

THE FOSS SYSTEM™

CONNECTIVITY. ENGINEERED.

Fiber optics tried and tested under tough nordic conditions.
Powering critical industries like telecom, offshore and the military.



www.fossfiberoptics.com

CONTENT

5. PRODUCTION

6. PRO BEAM

8. CABLE REEL

10. HARTING HAN®

12. IP-LC AND IP-MPO

14. PRE-TERMINATED CABLES

16. WALL BOXES

18. PATCH CORDS



Foss is part of Discoverie Plc, a world-leading manufacturer and distributor of electrical components.

OUR PHILOSOPHY YOUR BENEFIT.

Foss has delivered fiber-optic solutions and built fiber-optic infrastructure since 1984. From the very beginning, locally produced products have been at the heart of our business. We follow a simple philosophy and put this into practice, enabling us to deliver faster than international players and allowing us to tailor the solutions to your needs. At Foss, you can always be rest assured that you will get high-quality solutions based on long-life-time components. This protects your investments - and meets future bandwidth needs.

We supply a wide range of industries. Through the years, we have provided equipment to all the Norwegian operators. In recent years we have expanded our market to include industries such as railway, offshore installations and military.

Today, Foss has more than 120 employees with offices and production facilities in Norway and Slovakia, offering 2200 square meters of production capacity enabling a throughput of more than 1 million connector terminations annually.



PRODUCTION AND QUALITY CONTROL

Industrial environments place great demands on equipment. Both mechanical stress and large temperature variations can make standard materials unsuitable.

Our own production makes it possible to create special solutions that meet the requirements for local customization, delivery precision and quality.

We create complete solutions for demanding conditions in defense and industry, based on fiber optic field cables. The advantages for such factory-configured solutions is that the work is carried out in a controlled environment by trained installers, and that the products are tested before they are dispatched.

In addition to standard products, we can offer customized products that are made according to the customer's wishes and needs.



PRO BEAM EXPANDED BEAM

The PRO BEAM connector is an extreme robust connector. It can be used by anyone, almost anywhere. The plugs are water tight and can be used by unskilled personnel.

In Pro Beam, the light beam from the fiber is broadened in a ball lens to a diameter that is substantially larger than in a normal contact using so-called "Expanded Beam Technology". This gives an increased area of 900x and 200x compared to standard SM and MM contacts respectively. The effect of contamination is therefore reduced considerably. The cleaning of the contacts is also markedly easier and normally will just be a case of rinsing with water.

Foss Fiberoptikk buys quality components from TE and assembles in own production facilities in Drammen. Due to local production, customer-specific solutions can be delivered at short notice. Typical delivery time for a system is one week. Contact our sales department for more information.

HERMAPHRODITE CONTACTS

Pro Beam is a double-ended connector (hermaphrodites). There is no male and female and this simplifies the connection: A plug can be connected to plug. A plug can be connected to a panel connector. However, a panel connector cannot be connected to another panel connector. The panel connector has a transition to a standard connector for connection to electronics or other installed

PRO BEAM JUNIOR AND SENIOR.



Pro Beam Jr. Supplied as 2 or 4 channel system.

TYPE OF FIBER

All variations are available as both single and multi-mode. For the highest possible capacity, single mode is normally recommended, but most importantly the adaptation to other networks must be considered.

Pro Beam Sr. Available as a 2-, 4- or 8-channel system.



Typically 2 and 4 channels are delivered as junior and 8 channels as senior.

CABLE TYPE

Pro Beam cables are used in temporary connections. The cables may be coiled in and out repeatedly. The surroundings can provide great stress on the cables. This places a great demand on the cable. Two types of outer sheaths are available; polyurethane (PUR) and halogen-free polyurethane (PUR LSZH). Foss uses field cable from the American manufacturer OCC, Optical Cable Corporation. For panel connected Pro Beam we typically use standard double cords, but field cable is also used.



Cable and connectors. The length of the cable is adapted to the customer's wishes. The tactical cable is both robust and flexible. It handles a wide temperature range, -40°C - +70°C.

CONTACT AT THE FAR END

The Pro Beam comes with standard data contacts at the far end. Most standard connectors can be provided. The Pro Beam field cable with plug can also be supplied with a standard connector at the far end.

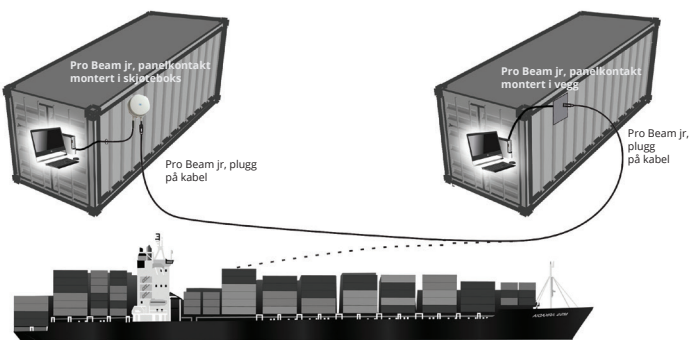


ANGLED PLUG

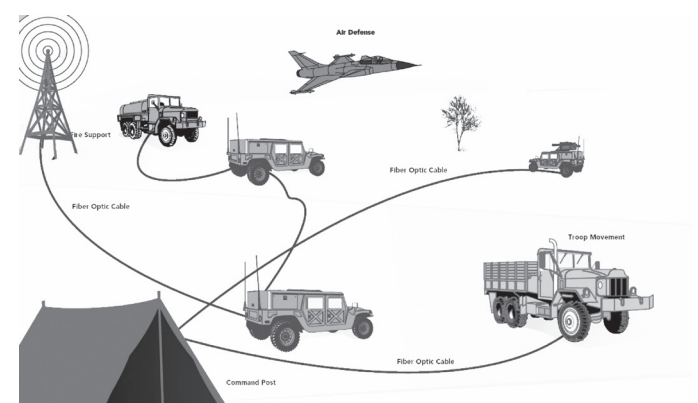
In special cases where the slightly long Pro Beam plug is too long, an angled plug maybe useful.

EXAMPLES OF USE

CIVIL USE



MILITARY USE





CABLE REEL

Made for heavy usage in rough environments. Lightweight, smooth operation and broad functional details make this reel top in its class.

CONFIGURATION EXAMPLES

Cable reel in painted aluminium with the parts in stainless material. Alternative: painted with green powder coating. Further colors are available on request.

Same size reels can be stacked, all having room for storing connectors (size up to Pro Beam Sr.) with the double flange providing easy access to the inner end of the cable. The crank handle may be folded in when not in use. A thumbscrew at the back of the reel is provided for braking the rotation speed.

The lengths indicated below are based on 5.5 mm cable (4 fibres). Cables with a diameter of 6.5 mm (8 fibres) will reduce the length by approx. 30%.

- Reel in painted aluminium
- 3 sizes: for lengths of 100, 250 and 500m cable
- Space for storing connectors
- Double flange for easy access to the inner end
- Stackable





HARTING HAN® INDUSTRIAL CONNECTOR

**Robust fiber connector for industrial environments.
Enables temporary connections with up to 24 fibers in one
connector. A typical system consists of a cable with plugs at
both ends. The ends are connected to the chassis connector
which has the transition to standard fiber connectors.**

EXAMPLES OF USE

Harting Han is used in solutions for both temporary and permanent connections. A finished pluggable solution that simplifies installation, perhaps in places where splicing is impossible. Harting HAN can be used in solutions where rapid disconnection is required. The connectors are well protected by a cover when not in use.

The fields of application are many and varied. Some examples of use are links between shipping containers, providing communications to mobile control stations and as a connection for fish tags.

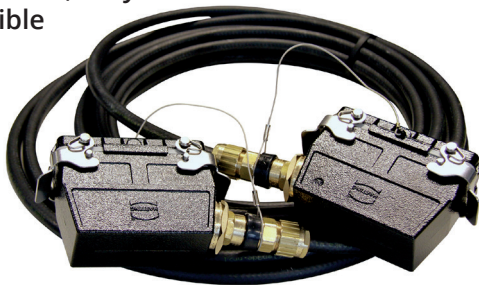
The optical part consists of standard SC connectors.

Industrial cables such as AICI and QFCI are typically used; but a number of other cables can also be supplied.



CABLES

Both AICI and QFCI are steel braided cables for use in rough environments, both indoor and outdoor. They are resistant to some chemicals and despite their ruggedness, they are still flexible and easy to install.



HAN HPR HOOD/HOUSING

A pressure tight housing, for use in external interconnections in vehicles, in highly demanding environments and wet areas, as well as for sensitive interconnections requiring shielding.

- Degree of protection IP65, IP68 and IP69K
- Operating temperature 40°C to 60°C



HAN STD. HOOD/HOUSING

For use in demanding environments, for example in the automobile and mechanical engineering industries, and for process and regulation control applications.

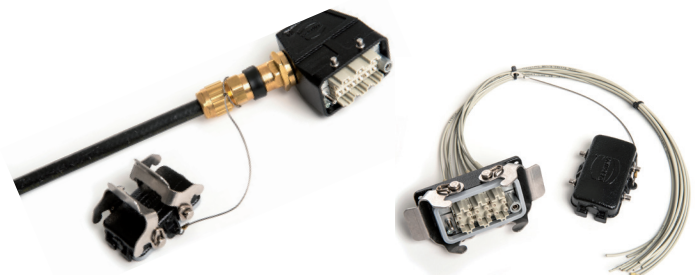
- Degree of protection IP65
- Operating temperature 40°C to 60°C



HAN M HOOD/HOUSING

For harsh environmental requirements and applications where aggressive environmental conditions and harsh climatic atmospheres are encountered.

- Degree of protection IP65
- Operating temperature 40°C to 60°C



IP-LC AND IP-MPO

The IP-series is based on standard LC or MPO connectors. The connector housing ensures mechanical protection while at the same time protecting against exposed weather conditions. These connectors are normally used in temporary connections. Typical applications in antenatowers or between containers.



CONNECTORS

The IP series consists of optical connectors that can withstand harsh weather and wind. The degree of protection is IP68. The optical part of the connector is based on standard LC or MPO connectors.

EXAMPLES OF USE

A typical system consists of field cable with a plug at both ends, adapter for mounting in chassis and standard cords on the inside of the cabinet, for connection to electronics or other networks.

Field cable with plugs can also be connected together by using the inline adapter. If this is done with IP-MPO, one side must be equipped with control pins.

The IP series is typically used for temporary connections. It is also used for more durable connections where splicing is unsuitable, for example in antenna masts.

Tactical cable is normally used with the IP-series. This is a robust and flexible cable. It can handle large variation in temperature, -40°C to +70°C. Together with the Foss cable reel, this becomes a very good solution for temporary connections.



- LC- (2-fibre) or MPO- (12-fibre) connector with IP68 protection
- A 24-fibre MPO may be provided on request
- For exposed weather conditions
- For environments with chemicals, corrosive-gasses and -liquids
- For fixed and temporary connections
- ODVA compatible.

PRE-TERMINATED CABLE FOR HARSH ENVIRONMENT

Pre-terminated cables for industrial use.
Customer specified, manufactured by Foss.
A variety of cables available, with customer specified
lengths and connector types. For installation in cabi-
nets and enclosures, the cables can be delivered with
pre-mounted glands.



FUNCIONS

These cables are used where standard patch cords are too fragile and where splicing of pigtails might be impossible.

Almost all types of cable can be used in breakout cables. Cables with 2 to 24 fibers are available.

- Cable according to NEK 606 for use offshore and on ship
- Single- or multi-mode
- Available with most connector types
- 2-, 4-, 8-, 12- or 24-fiber cable
- Manufactured in customer specified lengths.

CABELS

Standard cables can be used as pre-terminated cables.

A manifold is attached at the end of the cable to fan out the fibers in a controlled way. Each fiber is individually protected by a 3.0 mm tube. Cables with different specifications can be supplied, for example AXAI, AXXI, AICI, QFCI and tactical cable.

PROTECTION OF CONTACTS DURING INSTALLATION

To protect the connectors during installation two options are available.

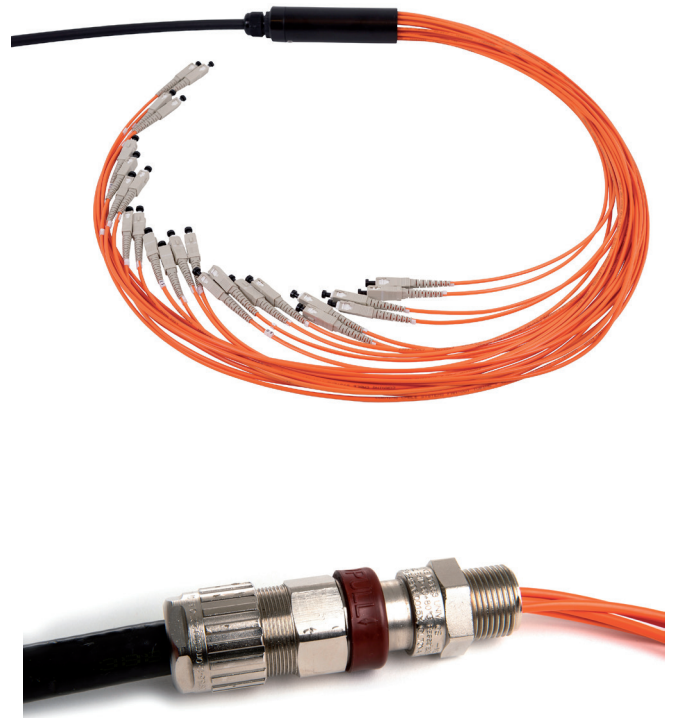
PROTECTION CABLE-END (with or without pulling grip):

Made from a flexible tube that is used for transportation/pulling protection before and during installation and then is completely removed after use. An optional cable-pulling grip may be placed outside of this tube if the cable is to be pulled through tubes.

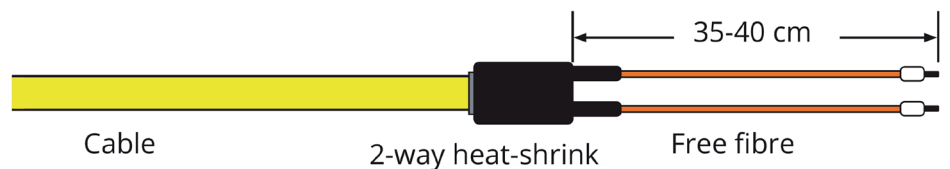
PROTECTION CABLE-END, DETACHABLE:

Here the protection may be removed and replaced as necessary, therefore suitable should the cable be moved several times. The one disadvantage is that the protection attachment cannot be removed from the cable.

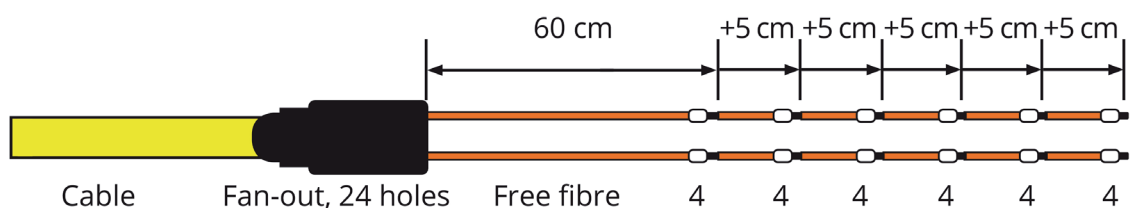
As an option the connector side of the cable may be protected with a flexible tube.



An Exd gland can be used as fan-out.



Break-out cables are like industrial patch-cords with 2-24



For cables with more than 2 fibres the length of the 2 or 4 next fibres will increase with 5 cm (+0/-5 cm) for every 2. or 4. fibre.



WALL BOXES

Wall boxes from Foss are manufactured from aluminium and are painted with white powder coating. The boxes are available in a variety of configurations and sizes adapted to many different shapes. The wall boxes are for indoor installation. Waterproof wall boxes can be supplied empty, with adapters and pigtails or pre-terminated with cable as required.

Both single mode and multi-mode variants exist.

WALL-MOUNT BOX MINI

A simple indoor wall-mount box for termination of cables. The incoming cable may be directly terminated using field connectors or by splicing pigtails.

- White aluminium
- Including pigtails and splice holder for splicing
- Clips for DIN rail as an optional configuration
- Dimensions: 110x150x35 mm



WALL CABINET FOSS24

An indoor wall cabinet for termination or splicing of optical cables. The incoming cable may be directly terminated using field connectors (e.g. FAST, UniCam, LightCrimp Plus) or by splicing pigtails.

The cabinet includes a perforated assembly board for easy attachment of splice holders and fiber guides. The cabinet has 9 round cable ports, a PG16 gland is included, with the rest of the ports blinded.

- Includes a key lock
- For splicing of cables
- For termination of optical connectors
- Prepared for splicing of pigtails
- Integrated assembly board
- Adapter plates exists for most connector types



MODULAR WALL BOX DIN

A flexible panel suited for DIN-rail mounting. The panel is modular and can be provided in various sizes. The base unit has space for up to 24 LC-connectors or 12 SC- or ST-connectors.

The panel can be delivered with pigtails or pre-terminated cable types; AXAI, QXXI or Micro-cable. AXAI cables have a tight buffer and support up to 24 fibers, so a panel with 48 fibers will therefore be delivered with 2 cables.

ADD-ON UNIT

The add-on unit has room for the same amount of connectors. The extension using an add-on unit is simply done by removing the lid from the base unit and attaching the add-on unit instead. The lid is then used on the add-on unit. In this way, it is possible to deliver panels with 48, 72, 96 or more connectors just by increasing the total width of the panel.

- DIN-rail mount or directly on wall mount
- Simple access inside panel
- May be extended with add-on units
- Each unit may handle up to 24 connectors
- Adapters for ST, SC and LC may be provided



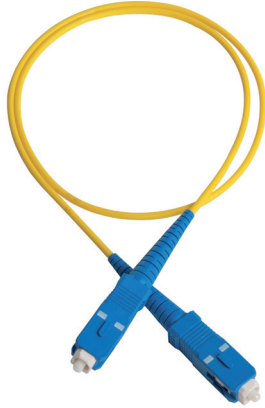


PATCH CORDS

All Foss patch cords are future proof, extremely precise and of the highest grade. They are available with both single mode and multi-mode optical fibers and are color coded for easy identification. All patch cords are tested according to our own quality measures and international standards before they are sent to customers.

PATCH CORD, SINGLE MODE

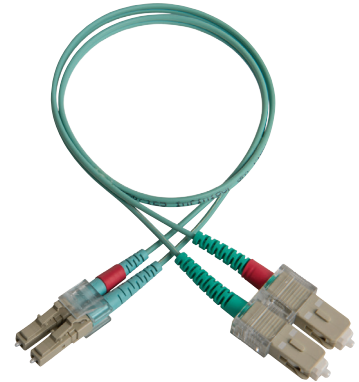
Single mode patch cords are offered both with 1-fiber cable and 2-fiber figure-8 cable. The products are offered in several different configurations with different connectors and lengths. The same product may be delivered in three different colours allowing separation of different services in the ODF.



DOUBLE PATCH CORD, MULTI-MODE

Double multi-mode patch cords are delivered as 2-fiber figure-8 cable. These are offered in several different configurations with different connectors, fibre types and lengths.

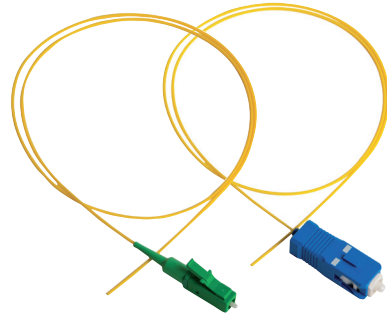
- 2.0 mm 2-fiber figure-8 cable (zip-cord)
- 2.8 mm on request
- Different coloured cable for simple identification



PIGTAILS

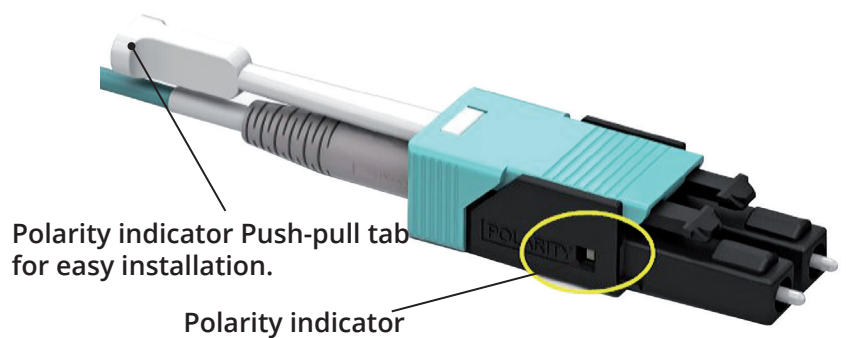
Pigtails for terminating cables with splicing.

- 0.9 mm cable
- Fast cladding (Tight Buffer, TB)
- Tight buffer with easy strip of 100 mm
- Different coloured cable for simple identification



DUPLEX PATCH CORDS UNIBOOT

Demand for increased fibre density requires new high density optical patch cords. Our new patch cords in the UniBoot design, contain 2 fibers in 1 cable and therefore the quantity of cable is cut in half when routing. The construction makes it possible to reverse the polarity from A-B to A-A without the use of tools.



TRUNK CABLE, MPO-MPO

Trunk cables and fan-out cables for indoor use are delivered with 12 or 24 optical fibers. Trunk cables are delivered with MPO at both ends. Fan-outs are used as converters between MPO and LC.



Fan-Out cable, MTP-LC, multimode OM-3.



Single mode

Multimode OM3

Multimode OM4

SPECIFICATIONS

HARSH ENVIRONMENT CONTACTS

DESCRIPTION	PRODUCT	MODE	FIBER TYPE	COLOR	CABLE DIAMETER	CONTACT	POLISH
Military grade lense contacts	ProBeam	SM	OS2 - G.652.D	● ●	5.5 mm	PBjr, PBsr	-
	ProBeam	SM	OS2 - G.652.D	● ●		PBsr	-
	ProBeam	MM	OM-1, OM-2	● ●	5.5 mm	PBjr, PBsr	-
	ProBeam	MM	OM-1, OM-2	● ●		PBsr	-
Dust and water-proof contact	IP-series	SM	OS2	●	5 mm	LC	PC, APC
	IP-series	SM	OS2	●	7 mm	MPO	PC, APC
	IP-series	MM	OM-1	●	5 mm	LC	
	IP-series	MM	OM-1	●	7 mm	MPO	
	IP-series	MM	OM-2	●	5 mm	LC	
	IP-series	MM	OM-2	●	7 mm	MPO	
	IP-series	MM	OM-3	●	5 mm	LC	
	IP-series	MM	OM-3	●	7 mm	MPO	

● = black ● = black LSZH

CORDS

	MODE	COLOR	CABLE DIAMETER	CONTACT	POLISH
Pigtail SM	SM - OS2	●	0,9 mm	LC, SC, E2000, MU, ST, FC	PC, APC
Pigtail MM	MM - OM-1	●	0,9 mm	LC, SC, E2000, MU, ST, FC	PC
	MM - OM-2	●	0,9 mm	LC, SC, E2000, MU, ST, FC	PC
	MM - OM-3	●	0,9 mm	LC, SC, E2000, MU, ST, FC	PC
	MM - OM-4	●	0,9 mm	LC, SC, E2000, MU, ST, FC	PC
Patch cord	SM - OS2	● ● ●	2 x 4 mm or 2,8 x 5,6 mm	LC, SC, E2000, MU, ST, FC	PC, APC
Double patch cord	SM - OS2	● ● ●	2 x 4 mm or 2,8 x 5,6 mm	LC, SC, E2000, MU, ST, FC	PC, APC
	MM - OM-1	●	2 x 4 mm or 2,8 x 5,6 mm	LC, SC, ST, FC	PC
	MM - OM-2	●	2 x 4 mm or 2,8 x 5,6 mm	LC, SC, ST, FC	PC
	MM - OM-3	●	2 x 4 mm or 2,8 x 5,6 mm	LC, SC, ST, FC	PC
	MM - OM-4	●	2 x 4 mm or 2,8 x 5,6 mm	LC, SC, ST, FC	PC
Uniboot cord	SM - OS2	●	2 mm	LC	PC, APC
	MM - OM-3	●	2 mm	LC	
	MM - OM-4	●	2 mm	LC	
Subscriber patch cord	SM - OS2	○*	2,8 mm	LC, SC	PC, APC

BEND RADIUS	TEMPERATURE	INSERTION LOSS @850/1300 nm MM, 1310/1550 nm SM	RETURN LOSS @1310/1550 nm	STANDARD LENGTHS
	-40°C to 85°C	2/4-channel, < 1.5 dB, typical 0.8 dB	< -34 dB	50, 100, 200, 500
	-40°C to 85°C	8-channel, < 2.0 dB, typical 0.8 dB	< -34 dB	50, 100, 200, 500
	-40°C to 85°C	2/4-channel, < 1.5 dB, typical 0.7 dB		50, 100, 200, 500
	-40°C to 85°C	8-channel, < 2.0 dB, typical 0.7 dB		50, 100, 200, 500
R20	-40°C to 70°C	< 0.5 dB	< -45 dB (PC), < -60 dB (APC)	10, 25, 50, 100
R35	-40°C to 70°C	< 0.5 dB	< -45 dB (PC), < -60 dB (APC)	10, 25, 50, 100
R20	-40°C to 70°C	< 0.5 dB		10, 25, 50, 100
R35	-40°C to 70°C	< 0.5 dB		10, 25, 50, 100
R20	-40°C to 70°C	< 0.5 dB		10, 25, 50, 100
R35	-40°C to 70°C	< 0.5 dB		10, 25, 50, 100
R20	-40°C to 70°C	< 0.5 dB		10, 25, 50, 100
R35	-40°C to 70°C	< 0.5 dB		10, 25, 50, 100

TEMPERATURE	INSERTION LOSS @850/1300 nm MM, 1310/1550 nm SM	RETURN LOSS @1310/1550 nm	STANDARD LENGTHS	STANDARD
-20°C to 60°C	< 0.5 dB	< -45 dB (PC), < -60 dB (APC)	1.5	ITU-T G.657.A1
-20°C to 60°C	< 0.5 dB (LC, SC, ST og FC)		1.5	
-20°C to 60°C	< 0.5 dB (LC, SC, ST og FC)		1.5	ITU G.651.1
-20°C to 60°C	< 0.3 dB (LC og SC)		1.5	ITU G.651.1
-20°C to 60°C	< 0.3 dB (LC og SC)		1.5	ITU G.651.1
-20°C to 60°C	< 0.5 dB, < 1.0 dB for ST	< 45 dB (PC) < 60 dB (APC)	1, 2, 3, 5, 8, 10	ITU-T G.657.A1
-20°C to 60°C	< 0.5 dB, < 1.0 dB for ST	< 45 dB (PC) < 60 dB (APC)	1, 2, 3, 5, 8, 10	ITU-T G.657.A1
-20°C to 60°C	< 0.5 dB		1, 2, 3, 5, 8, 10	
-20°C to 60°C	< 0.5 dB		1, 2, 3, 5, 8, 10	ITU G.651.1
-20°C to 60°C	< 0.5 dB, < 0.3 dB LC og SC		1, 2, 3, 5, 8, 10	ITU G.651.1
-20°C to 60°C	< 0.5 dB, < 0.3 dB LC og SC		1, 2, 3, 5, 8, 10	ITU G.651.1
-10°C to 60°C	< 0.5 dB	< 45 dB (PC) < 60 dB (APC)	1, 2, 3, 5, 8, 10	ITU-T G.657.A1
-10°C to 60°C	< 0.3 dB		1, 2, 3, 5	ITU G.651.1
-10°C to 60°C	< 0.3 dB		1, 2, 3, 5	ITU G.651.1
-40°C to 60°C	< 0.5 dB	< 45 dB (PC) < 60 dB (APC)	0.2, 0.3, 0.5, 1, 2, 3, 5	ITU-T G.657.A2

* UV-stabilised FR-LSZH

● = aqua
● = grey

○ = white
● = orange

● = yellow
● = violet

● = red
● = blue

● = black

SPECIFICATIONS

CABLES

DESCRIPTION	PRODUCT	DIAMETER	MODE
Tight buffer in/outdoor	AXAI	5 mm - G4, 6 mm - G8, 6.5 mm- G12, 8 mm - G24	SM - OS2
	AXAI	5 mm - G4, 6 mm - G8, 6.5 mm- G12, 8 mm - G24	MM - OM-1
	AXAI	5 mm - G4, 6 mm - G8, 6.5 mm- G12, 8 mm - G24	MM - OM-2
	AXAI	5 mm - G4, 6 mm - G8, 6.5 mm- G12, 8 mm - G24	MM - OM-3
	AXAI	5 mm - G4, 6 mm - G8, 6.5 mm- G12, 8 mm - G24	MM - OM-4
	AXXI	9.6 mm - G4, G8, 9.9 mm - G12, 10.8 mm - G24	SM - OS2
	AXXI	9.6 mm - G4, G8, 9.9 mm - G12, 10.8 mm - G24	MM - OM-1
	AXXI	9.6 mm - G4, G8, 9.9 mm - G12, 10.8 mm - G24	MM - OM-2
	AXXI	9.6 mm - G4, G8, 9.9 mm - G12, 10.8 mm - G24	MM - OM-3
	AXXI	9.6 mm - G4, G8, 9.9 mm - G12, 10.8 mm - G24	MM - OM-4
Loose tube	QXXI	10.5 mm - G12, G24, G48 - 12.0 mm - G96	SM - OS2
Tight buffer, harsh environments	AICI	8.2 mm - G4, 9.4 mm - G8, 10.3 mm - G12, 12.0 mm - G24	SM - OS2
	AICI	8.2 mm - G4, 9.4 mm - G8, 10.3 mm - G12, 12.0 mm - G24	MM - OM-1
	AICI	8.2 mm - G4, 9.4 mm - G8, 10.3 mm - G12, 12.0 mm - G24	MM - OM-2
	AICI	8.2 mm - G4, 9.4 mm - G8, 10.3 mm - G12, 12.0 mm - G24	MM - OM-3
	AICI	8.2 mm - G4, 9.4 mm - G8, 10.3 mm - G12, 12.0 mm - G24	MM - OM-4
Loose tube, harsh environments	QFCI	13.5 mm - G4, G8, G12, G24, G48	SM - OS2
	QFCI	13.5 mm - G4, G8, G12, G24, G48	MM - OM-1
	QFCI	13.5 mm - G4, G8, G12, G24, G48	MM - OM-2
	QFCI	13.5 mm - G4, G8, G12, G24, G48	MM - OM-3

● = aqua ● = black ● = yellow
● = grey ● = orange ● = violet

WALL BOXES

PRODUCT	H X B X D	CAPACITY	ADAPTER
FPD 76	180 x 57 x 160	24 - LC 12 - SC, ST	LC, SC, ST
FPD 76, DIN side	180 x 77 x 153	24 - LC 12 - SC, ST	LC, SC, ST
Veggboks mini	35 x 150 x 110	6 - FC, ST, DIN 8 - SC, E2000 12 - LC	LC, SC, E2000, FC, ST, DIN
Veggb. Mini terminated	35 x 150 x 110	16 - LC terminated	LC
Veggboks midi	242 x 280 x 68	24 - SC, FC, ST, DIN, E2000 48 - LC	LC, SC, E2000, FC, ST, DIN
FOSS24, with lock	300 x 280 x 75	24 - SC, FC, ST, DIN, E2000 48 - LC	LC, SC, E2000, FC, ST, DIN

	COLOR	INSERTION LOSS @850/1300 nm MM, 1310/1550 nm SM	RETURN LOSS 1310/1550 nm	TEMPERATURE	STANDARD
	●	< 0.5 dB, < 0.15 dB typical	< 45 dB (PC) < 60 dB (APC)	-40°C til 60°C	ITU-T G.657.A1
	●	< 0.5 dB, < 0.2 dB typical		-40°C til 60°C	
	●	< 0.5 dB, < 0.2 dB typical		-40°C til 60°C	ITU G.651.1
	●	< 0.5 dB, < 0.2 dB typical		-40°C til 60°C	ITU G.651.1
	●	< 0.5 dB, < 0.2 dB typical		-40°C til 60°C	ITU G.651.1
	●	< 0.5 dB, < 0.15 dB typical	< 45 dB (PC) < 60 dB (APC)	-40°C til 60°C	ITU-T G.652.D
	●	< 0.5 dB, < 0.2 dB typical		-40°C til 60°C	
	●	< 0.5 dB, < 0.2 dB typical		-40°C til 60°C	ITU G.651.1
	●	< 0.5 dB, < 0.2 dB typical		-40°C til 60°C	ITU G.651.1
	●	< 0.5 dB, < 0.2 dB typical		-40°C til 60°C	ITU G.651.1
	●	< 0.5 dB, < 0.2 dB typical		-40°C til 60°C	ITU G.651.1
	●	< 0.5 dB, < 0.2 dB typical	< 45 dB (PC) < 60 dB (APC)	-40°C til 60°C	ITU-T G.657.A1
	●	< 0.5 dB, < 0.15 dB typical	< 45 dB (PC) < 60 dB (APC)	-40°C til 60°C	ITU-T G.652.D
	●	< 0.5 dB, < 0.2 dB typical		-40°C til 60°C	
	●	< 0.5 dB, < 0.2 dB typical		-40°C til 60°C	ITU G.651.1
	●	< 0.5 dB, < 0.2 dB typical		-40°C til 60°C	ITU G.651.1
	●	< 0.5 dB, < 0.2 dB typical		-40°C til 60°C	ITU G.651.1
	●	< 0.5 dB, < 0.15 dB typical	< 45 dB (PC) < 60 dB (APC)	-40°C til 60°C	ITU-T G.652.D
	●	< 0.5 dB, < 0.2 dB typical		-40°C til 60°C	
	●	< 0.5 dB, < 0.2 dB typical		-40°C til 60°C	ITU G.651.1
	●	< 0.5 dB, < 0.2 dB typical		-40°C til 60°C	ITU G.651.1

	COLOUR	MODE	CABLE ENTRANCES	MOUNTING
	white	SM, MM	2 x PG16, 1 included	DIN, wall
	white	SM, MM	3 x PG16, 1 included	DIN, wall
	white	SM, MM	1 x M20, 1 x membrane	wall, DIN (accessory)
	white	SM, MM	2 x M20, 1 x membrane	wall, DIN (accessory)
	white	SM, MM	3 x M20, 1 x membrane	wall
	white	SM, MM	8x PG16, 1 x PG29	wall

THE FOSS SYSTEM™

CONNECTIVITY. ENGINEERED.

