



Key elements for Fiber Optic Network

> Outdoor fiber optic cables

Outdoor, fully dielectric fiber optic cables with a lightweight single- or multi-tube construction. They are flexible and resistant to pulling and UV radiation. Each tube can hold up to 24 optical fibers and is filled with a hydrophobic gel to protect the fibers from moisture ingress.

They are designed specifically for outdoor installation in telecommunication ducts. Installation can be performed either by mechanical (pulling) or pneumatic (blowing) methods.

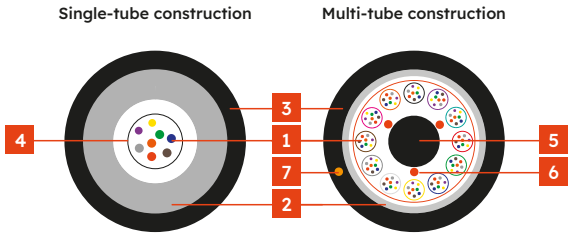


> Central tube cables (CTC)

Type	Capacity
A-DQ(ZN)B2Y 8007 5 5xx-00	4J, 8J, 12J, 24J
CTC outdoor fiber optic cable	
• single tube construction; • central tube; • rodent protection – reinforced with fiberglass; • PE outer sheath; • designed for outdoor installation in telecommunication ducts; • single-mode cable	

> Loose tube cabless (LTC)

Type	Capacity
A-DQ(ZN)B2Y 8007 7 7xx-00	12J, 24J, 48J, 72J, 96J, 144J, 288J
LTC RP outdoor fiber optic cable	
• multi-tube construction; • loose tube filled with fibers; • FRP - central reinforcement element; • rodent protection – reinforced with fiberglass; • HDPE sheath; • designed for outdoor installations in telecommunication ducts; • single-mode cable	



Construction of outdoor cables

- | | |
|-----------------------------|--|
| 1. Optical fibres | 5. FRP - central reinforcement element |
| 2. Fiberglass reinforcement | 6. Water blocking (yarns or tape) |
| 3. Outer sheath | 7. Ripcord for sheath stripping |
| 4. Central tube | |

A-DQ(ZN)2Y
8007 7 xxx-00

12J, 24J, 48J, 72J,
96J, 144J

LTC outdoor fiber optic cable

- multi-tube construction;
- loose tube filled with fibers;
- FRP - central reinforcement element;
- HDPE sheath;
- designed for outdoor installations in telecommunication ducts;
- single-mode cable

> Universal fiber optic cables

Universal fiber optic cables, suitable for both outdoor and indoor use, are rodent-resistant and fully dielectric with a lightweight single-tube construction. They are flexible, resistant to pulling forces and UV radiation. Each cable can hold up to 24 optical fibers and is filled with a hydrophobic gel to prevent moisture penetration, safeguarding the fibers.

These cables are designed for installation in telecommunication ducts for both indoor and outdoor applications. Installation can be performed using mechanical (pulling) or pneumatic (blowing) methods.



> Single-mode cable SM in Eca class

Type	Capacity
U-DQ(ZN)BH 8007 5 5xx-00	4J, 8J, 12J, 24J
SM CPR Eca universal fiber optic cable	
• single-mode cable • reinforced with fiberglass for rodent protection • LSZH sheath, CPR class Eca • Tensile load Tm 1600N or 1300N	

> Single-mode cables SM in B2ca class

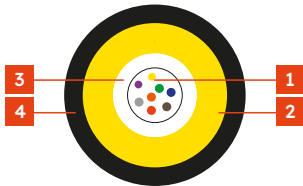
Type	Capacity
U-DQ(ZN)BH 8057 1 xx-B2	4J, 8J, 12J, 24J
SM CPR B2ca universal fiber optic cable	
• single-mode cable • reinforced with fiberglass for rodent protection • LSZH sheath, CPR class B2ca • Tensile load Tm 2000N	

> Muliti-mode cables MM in Dca class

Type	Capacity
U-DQ(ZN)BH 8067 y 0xx-12	4G, 8G, 12G, 24G
MM CPR Dca universal fiber optic cable	
• multi-mode cable • reinforced with fiberglass for rodent protection • LSZH outer sheath, CPR class Dca • Tensile load Tm 1200N • Categories: OM2, OM3, OM4	

> Muliti-mode cables MM in B2ca class

Type	Capacity
U-DQ(ZN)BH 8057 y 0xx-B2	4G, 8G, 12G, 24G
MM CPR B2ca universal fiber optic cable	
• multi-mode cable • reinforced with fiberglass for rodent protection • LSZH outer sheath, CPR class B2ca • Tensile load Tm 2000N • Categories: OM3, OM4	



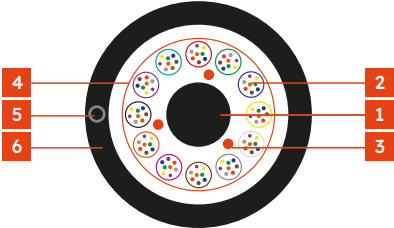
Construction of universal cables

1. Optical fibres
2. Central tube with 4, 8, 12 or 24 optical fibres
3. Rodent protection, fiberglass reinforcement
4. LSZH outer sheath

> Microduct fiber optic cables

Outdoor fiber optic cables for microducts (microcables) are fully dielectric and feature a lightweight, multi-tube construction. They are characterized by flexibility, tensile strength, and resistance to UV radiation. Each tube can hold up to 24 fibers, filled with a hydrophobic gel to prevent moisture penetration and protect the fibers. The cable tubes are twisted around a central reinforcing element (FRP) for added strength.

Designed specifically for outdoor installation in telecommunication microducts, these cables are installed using pneumatic methods (blowing) into microducts suitable for the given diameter of the microcables.



> LTMC

Type

Capacity

A-DQ(ZN)2Y

8007 7 xxx-00

12J, 24J, 48J, 72J, 96J,
144J, 192J, 288J

Microduct fiber optic cables LTMC 250 µm

- multi-tube construction
- loose tube with optical fibres
- gel-filled tube
- FRP - central reinforcement element
- HDPE outer sheath
- outdoor installation in telecommunication ducts

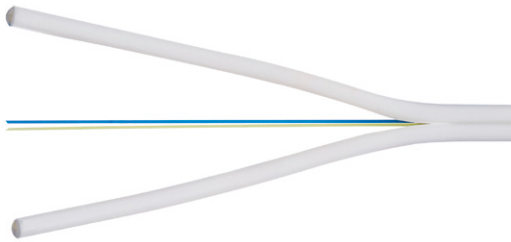
Construction of LTMC cables

1. Fibre Reinforced Plastic (FRP)
2. Loose tube with optical fibres
3. Water blocking layer (yarns or tape)
4. Cross-binder
5. Ripcord
6. HDPE outer sheath



As one of the few manufacturers worldwide, we control the entire production process, from the moment the fiber is produced to the point when the cable leaves the production line. Our state-of-the-art production facilities in Haaksbergen (Netherlands) and Rawicz (Poland) guarantee exceptional quality and reliability, as confirmed by numerous certifications from the **Polish National Institute of Telecommunications and OrangeLabs**.

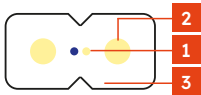
➤ Drop fiber optic cables



➤ Indoor installation cable MDIC, flat version

Indoor installation cable with a capacity of 2J and a flat cross-section, It features an LSZH coating in two CPR classes: Dca and B2ca. The fibers are routed without tubes. Longitudinal strengthening elements provide resistance to damage and deformation during installation. Designed for FTTH projects as a drop solution, suitable for both surface-mounted and flush-mounted installations.

Type	Capacity
SECFTH2JLSZH-B2CA	2J
SECFTH2JLSZH-DCA	2J



Construction of MDIC cable

1. Optical fibres
2. Longitudinal strength element
3. LSZH outer sheath

Indoor installation cable MDIC

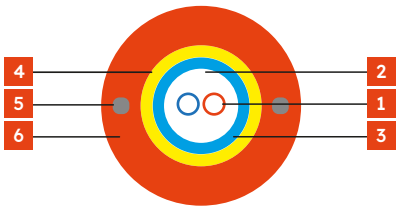
- lightweight, tubeless construction
- ITU-T G. 657.A1 fiber optic standard with reduced bend sensitivity
- CPR class: Dca and B2ca



➤ Direct-buried Access Cable

The Direct Access Cable (DAC) is a lightweight, non-metallic, central tube, direct-buried access cable with a small diameter for easy installation. FRP rods and aramid fibers provide resistance to crushing and tensile forces. The design allows the cable to bend along a single surface. It is specifically designed for FTTH (Fiber to the Home) projects.

Type	Capacity
02S3-DAC00-2000Q	2J
04S3-DAC00-2000Q	4J
12S3-DAC00-2000Q	12J
24S3-DAC00-2000Q	24J



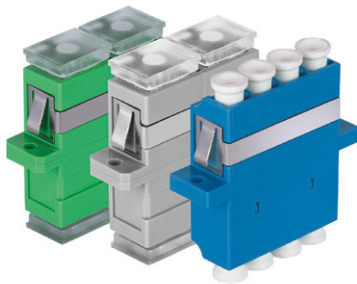
Construction of DAC cable

1. Optical fibres
2. Central tube
3. Gel filling
4. Aramid yarns reinforcement
5. Glass Fiber Reinforced Polymer (GFRP)
6. PE outer sheath (orange)

Direct-buried Access Cable

- high crush resistance and tensile strenght
- reinforcement of aramid yarns and FRP rods
- easy installation

> Accessories



> Fiber Optic Adapters

Fiber optic adapters are used to connect two fiber optic connectors. They are commonly used in fiber optic networks, primarily in distribution panels, enclosures, and subscriber sockets. Available in single (simplex), double (duplex), and quadruple (quad) configurations. Fiber optic adapters are essential components in telecommunications infrastructure, Ethernet networks, and cable television systems.

Parameter	Versions
Type	single-mode; multi-mode
Class	SM, OM2, OM3, OM4
Type of adapter	SC, LC, ST, MTP/MPO
End face polish type	APC, PC
Version	simplex, duplex, quad

> Panel components

A wide range of panel accessories enables efficient management of optical fibers. The offer includes splice cassettes with covers and holders, heat shrink tubing for splices, and additional components such as dust covers and mounting screws for adapters.



> Fiber optic panels

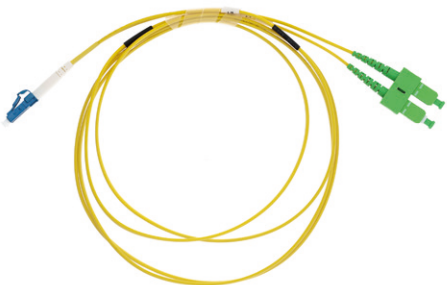
19" fiber optic distribution panels are essential network infrastructure components designed for installation in rack cabinets. They ensure well-organized and secure connections of fiber optic cables.

Product code	Description
P1-S240000-NEW	19" 1U fiber optic distribution panel, 24x SC simplex/LC duplex, equipped*
P1-T240000-NEW	19" 1U fiber optic distribution panel, 24x SC duplex, equipped*
P1-S240000-E-LV	19" 1U fiber optic distribution panel, front for 24 x SC simplex/LC duplex, slide version, empty
P1-T240000-E-LV	19" 1U fiber optic distribution panel, front for 24 x SC duplex, slide version, empty

*The panel is equipped with a cassette for 24 splices, two PG 13.5 glands, fiber organization holders, cable ties, labels, and screws for mounting adapters.



➤ Accessories



➤ Pigtails

A fiber optic pigtail is a type of fiber optic cable with one end terminated with a connector and the other end exposed as bare fiber. The standard version of pigtails is prepared on an indoor cable with a diameter of 0.9 mm. Pigtails are used to terminate optical fibers from line cables in optical distribution frames, subscriber outlets, and splicing boxes. They are available in single-mode and multi-mode versions, offered individually or in color-coded sets of 12.

Parameter	Versions
Type	single-mode; multi-mode
Class	SM, OM2, OM3, OM4
Connector type	SC, LC, ST
End face polish type	APC, PC

➤ Patch cables

A fiber optic patchcord (also known as a patch cable or jumper) is a short-length optical cable with connectors terminated on both ends. It is produced using indoor cable with various diameters, typically 2.0, 2.4, and 2.8 mm. Patchcords are used to connect optical transmission lines in fiber optic panels and distribution frames, as well as to connect other optical devices. They are available in various lengths, with any configuration of connectors and suitable for installation in conduits.

Parameter	Versions
Type	single-mode; multi-mode
Class	SM, OM2, OM3, OM4
Connector type	SC, LC, ST
End face polish type	APC, PC
Version	simplex, duplex

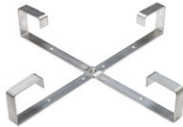




➤ Indoor Outlets

Subscriber outlets are used to terminate the fiber optic network on the subscriber's end. Depending on the model, they support the installation of SC simplex or LC duplex adapters and can terminate 2 to 4 fibers. Inside the outlet, there is space to store excess cable. Depending on the version, outlets may include additional components, such as a splice tray or pre-terminated cables with connectors. This product is intended for indoor installation.

Product code	Description
OUT-0000	Indoor outlet, empty; allows installation of 2x SC simplex/LC duplex
OUT-4-0000	Indoor outlet, big, empty; allows installation of 4x SC simplex/LC duplex
OUT-4-4433-xxx-B2	Indoor outlet OUT-4 4xSC/APC, with CPR B2ca cable, lengths: 30, 50, 100, 150m



➤ Cable Storage Frames

Cable storage frames are used for the safe storage of fiber optic cables in chambers or telecommunications facilities. The frame organizes the cable and ensures the correct bending radius. It allows for the storage of up to 50 meters of cable.

Product code	Description
SZ 1F	Supply rack 600x600x100mm
SZ 2F	Supply rack 800x600x100mm

➤ Fiber Optic Closures

Fiber optic closures are complete equipment sets that enable the permanent connection of fiber optic cables. The primary function of the closures is to protect the jointed fibers from adverse external conditions such as UV radiation, moisture, and harmful chemicals. They are designed for outdoor installation and use in cable chambers.

Product code	Description
FHSC-330-3-24	Fiber Optic Closure, for 48 fibers, 3 round ports
FHSC-435-4-96	Fiber Optic Closure, for 96 fibers, 4 round ports
FHSC-470-4-144-V1	Fiber Optic Closure, for 144 fibers, 4 round ports
FHSC-DAC	Repair closure for DAC cable



We manufacture cables based on modern G657.A1 fiber, which features a reduced bending radius, low attenuation, and high resistance to bending. It is fully compatible with G.652.D fibers, making it ideal for modern FTTH installations and other fiber optic infrastructure applications.