>
<tr>
<td>NET DB 5/10+7</td>
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<td>27.0</td>
<td>3.90</td>
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<td>8.0</td>
<td>2000</td>
</tr>
<tr>
<td>NET DB 7/10</td>
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<td>4.20</td>
<td>10.0</td>
<td>8.0</td>
<td>2000</td>
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<tr>
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<td>NET DB 7/12</td>
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</tr>
</tbody>
</table>

Dimensions

NET DB 3

NET DB 7

NET DB 19

NET DB 24

How to order

NET DB X/Y, where:
X - number of bundles
Y - diameter D_y [mm]

Informacje

» Possibility to perform a single bundle branch MICRO DB or a branch of a smaller prefabricated bundle with the use of a divided tee or a fork PDC
» On special demands, it is possible to prefabricate a bundle along with a copper wire for future localisation of reduction routes
SPLIT Micropipes

Description

- Prefabricated packs of MICRO DB micropipes for direct placement in the ground
- DB connectors and plugs must be used for connecting and securing empty DB micropipes directly in the ground
- An ideal solution for building fibre-optic distribution systems in the star or tree topology
- Designed for direct placement in the ground, without additional casings
- Thanks to the application of MICRO DB micropipes and a thin external coat made of PE foil, branches are easy to perform

Properties

<table>
<thead>
<tr>
<th>Symbol</th>
<th>D_y [mm]</th>
<th>E [mm]</th>
<th>D_i [mm]</th>
<th>D_c [mm]</th>
<th>L [m]</th>
</tr>
</thead>
<tbody>
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<td>3.8</td>
<td>2000</td>
</tr>
<tr>
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<td>0.75</td>
<td>8.0</td>
<td>3.8</td>
<td>2000</td>
</tr>
<tr>
<td>SPLIT 7/12</td>
<td>27.4</td>
<td>0.75</td>
<td>12.0</td>
<td>3.8</td>
<td>2000</td>
</tr>
<tr>
<td>SPLIT 4/12+5</td>
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<td>0.75</td>
<td>12.0</td>
<td>3.8</td>
<td>2000</td>
</tr>
<tr>
<td>SPLIT 5/12+8</td>
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<td>0.75</td>
<td>12.0</td>
<td>5.5</td>
<td>2000</td>
</tr>
<tr>
<td>SPLIT 7/12</td>
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<td>0.75</td>
<td>12.0</td>
<td>5.5</td>
<td>2000</td>
</tr>
</tbody>
</table>

Dimensions

How to order

SPLIT X/Y, where:
- X - number of bundles
- Y - diameter D_i [mm]
# NET DI Micropipes

## Description

Prefabricated packs of micropipes for placement in outer ducting

- Designed for mechanical tensioning in the outer telecommunication conduit system
- Maximum tensioning sections approx. 150 m, depending on the route and the filling degree of the opening (analogically as in the case of innerducts)

## Properties

<table>
<thead>
<tr>
<th>Symbol</th>
<th>D [mm]</th>
<th>D [mm]</th>
<th>E [mm]</th>
<th>D_i [mm]</th>
<th>D_i [mm]</th>
<th>L [m]</th>
</tr>
</thead>
<tbody>
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<td>2000</td>
</tr>
<tr>
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<td>5.0</td>
<td>3.8</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>NET DI 15/7</td>
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<td>17</td>
<td>5.0</td>
<td>3.8</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>NET DI 19/5</td>
<td>23.4</td>
<td>15</td>
<td>7.0</td>
<td>5.5</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>NET DI 7/7</td>
<td>25.0</td>
<td>2.0</td>
<td>7.0</td>
<td>5.5</td>
<td>2000</td>
<td></td>
</tr>
<tr>
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<td>17</td>
<td>10.0</td>
<td>8.0</td>
<td>2000</td>
</tr>
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<td>24.1</td>
<td>17</td>
<td>10.0</td>
<td>8.0</td>
<td>2000</td>
</tr>
<tr>
<td>NET DI 10/8+7</td>
<td>30.8</td>
<td>27.0</td>
<td>18</td>
<td>10.0</td>
<td>8.0</td>
<td>2000</td>
</tr>
<tr>
<td>NET DI 9/10</td>
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<td>17</td>
<td>10.0</td>
<td>8.0</td>
<td>2000</td>
</tr>
<tr>
<td>NET DI 10/12</td>
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<td>36.0</td>
<td>2.5</td>
<td>12.0</td>
<td>9.6</td>
<td>2000</td>
</tr>
</tbody>
</table>

## Dimensions

- **NET DI 3**
- **NET DI 7**
- **NET DI 19**
- **NET DI 24**

## How to order

NET DI X/Y, where:  
- **X** - number of bundles  
- **Y** - diameter D_i [mm]

---

www.xpon.com.pl
SPACE Micropipes

Description

- Prefabricated packs of micropipes in optical fibre protective pipes
- Possibility to perform a single bundle branch MICRO DB or a branch of a smaller prefabricated bundle with the use of a PDC divided tee
- Micropipes additionally secured by a coat made of thin foil in order to prevent the “spaghetti” effect - see the NET DB description on page 114 for comparison
- Designed for direct placement in the ground

Properties

<table>
<thead>
<tr>
<th>Symbol</th>
<th>D_i (mm)</th>
<th>D_y (mm)</th>
<th>E (mm)</th>
<th>D_1 (mm)</th>
<th>D_2 (mm)</th>
<th>L (m)</th>
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</thead>
<tbody>
<tr>
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<td>2000</td>
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<tr>
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<td>40.0</td>
<td>32.6</td>
<td>3.70</td>
<td>7.0</td>
<td>5.5</td>
<td>2000</td>
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<tr>
<td>SPACE 40/10x7</td>
<td>40.0</td>
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<td>3.70</td>
<td>7.0</td>
<td>5.5</td>
<td>2000</td>
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<tr>
<td>SPACE 40/2x10</td>
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<td>3.70</td>
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<td>2000</td>
</tr>
<tr>
<td>SPACE 40/5x10</td>
<td>40.0</td>
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<td>3.70</td>
<td>10.0</td>
<td>8.0</td>
<td>2000</td>
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<tr>
<td>SPACE 40/6x10</td>
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<td>3.70</td>
<td>10.0</td>
<td>8.0</td>
<td>2000</td>
</tr>
</tbody>
</table>

Dimensions

How to order

SPACE X/Y, where:  
X - number of bundles  
Y - diameter D_i [mm]
**SPEED Micropipes**

**Description**

- Prefabricated packs of micropipes for installation in cable conduits
- Micropipes protected by a thin film PE
- SPEED bundles may be mounted in optical fibre pipes by means of both the mechanical and the pneumatic methods
- Available in different configurations of quantity and diameters of pipes, upon earlier agreement of the technical production capacities

**FLAT Micropipes**

**Description**

- Prefabricated packs of MICRODB micropipes
- Flat arrangement of micropipes with distances between them makes it possible to adjust the section of the bundle to any space in the conduit system
- The two- or four-pipe bundles with diameters of 8, 10 and 12 mm are available on demand

**NAPPE Micropipes**

**Description**

- Prefabricated packs of MICRODB micropipes
- Perfect solution for multiplying partially occupied openings of the telecommunication conduit system
- Flat arrangement of micropipes with distances between them makes it possible to adjust the section of the bundle to any space in the conduit system.
- The two- or four-pipe bundles with diameters of 8, 10 and 12 mm are available on demand

**NET FP Micropipes**

**Description**

- Prefabricated packs of MICROFP micropipes
- Designed for the construction of inside fibre optic installation
- For use in multi-storey buildings
- Made in the FRLSOH standard - not distributing flames, low-smoke and halogen-free
- In the neutral colour for the HDPE

www.xpon.com.pl
MM Connectors

Description
Micropipe connectors
- They are designed for connecting MICRO and MICRO DB micropipes (not directly in the ground)
- Impact strength >1 J at the temperature of -20 °C
- Water- and gas-resistant
- Pneumatically resistant up to 12 bar

Properties

<table>
<thead>
<tr>
<th>Symbol</th>
<th>D_y [mm]</th>
<th>D_i [mm]</th>
<th>L_1 [m]</th>
</tr>
</thead>
<tbody>
<tr>
<td>MM 4</td>
<td>4.0</td>
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</tr>
<tr>
<td>MM 5</td>
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<td>MM 8</td>
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<td>14.6</td>
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</tr>
<tr>
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<td>21.0</td>
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<tr>
<td>MM 15</td>
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<td>15.0</td>
<td>26.0</td>
</tr>
</tbody>
</table>

Dimensions

How to order
MM X Connector for a micropipe with the diameter of X mm

MM DB Connectors

Description
Micropipes connectors designed for direct placement in the ground (without additional casings)
- They are designed for connecting MICRO DB micropipes
- Water- and gas-resistant
- Pneumatically resistant up to 12 bar

Properties

<table>
<thead>
<tr>
<th>Symbol</th>
<th>D_y [mm]</th>
<th>D_i [mm]</th>
</tr>
</thead>
<tbody>
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<tr>
<td>MM DB 8 5</td>
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<tr>
<td>MM DB 12</td>
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<td>8.0</td>
</tr>
</tbody>
</table>

Dimensions

How to order
MM DB X, where: X - diameter D_y [mm]
**MR Connectors**

**Description**
- Reduction connectors for micropipes with different diameters
- Water- and gas-resistant
- Pneumatically resistant up to 12 bar
- They are designed for connecting ordinary MICRO micropipes with MICRO DB e.g. in PDC tees

**Properties**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>(D_1) [mm]</th>
<th>(D_2) [mm]</th>
<th>(D_u) [mm]</th>
<th>(L_1) [m]</th>
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<tbody>
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<td>13.0</td>
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<td>-</td>
</tr>
</tbody>
</table>

**Dimensions**

**How to order**

\[MR \ X/\ Y, \text{ where:} \]
- \(X\) - diameter \(D_1\) [mm]
- \(Y\) - diameter \(D_u\) [mm]

---

**MWB Connectors**

**Description**
- Connectors for micropipes with adjustable water-tight compartment
- It is used for sealing the microcable exit from the micropipe
- The seal washer tightens on the microcable after tightening the nut

**Properties**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>(D_1) [mm]</th>
<th>(D_2) [mm]</th>
<th>(D_u) [mm]</th>
<th>(L_1) [m]</th>
</tr>
</thead>
<tbody>
<tr>
<td>MWB 4</td>
<td>5.0</td>
<td>5.0</td>
<td>16.0</td>
<td>43.0</td>
</tr>
<tr>
<td>MWB 5</td>
<td>5.0</td>
<td>4.0</td>
<td>16.0</td>
<td>43.0</td>
</tr>
<tr>
<td>MWB 7</td>
<td>7.0</td>
<td>7.0</td>
<td>18.0</td>
<td>46.0</td>
</tr>
<tr>
<td>MWB 10</td>
<td>10.0</td>
<td>7.0</td>
<td>23.0</td>
<td>55.0</td>
</tr>
<tr>
<td>MWB 12</td>
<td>12.0</td>
<td>10.0</td>
<td>28.0</td>
<td>52.0</td>
</tr>
</tbody>
</table>

**Dimensions**

**How to order**

\[MWB \ X/\ Y, \text{ where:} \]
- \(X\) - diameter \(D_1\) [mm]
- \(Y\) - diameter \(D_u\) [mm]
### MGB Connectors

**Description**

Connectors for micropipes with adjustable water-tight and gas-tight compartments

- Double separation ensures water- and gas-tightness of the microcable outlet from the micropipe.

#### Properties

<table>
<thead>
<tr>
<th>Symbol</th>
<th>( D_1 ) (mm)</th>
<th>( D_2 ) (mm)</th>
<th>( D_u ) (mm)</th>
<th>( L_1 ) (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGB 4</td>
<td>4.0</td>
<td>4.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MGB 5</td>
<td>5.0</td>
<td>5.0</td>
<td>16.0</td>
<td>47.0</td>
</tr>
<tr>
<td>MGB 7</td>
<td>7.0</td>
<td>7.0</td>
<td>18.0</td>
<td>50.0</td>
</tr>
<tr>
<td>MGB 8/5</td>
<td>8.0</td>
<td>5.0</td>
<td>18.0</td>
<td>50.0</td>
</tr>
<tr>
<td>MGB 10</td>
<td>10.0</td>
<td>10.0</td>
<td>23.0</td>
<td>62.0</td>
</tr>
<tr>
<td>MGB 12</td>
<td>12.0</td>
<td>26.0</td>
<td>72.0</td>
<td></td>
</tr>
</tbody>
</table>

#### Dimensions

![Diagram of MGB Connector]

**How to order**

MGB X/Y, where:

- X - diameter \( D_1 \) (mm)
- Y - diameter \( D_u \) (mm)

---

### ME Connectors

**Description**

Plugs for empty micropipes

- Designed for securing empty micropipes MICRO and MICRO DB (in additional casing)
- Impact strength >1 J at the temperature of -20 °C
- Water- and gas-resistant
- Pneumatically resistant up to 12 bar

#### Properties

<table>
<thead>
<tr>
<th>Symbol</th>
<th>( D_1 ) (mm)</th>
<th>( D_2 ) (mm)</th>
<th>( L ) (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME 4</td>
<td>4.0</td>
<td>10.0</td>
<td>25.0</td>
</tr>
<tr>
<td>ME 5</td>
<td>5.0</td>
<td>13.0</td>
<td>26.6</td>
</tr>
<tr>
<td>ME 7</td>
<td>7.0</td>
<td>14.6</td>
<td>29.5</td>
</tr>
<tr>
<td>ME 8</td>
<td>8.0</td>
<td>14.6</td>
<td>29.5</td>
</tr>
<tr>
<td>ME 10</td>
<td>10.0</td>
<td>16.4</td>
<td>37.2</td>
</tr>
<tr>
<td>ME 12</td>
<td>12.0</td>
<td>21.0</td>
<td>38.0</td>
</tr>
<tr>
<td>ME 14</td>
<td>14.0</td>
<td>26.0</td>
<td>38.0</td>
</tr>
</tbody>
</table>

#### Dimensions

![Diagram of ME Connector]

**How to order**

ME X, where:

- X - diameter \( D_1 \) (mm)
ME DB Connectors

**Description**
Connectors for ME DB micropipes designed for direct placement in the ground (without additional casings)
» Designed for securing empty micropipes MICRODB
» Water- and gas-resistant
» Pneumatically resistant up to 12 bar

**Properties**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>D_y [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME DB 7</td>
<td>7.0</td>
</tr>
<tr>
<td>ME DB 8</td>
<td>8.0</td>
</tr>
<tr>
<td>ME DB 10</td>
<td>10.0</td>
</tr>
<tr>
<td>ME DB 12</td>
<td>12.0</td>
</tr>
<tr>
<td>ME DB 14</td>
<td>14.0</td>
</tr>
</tbody>
</table>

**How to order**
ME DB X, where: X - diameter D_y [mm]

---

EWB Connectors

**Description**
Water-tight plugs to the micropipes with a cable
» Used for sealing the microcable exit from the micropipe
» Opening diameter is adjusted to the typical diameter of a microcable for a suitable micropipe

**Properties**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>D_y [mm]</th>
<th>D_u [mm]</th>
<th>L_1 [m]</th>
</tr>
</thead>
<tbody>
<tr>
<td>EWB 4</td>
<td>4.0</td>
<td>4.0</td>
<td>0.0</td>
</tr>
<tr>
<td>EWB 7</td>
<td>7.0</td>
<td>10.0</td>
<td>2.0</td>
</tr>
<tr>
<td>EWB 10</td>
<td>10.0</td>
<td>12.0</td>
<td>2.7</td>
</tr>
<tr>
<td>EWB 12</td>
<td>12.0</td>
<td>14.0</td>
<td>2.5</td>
</tr>
</tbody>
</table>

**Dimensions**

**How to order**
EWB X, where: X - diameter D_y [mm]
Knives for Micropipes “John Guest”

Description

- Straight knives for trimming empty micropipes
- They make it possible to trim the micropipe at the right angle, which ensures tight connection in connectors and plugs

Knives for micropipes “Eden”

Description

- Rotational knives for cutting micropipes with a microcable
- A special construction allows us to cut the micropipe with an installed microcable at the right angle, in a manner which is totally safe for the microcable
PDC Divided Cable Junction Boxes

Description

- Divided boxes for shielding the prefabricated bundle connections NET and SPACE
- They are designed for direct placement in the ground as well as in telecommunication manholes and data communication containers
- Sealings within diameter range of up to 50 mm
- Stretching strength of connected beams - over 1500 N
- Watertightness at the IP 68 level

Properties

<table>
<thead>
<tr>
<th>Symbol</th>
<th>D (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDC 021</td>
<td>NET 13/5 - NET 13/5</td>
</tr>
<tr>
<td>PDC 022</td>
<td>NET 19/5 - NET 19/5</td>
</tr>
<tr>
<td>PDC 023</td>
<td>NET 24/5 - NET 24/5</td>
</tr>
<tr>
<td>PDC 024</td>
<td>NET 3/7 - NET 3/7</td>
</tr>
<tr>
<td>PDC 025</td>
<td>NET 7/7 - NET 7/7</td>
</tr>
<tr>
<td>PDC 026</td>
<td>NET 7/10 - NET 7/10</td>
</tr>
<tr>
<td>PDC 027</td>
<td>NET 7/10 - NET 7/10</td>
</tr>
<tr>
<td>PDC 028</td>
<td>NET 7/12 - NET 7/12</td>
</tr>
<tr>
<td>PDC 030</td>
<td>OPTO 18 - OPTO 18</td>
</tr>
<tr>
<td>PDC 031</td>
<td>OPTO 20 - OPTO 20</td>
</tr>
<tr>
<td>PDC 032</td>
<td>OPTO 25 - OPTO 25</td>
</tr>
<tr>
<td>PDC 033</td>
<td>OPTO 32 - OPTO 32</td>
</tr>
<tr>
<td>PDC 034</td>
<td>OPTO 40 - OPTO 40</td>
</tr>
<tr>
<td>PDC 035</td>
<td>OPTO 50 - OPTO 50</td>
</tr>
</tbody>
</table>

Dimensions

How to order

PDC X, where:

X - depending on the type of the micropipe (see: description)
PDC Divided Branch Tees

Description

Divided tees for branching the prefabricated bundle NET or SPACE
- They are designed for direct placement in the ground as well as in telecommunication manholes and data communication containers
- Sealings within diameter range of up to 50 mm
- Branch packing - from a single micropipe MICRO DB 7 to a prefabricated bundle with diameter of up to 32 mm

Properties

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDC 03</td>
<td>NET 13/5 - NET 13/5 - MDB 8</td>
</tr>
<tr>
<td>PDC 04</td>
<td>NET 19/5 - NET 19/5 - MDB 8</td>
</tr>
<tr>
<td>PDC 05</td>
<td>NET 24/5 - NET 24/5 - MDB 8</td>
</tr>
<tr>
<td>PDC 06</td>
<td>NET 3/7 - NET 3/7 - MDB 10</td>
</tr>
<tr>
<td>PDC 07</td>
<td>NET 7/7 - NET 7/7 - MDB 12</td>
</tr>
<tr>
<td>PDC 08</td>
<td>NET 13/10 - NET 13/10 - MDB 12</td>
</tr>
<tr>
<td>PDC 09</td>
<td>NET 7/12 - NET 7/12 - MDB 12</td>
</tr>
<tr>
<td>PDC 10</td>
<td>NET 7/12 - NET 7/12 - MDB 15</td>
</tr>
<tr>
<td>PDC 11</td>
<td>OPTO 40 - OPTO 40 - MDB 7</td>
</tr>
<tr>
<td>PDC 12</td>
<td>OPTO 40 - OPTO 40 - OPTO 25</td>
</tr>
<tr>
<td>PDC 13</td>
<td>OPTO 40 - OPTO 40 - OPTO 32</td>
</tr>
<tr>
<td>PDC 14</td>
<td>NET 13/5 - NET 13/5 - NET 3/5</td>
</tr>
<tr>
<td>PDC 15</td>
<td>NET 19/5 - NET 19/5 - NET 3/5</td>
</tr>
<tr>
<td>PDC 16</td>
<td>NET 24/5 - NET 24/5 - NET 3/5</td>
</tr>
<tr>
<td>PDC 17</td>
<td>NET 8/5 - NET 8/5 - NET 7/5</td>
</tr>
<tr>
<td>PDC 18</td>
<td>NET 24/5 - NET 24/5 - NET 7/5</td>
</tr>
<tr>
<td>PDC 19</td>
<td>OPTO 50 - OPTO 50 - OPTO 25</td>
</tr>
</tbody>
</table>

Dimensions

How to order

PDC X, where: X - depending on the type of the micropipe (see: description)
PDC Divided “Fork” Splitters

Description

Divided forks for branching a large prefabricated bundle NET or SPACE into two smaller ones

- They are designed for direct placement in the ground as well as in telecommunication manholes and data communication containers
- Sealings within diameter range of up to 50 mm
- Stretching strength of connected beams - over 1500 N
- Watertightness at the IP 68 level

Properties

<table>
<thead>
<tr>
<th>Symbol</th>
<th>D (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDC 036</td>
<td>NET 13/5 - NET 7/5 - NET 7/5</td>
</tr>
<tr>
<td>PDC 037</td>
<td>NET 19/5 - NET 13/5 - NET 7/5</td>
</tr>
<tr>
<td>PDC 038</td>
<td>NET 24/5 - NET 13/5 - NET 7/5</td>
</tr>
<tr>
<td>PDC 040</td>
<td>NET 17/7 - NET 3/7 - NET 3/7</td>
</tr>
<tr>
<td>PDC 041</td>
<td>NET 10/10 - NET 3/10 - NET 3/10</td>
</tr>
<tr>
<td>PDC 045</td>
<td>OPTO 40 - OPTO 32 - OPTO 32</td>
</tr>
<tr>
<td>PDC 046</td>
<td>OPTO 40 - OPTO 40 - OPTO 40</td>
</tr>
<tr>
<td>PDC 047</td>
<td>OPTO 50 - OPTO 40 - OPTO 40</td>
</tr>
<tr>
<td>PDC 048</td>
<td>OPTO 50 - OPTO 50 - OPTO 50</td>
</tr>
</tbody>
</table>

Dimensions

[Diagram of the splitter showing dimensions 128, 200, and 346]

How to order

PDC X, where: X - depending on the type of the micropipe (see: description)
**FF Packing**

**Description**

- Sealings of micropipes exit from the OPTOpipe
- Waterproof

**Properties**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>D₁ [mm]</th>
<th>D₂ [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>FF 5</td>
<td>40.0</td>
<td>10.0</td>
</tr>
<tr>
<td>FF 10</td>
<td>40.0</td>
<td>7.0</td>
</tr>
<tr>
<td>FF 7</td>
<td>50.0</td>
<td>10.0</td>
</tr>
<tr>
<td>FF 14</td>
<td>50.0</td>
<td>7.0</td>
</tr>
</tbody>
</table>

**Dimensions**

![Diagram of FF Packing dimensions]

**How to order**

FF X, where: X - quantity of micropipes
UFC Fiber Optic Cables for Microducts

Description

**Single-mode Micro Optical Fibre** - fully dielectric. It is characterised by high flexibility and stretching strength, it is UV-resistant. Reinforced with aramid fibres and filled with acrylic. It is protected by a polyethylene layer. The cable is designed for outer and inner installations. Installation may be carried out by pneumatic methods (blowing in) into micropipes with internal diameter of up to 3.5 mm.

Properties

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product group</td>
<td>Universal cable</td>
</tr>
<tr>
<td>Fibre standard</td>
<td>ITU-T G.957A1</td>
</tr>
<tr>
<td>Deformation strength</td>
<td>yes</td>
</tr>
<tr>
<td>Halogen free</td>
<td>yes</td>
</tr>
<tr>
<td>Protection against longitudinal</td>
<td>yes</td>
</tr>
<tr>
<td>penetration of moisture</td>
<td></td>
</tr>
<tr>
<td>Anti-rodent</td>
<td>no</td>
</tr>
<tr>
<td>Tube</td>
<td>central</td>
</tr>
<tr>
<td>Core type</td>
<td>SM</td>
</tr>
<tr>
<td>Colour of the outer layer</td>
<td>black</td>
</tr>
<tr>
<td>Outer layer</td>
<td>HDPE</td>
</tr>
<tr>
<td>Thickness of the outer layer</td>
<td>0.25 mm</td>
</tr>
<tr>
<td>Scope of working temperature</td>
<td>-30°C / +60°C</td>
</tr>
<tr>
<td>Scope of working temperature</td>
<td>-5°C / +50°C</td>
</tr>
<tr>
<td>Scope of temperature during transportation</td>
<td>-30°C / +50°C</td>
</tr>
</tbody>
</table>

Design of the cable

1. Optical fibre
2. Inner acrylic layer
3. Reinforcement made of aramid fibre
4. HDPE outer layer

Parameters

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Construction</th>
<th>Bend radius (mm)</th>
<th>Weight (kg/km)</th>
<th>Cable diameter (mm)</th>
<th>Max. tensile strength [N]</th>
</tr>
</thead>
<tbody>
<tr>
<td>UFC-2J</td>
<td>2 x SM (1 x 2)</td>
<td>50</td>
<td>3</td>
<td>19</td>
<td>100</td>
</tr>
<tr>
<td>UFC-4J</td>
<td>4 x SM (1 x 4)</td>
<td>50</td>
<td>3</td>
<td>19</td>
<td>100</td>
</tr>
<tr>
<td>UFC-6J</td>
<td>6 x SM (1 x 6)</td>
<td>50</td>
<td>3</td>
<td>19</td>
<td>100</td>
</tr>
</tbody>
</table>

How to order

- **UFC-2J**: Fibre-optic cable UFC 2-fibre for microducts
- **UFC-4J**: Fibre-optic cable UFC 4-fibre for microducts
- **UFC-6J**: Fibre-optic cable UFC 6-fibre for microducts
CMTC Fiber Optic Cables for Microducts

Description

Single-mode outdoor fibre-optic cable A-D(ZN)9Y - fully dielectric cable with light single-tube structure. It is characterised by high flexibility and stretching strength, it is UV-resistant. The cable is filled with a water repellent gel for the protection of microfibers against the penetration of moisture. The cable is designed for outer installation. Installation may be carried out by pneumatic methods (blowing in) into micropipes with internal diameter of up to 5.5 mm.

<table>
<thead>
<tr>
<th>Properties</th>
<th>Design of the cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product group</td>
<td>Universal cable</td>
</tr>
<tr>
<td>Fibre standard</td>
<td>ITU-T G.957.A1</td>
</tr>
<tr>
<td>Deformation strength</td>
<td>yes</td>
</tr>
<tr>
<td>Halogen free</td>
<td>yes</td>
</tr>
<tr>
<td>Protection against longitudinal penetration of moisture</td>
<td>yes</td>
</tr>
<tr>
<td>Anti-rodent</td>
<td>no</td>
</tr>
<tr>
<td>Tube</td>
<td>loose</td>
</tr>
<tr>
<td>Core type</td>
<td>SM</td>
</tr>
<tr>
<td>Colour of the outer layer</td>
<td>black</td>
</tr>
<tr>
<td>Outer layer</td>
<td>polypropylene</td>
</tr>
<tr>
<td>Thickness of the outer layer</td>
<td>0.25 mm</td>
</tr>
<tr>
<td>Scope of working temperature</td>
<td>-30°C / +70°C</td>
</tr>
<tr>
<td>Scope of working temperature</td>
<td>-30°C / +50°C</td>
</tr>
<tr>
<td>Scope of temperature during transportation</td>
<td>-30°C / +70°C</td>
</tr>
</tbody>
</table>

Parameters

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Construction</th>
<th>Bend radius [mm]</th>
<th>Weight [kg/km]</th>
<th>Cable diameter [mm]</th>
<th>Max. tensile strength [N]</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTMC-2J</td>
<td>2 x SM (1 x 2)</td>
<td>55</td>
<td>12</td>
<td>3.9</td>
<td>320</td>
</tr>
<tr>
<td>CTMC-4J</td>
<td>4 x SM (1 x 4)</td>
<td>55</td>
<td>13</td>
<td>3.9</td>
<td>320</td>
</tr>
<tr>
<td>CTMC-6J</td>
<td>6 x SM (1 x 6)</td>
<td>55</td>
<td>13</td>
<td>3.9</td>
<td>320</td>
</tr>
<tr>
<td>CTMC-8J</td>
<td>8 x SM (1 x 6)</td>
<td>55</td>
<td>13</td>
<td>3.9</td>
<td>320</td>
</tr>
<tr>
<td>CTMC-24J</td>
<td>24 x SM (1 x 6)</td>
<td>55</td>
<td>13</td>
<td>3.9</td>
<td>320</td>
</tr>
</tbody>
</table>

How to order

- CTMC-2J: Fibre-optic cable CTMC 2-fibre for microducts
- CTMC-4J: Fibre-optic cable CTMC 4-fibre for microducts
- CTMC-6J: Fibre-optic cable CTMC 6-fibre for microducts
- CTMC-8J: Fibre-optic cable CTMC 8-fibre for microducts
- CTMC-24J: Fibre-optic cable CTMC 24-fibre for microducts
CMTL Fiber Optic Cables for Microducts

**Description**

Single-mode outdoor fibre-optic cable **A-DQ(ZN)2Y** – fully dielectric cable with light multi-tube structure. It is characterised by high flexibility and stretching strength. Each tube may house up to 24 fibres, is filled with a water repellent gel for the protection of microfibres against the penetration of moisture. The cable tubes are twisted around the central reinforcing element (FRP). Moreover, the cable is equipped with a line allowing us to cut the outer layer of the cable. The cable is designed for outer installation. Installation may be carried out by pneumatic methods (blowing in) into micropipes with internal diameter of up to 5.5 mm (12 to 96J), 10 mm (12 to 144J) and 12 mm (12 to 192J).

**Properties**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product group</td>
<td>Universal cable</td>
</tr>
<tr>
<td>Fibre standard</td>
<td>ITU-T G.957A1</td>
</tr>
<tr>
<td>Deformation strength</td>
<td>yes</td>
</tr>
<tr>
<td>Halogen free</td>
<td>yes</td>
</tr>
<tr>
<td>Protection against longitudinal penetration of moisture</td>
<td>yes</td>
</tr>
<tr>
<td>Anti-rodent</td>
<td>no</td>
</tr>
<tr>
<td>Tube</td>
<td>central</td>
</tr>
<tr>
<td>Core type</td>
<td>SM</td>
</tr>
<tr>
<td>Colour of the outer layer</td>
<td>black</td>
</tr>
<tr>
<td>Outer layer</td>
<td>PE</td>
</tr>
<tr>
<td>Thickness of the outer layer</td>
<td>maks. 0.45 - 0.5 mm</td>
</tr>
<tr>
<td>Scope of working temperature</td>
<td>-40°C / +70°C</td>
</tr>
<tr>
<td>Scope of working temperature</td>
<td>-30°C / +50°C</td>
</tr>
<tr>
<td>Scope of temperature during transportation</td>
<td>-40°C / +70°C</td>
</tr>
</tbody>
</table>

**Parameters**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Construction</th>
<th>Bend radius [mm]</th>
<th>Weight [kg/km]</th>
<th>Cable diameter [mm]</th>
<th>Max. tensile strength [N]</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMTL-12J</td>
<td>12 x SM (1x 12)</td>
<td>120</td>
<td>26</td>
<td>6.0</td>
<td>1000</td>
</tr>
<tr>
<td>CMTL-24J</td>
<td>24 x SM (2x 12)</td>
<td>120</td>
<td>26</td>
<td>6.0</td>
<td>1000</td>
</tr>
<tr>
<td>CMTL-36J</td>
<td>36 x SM (3x 12)</td>
<td>120</td>
<td>27</td>
<td>6.0</td>
<td>1000</td>
</tr>
<tr>
<td>CMTL-48J</td>
<td>48 x SM (4x 12)</td>
<td>120</td>
<td>27</td>
<td>6.0</td>
<td>1000</td>
</tr>
<tr>
<td>CMTL-72J</td>
<td>72 x SM (6x 12)</td>
<td>120</td>
<td>29</td>
<td>6.0</td>
<td>1000</td>
</tr>
<tr>
<td>CMTL-96J</td>
<td>96 x SM (8x 12)</td>
<td>120</td>
<td>44</td>
<td>7.0</td>
<td>1000</td>
</tr>
<tr>
<td>CMTL-144J</td>
<td>144 x SM (12x 12)</td>
<td>185</td>
<td>59</td>
<td>9.2</td>
<td>1000</td>
</tr>
<tr>
<td>CMTL-144J</td>
<td>144 x SM (6x 24)</td>
<td>185</td>
<td>50</td>
<td>7.9</td>
<td>1000</td>
</tr>
<tr>
<td>CMTL-192J</td>
<td>192 x SM (8x 24)</td>
<td>185</td>
<td>66</td>
<td>9.3</td>
<td>2000</td>
</tr>
</tbody>
</table>

**Design of the cable**

1. Central reinforcing element (FRP)
2. Loose tube filled with fibres
3. Protection against longitudinal penetration of moisture
4. Filler (only for 5-tube structures)
5. Cross-binder
6. A line allowing the cutting of a layer (ripcord)
7. PE outer layer (black)

**How to order**

- **CMTL-12J**: Fibre-optic cable CTML 12-fibre for microducts
- **CMTL-24J**: Fibre-optic cable CTML 24-fibre for microducts
- **CMTL-36J**: Fibre-optic cable CTML 36-fibre for microducts
- **CMTL-48J**: Fibre-optic cable CTML 48-fibre for microducts
- **CMTL-72J**: Fibre-optic cable CTML 72-fibre for microducts
- **CMTL-96J**: Fibre-optic cable CTML 96-fibre for microducts (bend radius 130 mm)
- **CMTL-96J-130**: Fibre-optic cable CTML 96-fibre for microducts (bend radius 130 mm)
- **CMTL-144J**: Fibre-optic cable CTML 144-fibre for microducts (bend radius 185 mm)
- **CMTL-144J-185**: Fibre-optic cable CTML 144-fibre for microducts (bend radius 185 mm)
- **CMTL-144J-160**: Fibre-optic cable CTML 144-fibre for microducts (bend radius 160 mm)
- **CMTL-192J**: Fibre-optic cable CTML 192-fibre for microducts

www.xpon.com.pl
CUM Fiber Optic Cables for Microducts

Description

Single-mode outdoor fibre-optic cable A-DQ(ZN)2Y - anti-rodent, fully dielectric cable. It is characterised by high flexibility and stretching strength, it is UV-resistant. Reinforced with aramid fibres. It is protected by a polyethylene layer. The cable is filled with a water repellent gel for the protection of microfibers against the penetration of moisture. The cable is designed for outer installations. Installation may be carried out by pneumatic methods (blowing in) into micropipes with internal diameter of up to 3.5 mm.

Properties

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product group</td>
<td>Universal cable</td>
</tr>
<tr>
<td>Fibre standard</td>
<td>ITU-T G.957 A1</td>
</tr>
<tr>
<td>Deformation strength</td>
<td>yes</td>
</tr>
<tr>
<td>Halogen free</td>
<td>yes</td>
</tr>
<tr>
<td>Protection against longitudinal</td>
<td>yes</td>
</tr>
<tr>
<td>penetration of moisture</td>
<td>yes</td>
</tr>
<tr>
<td>Anti-rodent</td>
<td>yes</td>
</tr>
<tr>
<td>Tube</td>
<td>central</td>
</tr>
<tr>
<td>Core type</td>
<td>SM</td>
</tr>
<tr>
<td>Colour of the outer layer</td>
<td>black</td>
</tr>
<tr>
<td>Outer layer</td>
<td>polyamide</td>
</tr>
<tr>
<td>Thickness of the outer layer</td>
<td>0.25 mm</td>
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<tr>
<td>Scope of working temperature</td>
<td>-20°C / +60°C</td>
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<tr>
<td>Scope of working temperature</td>
<td>-15°C / +50°C</td>
</tr>
<tr>
<td>Scope of temperature during transport</td>
<td>-30°C / +70°C</td>
</tr>
</tbody>
</table>

Design of the cable

1. Optical fibre
2. Gel filling
3. Central tube
4. Reinforcement made of aramid fibre
5. PA outer layer

Parameters

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Construction</th>
<th>Bend radius (mm)</th>
<th>Weight (kg/km)</th>
<th>Cable diameter (mm)</th>
<th>Max. tensile strength [N]</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUM-2J</td>
<td>2 x SM (1 x 2)</td>
<td>30</td>
<td>5</td>
<td>2.45</td>
<td>200</td>
</tr>
<tr>
<td>CUM-4J</td>
<td>4 x SM (1 x 4)</td>
<td>30</td>
<td>5</td>
<td>2.45</td>
<td>200</td>
</tr>
<tr>
<td>CUM-6J</td>
<td>6 x SM (1 x 6)</td>
<td>30</td>
<td>5</td>
<td>2.45</td>
<td>200</td>
</tr>
<tr>
<td>CUM-8J</td>
<td>8 x SM (1 x 8)</td>
<td>30</td>
<td>5</td>
<td>2.45</td>
<td>200</td>
</tr>
<tr>
<td>CUM-12J</td>
<td>12 x SM (1 x 12)</td>
<td>30</td>
<td>5</td>
<td>2.45</td>
<td>200</td>
</tr>
</tbody>
</table>

How to order

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUM-2J</td>
<td>Fibre-optic cable CUM 2-fibre for microducts</td>
</tr>
<tr>
<td>CUM-4J</td>
<td>Fibre-optic cable CUM 4-fibre for microducts</td>
</tr>
<tr>
<td>CUM-6J</td>
<td>Fibre-optic cable CUM 6-fibre for microducts</td>
</tr>
<tr>
<td>CUM-8J</td>
<td>Fibre-optic cable CUM 8-fibre for microducts</td>
</tr>
<tr>
<td>CUM-12J</td>
<td>Fibre-optic cable CUM 12-fibre for microducts</td>
</tr>
</tbody>
</table>
UFS Fiber Optic Cables for Microducts

Description

The fiber bundle UFS is characterised by high flexibility and stretching strength. It is protected by a polyethylene layer. Every bundle with an acrylic layer for the protection of microfibers against the penetration of moisture. Installation may be carried out by pneumatic methods (blowing in) into micropipes with internal diameter of up to 2.1mm. The cable is designed for outer and inner installations.

Properties

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product group</td>
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<td>Fibre standard</td>
<td>ITU-T G.957A1</td>
</tr>
<tr>
<td>Deformation strength</td>
<td>yes</td>
</tr>
<tr>
<td>Halogen free</td>
<td>yes</td>
</tr>
<tr>
<td>Protection against longitudinal</td>
<td>yes</td>
</tr>
<tr>
<td>penetration of moisture</td>
<td></td>
</tr>
<tr>
<td>Anti-rodent</td>
<td>yes</td>
</tr>
<tr>
<td>Tube</td>
<td>central</td>
</tr>
<tr>
<td>Core type</td>
<td>SM</td>
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<tr>
<td>Colour of the outer layer</td>
<td>black</td>
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<tr>
<td>Outer layer</td>
<td>PE</td>
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<tr>
<td>Thickness of the outer layer</td>
<td>0.15 mm</td>
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<tr>
<td>Scope of working temperature</td>
<td>-40°C / +50°C</td>
</tr>
<tr>
<td>Scope of working temperature</td>
<td>-5°C / +50°C</td>
</tr>
<tr>
<td>Scope of temperature during transportation</td>
<td>-30°C / +50°C</td>
</tr>
</tbody>
</table>

Design of the cable

1. Optical fibre
2. Inner acrylic layer
3. PE outer layer

Parameters

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Construction</th>
<th>Bend radius [mm]</th>
<th>Weight [kg/km]</th>
<th>Cable diameter [mm]</th>
<th>Max. tensile strength [N]</th>
</tr>
</thead>
<tbody>
<tr>
<td>UFS-2J</td>
<td>2 x SM</td>
<td>40</td>
<td>2</td>
<td>14</td>
<td>20</td>
</tr>
<tr>
<td>UFS-4J</td>
<td>4 x SM</td>
<td>40</td>
<td>2</td>
<td>14</td>
<td>20</td>
</tr>
<tr>
<td>UFS-6J</td>
<td>6 x SM</td>
<td>50</td>
<td>2</td>
<td>14</td>
<td>25</td>
</tr>
<tr>
<td>UFS-8J</td>
<td>8 x SM</td>
<td>50</td>
<td>2</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>UFS-12J</td>
<td>12 x SM</td>
<td>50</td>
<td>3</td>
<td>17</td>
<td>30</td>
</tr>
</tbody>
</table>

How to order

- UFS-2J: Fibre-optic cable UFS 2-fibre for microducts
- UFS-4J: Fibre-optic cable UFS 4-fibre for microducts
- UFS-6J: Fibre-optic cable UFS 6-fibre for microducts
- UFS-8J: Fibre-optic cable UFS 8-fibre for microducts
- UFS-12J: Fibre-optic cable UFS 12-fibre for microducts

www.xpon.com.pl
Fiber Optic Splicing Closures for FTTH
**FOSC DJ S-24**

**Description**

The **Vertical Hermetic Fiber Optic Splicing Closure** is a complete set of accessories used for connecting permanently two (or more) micro cables or fiber optic cables. After being heated, a heat shrinkable fixing sleeve is used to fix and seal the inlet/outlet tube and fiber cable. A closure is installed in a vertical position. Its strong housing and the main components make the closure fire resistant, waterproof and quakeproof, and protect the fibre-optic fusion splices against pulling, torsion and impact. It can be deployed in aerial, underground, wall-mounting, hand hole-mounting and duct-mounting applications. FOSC DJ S-24III equipment with FOST D24III splice trays allows to install 9 splitters in ABS housings.

**Properties**

- High quality ABS material
- Airtight closure
- Cable port: 10 x ø20 mm + 1 x ø40 mm
- Core capacity: 264
- Metal handles of the central element
- Size (H x D): 498 x ø302 mm

**Photos and dimensions**

**How to order**

- FOSC DJ S-24I
- FOSC DJ S-24II
- FOSC DJ S-24III
- FOST D24I
- FOST D24II
- FOST D24III

**Information**

- DJ S-24I holds up to 11 FOST D24I cassettes
- DJ S-24II holds up to 7 FOST D24I and 1 FOST D24II cassettes
- DJ S-24III holds up to 2 FOST D24I, 1 FOST D24II and up to 3 FOST D24III cassettes
- FOSC is packed in cardboard box

**Standard equipment**

- Seal type (1 roll)
- Insulation type (1 roll)
- Abrasive cloth (1 pc)
- Earthing wire (2 sets)
- Nylon tie (1 bag)
- Labeling paper (1 pc)
- Measuring paper (1 pc)
- Desiccant (1 bag)
- Special wrench (2 pcs)
- Hose clamp I (12 pcs)
- Hose clamp II (2 pcs)
- Elastic ring (11 sets)
FOSC DJS-25

Description

The Vertical Hermetic Fiber Optic Splicing Closure is a complete set of accessories used for connecting permanently two (or more) micro cables or fiber optic cables. After being heated, a heat shrinkable fixing sleeve is used to fix and seal the inlet/outlet tube and fiber cable. A closure is installed in a vertical position. Its strong housing and the main components make the closure fire resistant, waterproof and quakeproof, and protect the fibre-optic fusion splices against pulling, torsion and impact. It can be deployed in aerial, underground, wall-mounting, hand hole-mounting and duct-mounting applications. FOSC DJS-25III equipment with FOST D24III splice trays allows to install 6 splitters in ABS housings.

Properties

- High quality ABS material
- Airtight closure
- Cable port: 10 x ø20 mm + 1 x ø40 mm
- Core capacity: 168
- Metal handles of the central element
- Size (H x D): 495 x ø276.6 mm

Photos and dimensions

How to order

<table>
<thead>
<tr>
<th>FOSC DJS-25I</th>
<th>DJS-25I Vertical Hermetic Fiber Optic Splicing Tray</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOSC DJS-25II</td>
<td>DJS-25II Vertical Hermetic Fiber Optic Splicing Tray</td>
</tr>
<tr>
<td>FOSC DJS-25III</td>
<td>DJS-25III Vertical Hermetic Fiber Optic Splicing Tray</td>
</tr>
<tr>
<td>FOST D24I</td>
<td>DIN24 Splice Tray (24 cores)</td>
</tr>
<tr>
<td>FOST D24II</td>
<td>Cassettes with possibility adapters mounting (max 10 SC simplex adapters)</td>
</tr>
<tr>
<td>FOST D24III</td>
<td>Cassettes with possibility splitters mounting (max 3 splitters)</td>
</tr>
</tbody>
</table>

Information

- DJS-25I holds up to 7 FOST D24I cassettes
- DJS-25II holds up to 6 FOST D24I and 1 FOST D24II cassettes
- DJS-25III holds up to 2 FOST D24I, 1 FOST D24II and up to 2 FOST D24III cassettes
- FOSC is packed in cardboard box

Standard equipment

- Seal type (1 roll)
- Insulation type (1 roll)
- Abrasive cloth (1 pc)
- Earthing wire (2 sets)
- Nylon tie (1 bag)
- Labeling paper (1 pc)
- Measuring paper (1 pc)
- Desiccant (1 bag)
- Special wrench (2 pcs)
- Hose clamp I (12 pcs)
- Hose clamp II (2 pcs)
- Elastic ring (11 sets)
Termination Boxes for FTTH
FTTH-001 Termination Box

Description

Termination box FTTH-001
» FTTH-001 is designed for use in indoor applications
» Maximum capacity: 2 fibers
» Suitable to hold max 2 SC adapters
» The unit can be quickly installed within an office, house or communication room environment

Properties
» Economic design
» Ability to allow cables to enter from both sides of the unit
» Removable cover for easy access
» Compact profile

Information
» Cable port: 4 x ø5 mm
» Maximum capacity: 2 fibers
» Size: 86 x 86 x 19 mm

Photos

How to order

| FTTH-001 | FTTH-001 Termination box |

Accessories

» Pigtails
» Adapters
» Splice protectors
FTTB-001 Termination Box

Description

Termination box FTTB-001
» FTTB-001 is designed for use in indoor wall mounting applications
» Maximum capacity: 24 fibers
» Easy installation
» Splice tray can be opening angle above 90°

Properties

» Light weight and small size
» Provide splice connection protection of fiber cables and pigtails
» Made of engineering plastic material
» Suitable to hold max 8 SC adapters

Photos

How to order

FTTB-001 FTTB-001 Termination box

Information

» Number of input cable ports: 2
» Maximum capacity: 24 fibers
» Size: 264 x 154 x 56 mm

Accessories

» Pigtails
» Adapters
» Splice protectors
FTTB-002 Termination Box

Description
Termination box FTTB-002
» FTTB-002 is designed for use in indoor wall mounting applications
» Maximum capacity: 12 fibers
» Easy installation
» Splice tray can be opening angle above 90°

Properties
» Light weight and small size
» Provide splice connection protection of fiber cables and pigtails
» Made of engineering plastic material

Photos

How to order
FTTB-002 FTTB-002 Termination box

Information
» Number of input cable ports: 2
» Maximum capacity: 12 fibers (for 2 splitter trails)
» Size: 264 x 154 x 56 mm

Accessories
» Pigtails
» Adapters
» Splice protectors
FTTB-008 Termination Box

Description

Termination box FTTB-008
- FTTB-008 is designed for use in indoor wall mounting applications
- Maximum capacity: 12 fibers
- Suitable to hold 2 SC simplex or 6 LC duplex adapters
- Easy installation

Properties

- Light weight and small size
- Provide splice connection protection of fiber cables and pigtails
- Made of engineering plastic material

Photos

How to order

| FTTB-008 | FTTB-008 Termination box |

Information

- Number of input cable ports: 2
- Maximum capacity: 12 fibers (for LC duplex connectors)
- Size: 183 x 169 x 19 mm

Accessories

- Pigtails
- Adapters
- Splice protectors
FTTB-100 Termination Box

Description
- Termination box FTTB-100
- FTTB-100 is designed for wall and pole mount applications
- Maximum capacity: 144 fibers
- Mechanical protection „safety lock”
- ROHS compliance

Properties
- Resistance to vibration and shock
- Available in two types (for wall and pole mounting),
- Modern and innovating design
- Made of engineering plastic material
- Available for SC adapters
- Index of protection IP 65

Photos

How to order
- FTTB-100 FTTB-100 Termination box

Information
- Number of input cable ports: 2
- Maximum capacity: 144 fibers (for 6 splitter trays)

Accessories
- Pigtails
- Adapters
- Splice protectors
FTTB-D30A Termination Box

Description

Termination box FTTB-D30A
- FTTB-D30A is designed for wall and pole mount applications
- Maximum capacity: 8 fibers
- ROHS compliance

Properties

- Resistance to vibration and shock
- Modern and innovating design
- Made of engineering plastic material
- Available for SC simplex adapters
- Index of protection IP 54

Photos

How to order

FTTB-D30A FTTB-D30A Termination box

Information

- Cable port: 2 x ø12 mm
- Maximum capacity: 8 fibers
- Size: 200 x 215 x 54 mm

Accessories

- Pigtales
- Adapters
- Splice protectors
FTTB-D30B Termination Box

Description
- Termination box FTTB-D30B
  » FTTB-D30B is designed for wall and pole mount applications
  » Maximum capacity: 12 fibers
  » ROHS compliance

Properties
- Resistance to vibration and shock
- Modern and innovating design
- Made of engineering plastic material
- Available for SC adapters
- Index of protection IP 67

Photos

How to order
- FTTB-D30B FTTB-D30B Termination box

Information
- Cable port: 3 x Ø 12 mm
- Maximum capacity: 12 fibers
- Size: 200 x 215 x 54 mm

Accessories
- Pigtails
- Adapters
- Splice protectors
GPON OLT Si3000 Pono

**Description**

The Iskratel Si3000 Pono is a high-port-density, stand-alone, GPON Optical Line Termination (OLT) product. One OLT port delivers up to 2,488 Gb/s in the downstream and 1,244 Gb/s in the upstream direction, and typically covers up to 128 users. By using all 8 OLT ports the product can cover 1024 users.

**Properties**

- Non-blocking architecture
- Easy deployment in space-constrained locations
- Small initial investment compared to modular products
- Temperature hardened design that minimizes cooling system costs
- Advanced networking features for the secure, reliable and high-quality delivery of triple-play services
- DBA for bandwidth assurance
- Optical power diagnostics and the measurement of the distance between OLT and ONT
- The Si3000 provides 8 GPON OLT ports, 8 combo 1G and 2 XFP-based 10G network interfaces

GPON ONT G2400 series

**Description**

Complying with the latest ITU-T G.984 GPON standard, the Innbox GPON FTTH Home Gateway G2400 series is designed for service providers to meet the demand for desired high-speed connections, offering rates up to 2.5 Gb/s downstream and up to 1.25 Gb/s upstream. The Innbox G2400 series consist of five models. Each of them is equipped with Gigabit Ethernet 1G/100/1000BASE-TX ports. The great advantage is a wide range of interfaces, such as WIFI 802.11b/g/n, which allows for wireless data transfer.

**Properties**

- Complying with ITU-T G.984
- Modern design
- Wide range of interfaces: gigabit Ethernet, FXS for POTS, CATV RF, WLAN 802.11n
- A fully featured router and firewall, secure wireless transmission and authentication

<table>
<thead>
<tr>
<th>Name</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>ONT G2402</td>
<td>2xGE</td>
</tr>
<tr>
<td>ONT G2424</td>
<td>4xGE, 2xFXS</td>
</tr>
<tr>
<td>ONT G2425</td>
<td>4xGE, 2xFXS, RF</td>
</tr>
<tr>
<td>ONT G2426</td>
<td>4xGE, 2xFXS, WLAN, USB</td>
</tr>
<tr>
<td>ONT G2427</td>
<td>4xGE, 2xFXS, WLAN, RF, USB</td>
</tr>
</tbody>
</table>