FIBER FOX®

safe

EBC Series

flexible

FCM Modules

reliable

Full Systems

The World Of
Professional Fiber Optics

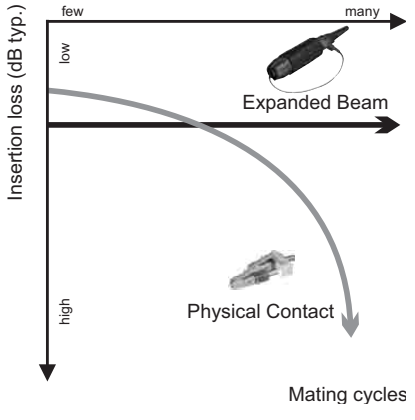
Table Contents

Why Lens Technology?

Data rates have risen enormously, especially with the introduction of HD television. This means that video technology also needs efficient and reliable transmission cables on an optical basis for shorter distances nowadays, wherever copper coax cables or fibre optic cables were used for long lines formerly.

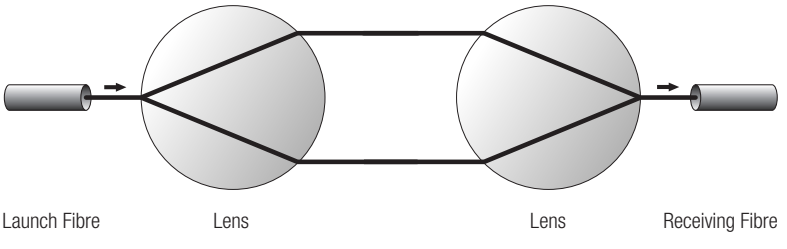
There are great reservations against this technology in some parts of the TV industry, although fibre optic cables have been used in the environment of telecoms or with the armed forces for years. One reason for this situation probably results from the experience that was gained with fibre optics in the past. Constant movement caused by rigging and de-rigging when using an OB van for transmitting sports events or other events proves the extreme demands which are made on the material. The functionality must be ensured always, even in harsh environmental conditions like rain, cold, heat, dust or mud.

So-called 'physical contact' fibre optic terminations are usually used in the TV industry too. They require connectors with which the ends of glass fibres can be led directly to one another without protection and with the highest degree of precision. The majority of hybrid connectors that are compatible with SMPTE must be included for this purpose, besides all of the usual



connectors for computers. The main advantage of this technology is that the attenuating values are low at about 0.3–0.5 dB. However, the disadvantages lie in increased abraision, the very low mating cycles (between 500 and 1,000 approximately) which result from that and the pronounced sensitivity to dirt. A single grain of dust can especially cause malfunctions with single-mode technology which utilizes one core of glass fibres measuring only 0.009 mm because it is relatively large when measured on the diameter of the glass fibres. What is more, every plugging operation causes abraision on the surfaces by means of touching the unprotected ends of the glass fibres which worsens the attenuating values after a relatively short time.

There is not any continuous worsening of the signal with glass fibre systems – nor with digital systems either – contrary to the analog environment. The system functions faultlessly first of all until the attenuating threshold is exceeded (typically because of a dirty connector or plug), then suffers total failure. There are indeed cleaning systems on the market but the damage to the surface remains when cleaning and plugging are carried out. It is this microscopically small surface which makes all direct connectors sensitive, unless they are used on the studio floor or on the camera.

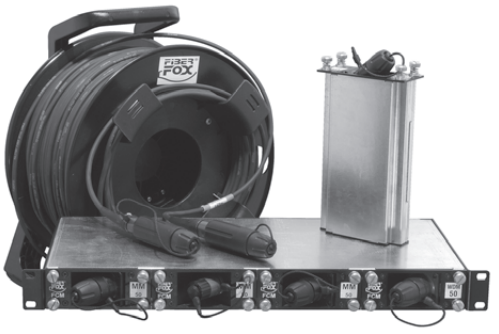


Lens connectors follow another approach: expanding the beam of light (expanded beam) and plugging without touching the ends of the glass fibres ('no physical contact'). So they avoid the most common failure of fibre optic connections.

The beam of light at the output connector is expanded by more than 1000 times the area through a lens and it is re-combined in the input connector. Any soiling is not so decisive any more, on account of the enormous magnification of the beam's surface. The ends of the glass fibres do not touch, abraision is avoided and thousands of plugging operations (typically 5000) do not inevitably lead to a worsening of the attenuating values. There is a technical price to pay for the system because the insertion loss per connector is typically about 1 dB (0.7 for singlemode). A physical contact connector that is subjected to similar stresses and strains would noticeably increase this value however and it would certainly fail completely in service. The lenses can be cleaned without any problems at all because they have been hardened and react to touching insensitively. Even water (the enemy of every optical or electrical system) cannot penetrate into the glass fibres and make them 'blind' – it suffices to simply wipe them off before connecting!

FIBERFOX

The System



DESCRIPTION

Large amounts of data can be transmitted outstandingly with fibre-optic systems. Any weaknesses in relation to cables or connectors will be completely eliminated by using the FIBERFOX system. Durability, reliability and easy handling are priorities because the material must withstand the highest demands that are placed on it by stresses and strains during mobile use.

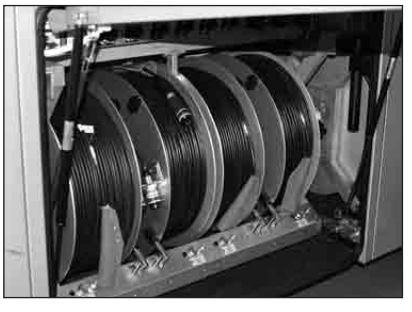
The Linking Elements

INFO

The problems that were involved with conventional connections in the past no longer apply when using prefabricated FIBERFOX glass fibre lines. Cables and the associated EBC lens connectors are optimally coordinated with each other on all lines and they therefore supply the best technical values. Selected types of drum – which also offer special features for reliable use with optical transmission systems, besides the correct core diameter and the best holding capacity – ensure easy handling.use.

EBC Cables

The flame-retardant halogen-free FOXPUR cable is extremely loadable mechanically, highly flexible and it can be wound on the drum very well. Its attenuating values are very low and so is its weight. Contracted stickers bearing serial numbers and longitudinal lettering enable permanent traceability and simple stock-taking. Every cable is inspected with the most modern measuring equipment before it leaves our firm.



Cable Drums

We use rubber drums for lines of up to 250 m (SMPTE 100 m), on account of their high resistance and low weight. All drums allow for the cable's appropriate bending radius. Special holding facilities ensure that the ends of lines will be fixed and that they are not subjected to any wear during transport. Cable made of steel are used for distances of more than 250 m.

The Connecting Elements

INFO

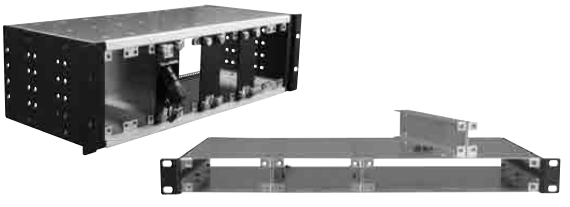
FIBERFOX offers a wide range of possibilities in this case. The user can choose a practical system ranging from the simple connection panel to the highly flexible modular construction. Whereas the 19" connection panel mainly supports the conventional use of racks, the FCM components offer varied options: stand-alone operation, rack assembly, outlet box, etc. Almost everything can be done! Short-term demands are fulfilled– at the least cost – by means of exchanging the modules: this guarantees a high level of redundancy and it avoids tedious assembly work. All of the common systems can be linked up via the connection of suitable cables, starting from the SC duplex connector. Last b ut not least: FIBERFOX has already become the standard in many OB vans, studios and live situations.

FCM Modules

Compact metal boxes with lens connectors on the front and various facilities for connection on the back. They are available in passive or active versions such as Standard Modules, SMPTE Modules and Ethernet Modules.

FCM Frames/Housings

Available as 19" or as stand-alone version. They can carry up to nine FCM modules. FIBERFOX frames are perfect for Rental, OB-Vans and Fixed Installation as well.



FCM Module Connection Cables

They make the connection to your system and are coordinated to the FCM modules.

EBC Receptacles

Ready-made receptacles are coming in many different versions. All of the EBC receptacles are designed and constructed with the proven EBC lens technology. They are delivered prefabricated whereby the patchcord's standard length is 2 m. Cables and connectors match prefectly – even with the EBC receptacles – in order to achieve the best possible values.

EBC 19" Connection Panels

If no FCM modules are needed and it is not required to change the EBC integrated connectors frequently, then EBC connection panels are the best choice. They are additionally equipped with a threaded bolt for holding standard splice cassettes.

The Accessories

INFO

The trappings also belong to the aspects which are significant when purchasing a system. Quick availability plays an important role with patchcords, tools, spare parts or other material – apart from being good value for money. Although the matter concerns conventional products in many cases, we carefully ensure quality throughout, in order to guarantee sustained and excellent performance of the entire system in this area, too.

Patchcords

All common cables, connectors and different lengths.

Service Parts

Parts for service and repair.

FIBERFOX SMPTE Compatible
Fiber Optic Multicore System

DESCRIPTION

The SMPTE compatible FIBERFOX System is the perfect solution for the TV industry. It shows reliability and consistency even on quickset-up temporary installations. The expanded beam connector EBC70 can provide this and connecting with an industry-standard FIBERFOX hybrid cable makes sense. The system includes ready-made cables and lots of connecting products for OBs, studios and fixed installation purposes.

FIBERFOX EBC70 Ready-Made Cables SMPTE

INFO NOTES

- ø = 9.2mm
- 1Cable according to SMPTE311M Standard
- PUR flame-retardant, halogen-free
- 2-fibers SM + 4x power line (AWG20) + 2x control line (AWG24) + screen
- Heavy-duty
- Low attenuation 0,5db/km
- Low weight 120kg/km

FIBERFOX EBC70 READY-MADE CABLES SMPTE - 1X EBC70 / 1X EBC70

CODE	DESCRIPTION
27504008	2m
27504000	10m
27504001	25m
27504002	50m
27504003	100m
27504005	250m
27504014	400m
27504006	500m

FIBERFOX EBC70 READY-MADE CABLES SMPTE - 1X EBC70 RECEPTACLE / 1X EBC70

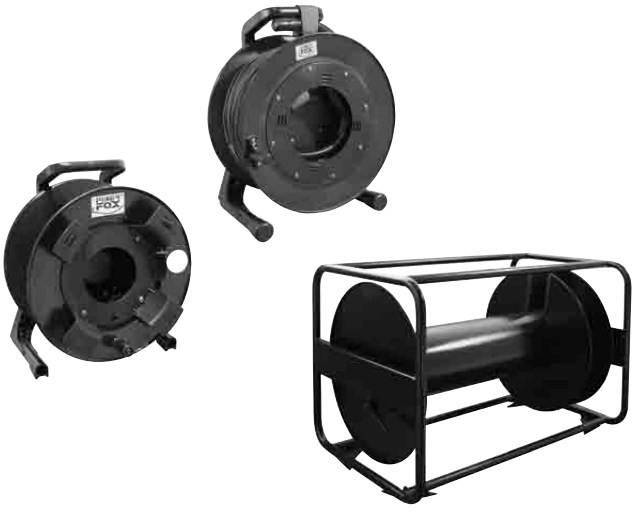
CODE	DESCRIPTION
27504011	100m
27504007	250m
27504012	400m
27504013	500m

FIBERFOX Cable Drums

INFO NOTES

- Versions up to 150m are made of rubber
- 250m (or more) versions are stackable and made of steel
- With fixing for connectors or strapping ring
- With brake
- Colour black

CODE	DESCRIPTION
27198000	Cable drum max. 150m TAC, no Singlemode !
27198004	Cable drum max. 200m TAC or 100m SMPTE
27198001	Cable drum max. 250m TAC or 150m SMPTE
27198002	Cable drum max. 500m TAC or 300m SMPTE
27198003	Cable drum max. 1000m TAC or 500m SMPTE
27198008	Cable drum max. 150m TAC with cable split
27198007	Cable drum max. 250m TAC with cable split



FIBERFOX FCM SMPTE Module

INFO NOTES

- (W) approx. 109mm · 1 module site, (H) approx. 44mm · 1 HE, (D) approx. 186mm
- Front 2mm steel plate, black powder coated, housing 1.5mm steel plate, galvanised
- Front FIBERFOX EBC70
- Back 1x SC-Duplex APC 8°, also fits 2x Simplex (e.g. APC 8°,)
  1x PushPull 250V 2pol+E for power
  1x PushPull 48V 4pol (Pin 1+2 connected) for control
- All fiber connectors with safety cap, countersunk 45° on the front
- Ready made-up on the inside

CODE	DESCRIPTION
27702023	EBC70 SMPTE / 2x SC-Duplex 8°, 9/125

FIBERFOX FCM Frame/Housing

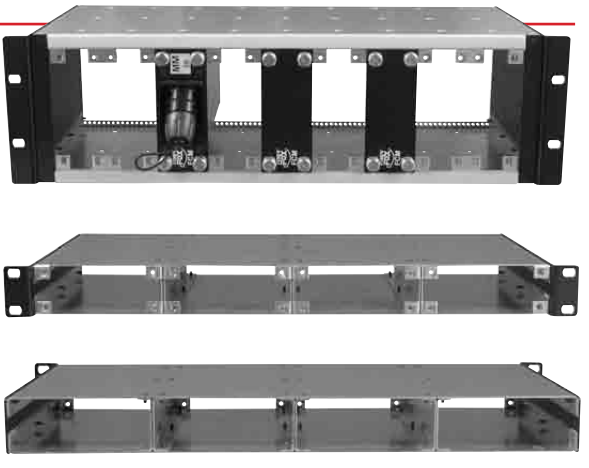
INFO NOTES

- Steel plate 1.5mm, elogalvanised, black powder coated
- All frames/housings are without FCM modules

- Frame 19“: 1U, approx. 194mm (D), for a maximum of 4x FCM modules
- Frame 19“: 3U, approx. 194mm (D), for a maximum of 9x FCM modules

- Frames Stand-Alone: Heavy, stable design, for operation of one FCM module
- Frames Stand-Alone: Integrated cable compartment and transport protection for fiber connectors

- Wallmount box: For fixing one FCM module to the wall

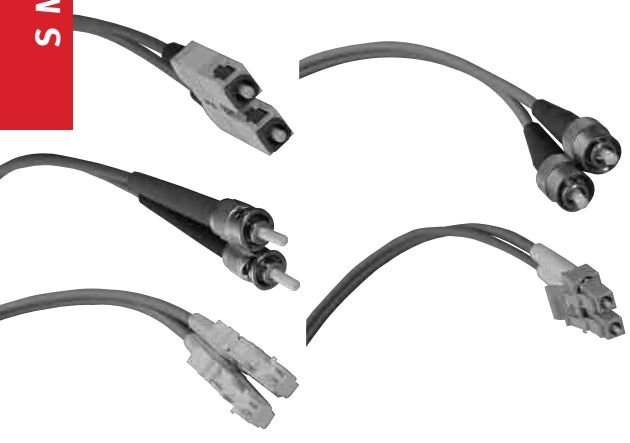


CODE	DESCRIPTION
27702000	19", 1U for max. 4x FCM modules, blank
27702026	19", 3U for max. 9x FCM modules vertical, blank
27702022	Wallmount box for 1x FCM module, blank
27702010	Stand-alone housing for 1x FCM module, blank
27702001	Cover plate

FIBERFOX FCM Module Connection Cables

INFO NOTES

- ø = 2.8mm x 5.7mm - Figure 8, length see article description
- Plastic, flame-retardant, halogen-free
- Ready-made
- Colours assorted to 9/125, 50/125 and 62.5/125
- Top quality connectors



CODE	FOR INTEGRATION OF THE FCM MODULES IN SC-DUPLEX SYSTEMS
27505326	2x SC-APC8° / 2x SC-PC, 9/125, yellow, 2m
27505114	2x SC-APC8° / 2x SC-APC 8°, 9/125, yellow, 2m
27505357	2x SC-APC8° / 2x SC-UPC,9/125, yellow, 2m

CODE	FOR INTEGRATION OF THE FCM MODULES IN LC-DUPLEX SYSTEMS
27505331	2x SC APC8° / 2x LC PC, 9/125, yellow, 2m

CODE	FOR INTEGRATION OF THE FCM MODULES IN ST SYSTEMS
27505327	2x SC APC8° / 2x ST, 9/125, yellow, 2m

CODE	FOR INTEGRATION OF THE FCM MODULES IN E2000 SYSTEMS
27505328	2x SC APC8° / 2x E2000, PC 9/125, yellow, 2m
27505329	2x SC APC8° / 2x E2000, APC8° 9/125, yellow, 2m

CODE	FOR INTEGRATION OF THE FCM MODULES IN FC/PC SYSTEMS
27505330	2x SC APC8° / 2x FC / PC, 9/125, yellow, 2m
27505283	2x SC APC8° / 2x FC / APC 8°, 9/125, yellow, 2m

FIBERFOX EBC70 Ready-Made Receptacle SMPTE

INFO NOTES

- Dimensions without cables: (W) 30mm, (H) 30mm, connector = ø 5mm (D) 64.4mm with closed cap
- 2-fibers
- 2 pins for power, protected against touching
- 2 pins for control, protected from touching
- Guiding pin, ground first connection
- Three coding rings (red, yellow, green) included
- Ready made up, incl. safety cap
- Heavy-duty

CODE	BASIS SINGLEMODE, SMPTE
27700074	1x EBC70 / 2x LC, 9/125, AWG cables, 2m
27700076	1x EBC70 / 2x LC APC8°, 9/125, AWG cables, 2m
27700078	1x EBC70 / 2x SC PC, 9/125, AWG cables, 2m
27700075	1x EBC70 / 2x SC UPC, 9/125, AWG cables, 2m
27700077	1x EBC70 / 2x SC APC 8°, 9/125, AWG cables, 2m

FIBERFOX EBC Series 19" Connection Panels blank

INFO NOTES

- Panelbox: (W) 19“ (H) approx. 44mm =1 HE, (D) approx. 194mm
- Panelbox: 2mm steel plate, black powder coated
- Panelbox: Without connectors
- Panelbox: For max. 4x EBC5x or EBC7x receptacles
- Panelbox: Patchcords possible either at the front or back
- Panelbox: Closed housing

- Panel: (W) 19“, (H) approx. 44mm =1 HE, (D) 194mm (without connectors)
- Panel: 2mm steel plate, black powder coated
- Panel: Without connectors
- Panel: For max. 6x EBC5x or EBC7x receptacles
- Panel: Front panel only, no housing!

CODE	DESCRIPTION
27700037	1U, box for 4x EBC5x/7x +4x hole back/front
27700068	1U, panel for 6x EBC5x/7x +6x hole back

FIBERFOX 4-Channel
Fiber Optic Multicore System

FIBERFOX EBC54 Ready-Made Cable 4-Fibers

INFO NOTES

- ø = 5.5mm, 4 fiber channels
- PUR flame-retardant, halogen-free
- Ready-made up with connector EBC54
- Heavy-duty
- Low attenuation, low weight
- Also available as cable plug/receptacle version, coming with superior strain relief (same as back-end EBC cable connector)

FIBERFOX EBC54 READY-MADE CABLE 4-FIBERS - 1X EBC54 / 1X EBC54

CODE	MULTIMODE 50/125µM	CODE	MULTIMODE 62,5/125µM	CODE	SINGLEMODE 9/125µM
27500028	5m	27500002	5m	27500544	5m
27500265	25m	27500268	25m	27500274	25m
27500264	50m	27500004	50m	27500273	50m
27500221	100m	27500009	100m	27500018	100m
27500361	150m	27500010	150m	27500452	150m
27500025	250m	27500012	250m	27500019	250m
27500026	500m	27500013	500m	27500020	500m
27500003	1000m	27500015	1000m	27500271	1000m

FIBERFOX EBC54 READY-MADE CABLE 4-FIBERS - 1X EBC54 RECEPTACLE / 1X EBC54

CODE	MULTIMODE 50/125µM	CODE	MULTIMODE 62,5/125µM	CODE	SINGLEMODE 9/125µM
27500445	100m	27500503	100m	27500507	100m
27500496	250m	27500504	250m	27500459	250m
27500497	400m	27500505	400m	27500508	400m
27500498	500m	27500506	500m	27500509	500m

FIBERFOX Cable Drums

INFO NOTES

- Versions up to 150m are made of rubber
- 250m (or more) versions are stackable and made of steel
- With fixing for connectors or strapping ring
- With brake
- Colour black

CODE	DESCRIPTION
27198000	Cable drum max. 150m TAC, no Singlemode !
27198004	Cable drum max. 200m TAC or 100m SMPTE
27198001	Cable drum max. 250m TAC or 150m SMPTE
27198002	Cable drum max. 500m TAC or 300m SMPTE
27198003	Cable drum max. 1000m TAC or 500m SMPTE
27198008	Cable drum max. 150m TAC with cable split
27198007	Cable drum max. 250m TAC with cable split

FIBERFOX FCM Standard Module

INFO NOTES

- (W) approx. 109mm · 1 module site, (H) approx. 44mm · 1 HE, (D) approx. 186mm
- Front 2mm steel plate, black powder coated, housing 1.5mm steel plate, galvanised
- Front FIBERFOX EBC54
- Back 2x SC-Duplex, also fits 4x Simplex (e.g. SC PC)
- All connectors with safety cap, countersunk 45° on the front
- Ready made-up on the inside

CODE	DESCRIPTION
27702002	EBC54 / 4x SC, 50/125
27702003	EBC54 / 4x SC, 62,5/125
27702004	EBC54 / 4x SC 8°, 9/125

FIBERFOX FCM Frame/Housing

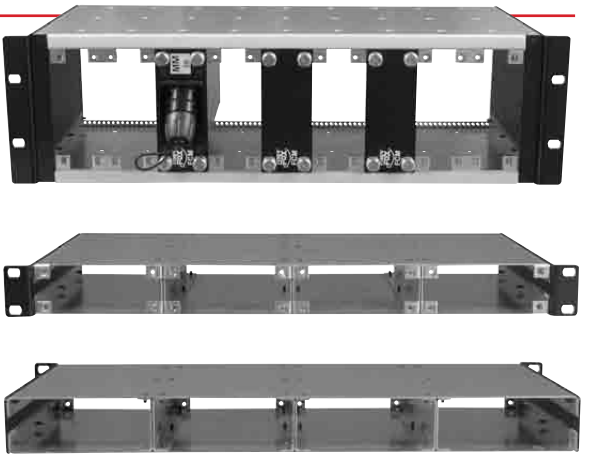
INFO NOTES

- Steel plate 1.5mm, elogalvanised, black powder coated
- All frames/housings are without FCM modules

- Frame 19“: 1U, approx. 194mm (D), for a maximum of 4x FCM modules
- Frame 19“: 3U, approx. 194mm (D), for a maximum of 9x FCM modules

- Frames Stand-Alone: Heavy, stable design, for operation of one FCM module
- Frames Stand-Alone: Integrated cable compartment and transport protection for fiber connectors

- Wallmount box: For fixing one FCM module to the wall



CODE	DESCRIPTION
27702000	19", 1U for max. 4x FCM modules, blank
27702026	19", 3U for max. 9x FCM modules vertical, blank
27702022	Wallmount box for 1x FCM module, blank
27702010	Stand-alone housing for 1x FCM module, blank
27702001	Cover plate

FIBERFOX FCM Ethernet Module

INFO NOTES

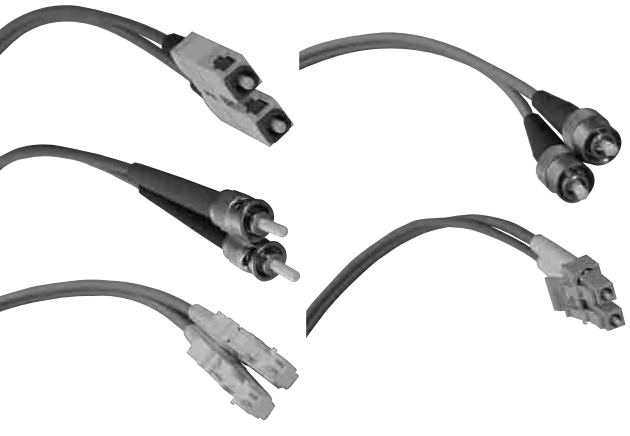
- (W) approx. 109mm · 1 module site, (H) approx. 44mm · 1 HE, (D) approx. 186mm
- Front 2mm steel plate, black powder coated, housing 1.5mm steel plate, galvanised
- Front FIBERFOX EBC54
- Equipped with Mini Fast Ethernet converter
- Very low latency, wide operating temperatur range
- LED monitoring
- Back 1x Neutrik EtherCon RJ45 female, 1x SC-Duplex, 1x Push Pull power
- All fiber connectors with safety cap, countersunk 45° on the front
- Ready made-up on the inside
- Lines A2, B2 internal linked

CODE	DESCRIPTION
27707002	Media converter EBC54 / 1x RJ45/2x SC, 50/125
27707003	Media converter EBC54 / 1x RJ45/2x SC, 62,5/125
27707004	Media converter EBC54 / 1xRJ45/2x SC APC8°, 9/125

FIBERFOX FCM Module Connection Cables

INFO NOTES

- ø = 2.8mm x 5.7mm - Figure 8, length see article description
- Plastic, flame-retardant, halogen-free
- Ready-made
- Colours assorted to 9/125, 50/125 and 62.5/125
- Top quality connector



CODE	FOR INTEGRATION OF THE FCM MODULES IN SC-DUPLEX SYSTEMS
27505085	2x SC / 2x SC, 50/125, green, 2m
27505096	2x SC / 2x SC, 62,5/125, blue, 2m
27505326	2x SC-APC8° / 2x SC-PC, 9/125, yellow, 2m
27505114	2x SC-APC8° / 2x SC-APC 8°, 9/125, yellow, 2m
27505357	2x SC-APC8° / 2x SC-UPC,9/125, yellow, 2m

CODE	FOR INTEGRATION OF THE FCM MODULES IN ST SYSTEMS
27505058	2x SC / 2x ST, 50/125, green, 2m
27505067	2x SC / 2x ST, 62,5/125, blue, 2m
27505327	2x SC APC8° / 2x ST, 9/125, yellow, 2m

CODE	FOR INTEGRATION OF THE FCM MODULES IN E2000 SYSTEMS
27505201	2x SC / 2x E2000, 50/125, green, 2m
27505209	2x SC / 2x E2000, 62,5/125, blue, 2m
27505328	2x SC APC8° / 2x E2000, PC 9/125, yellow, 2m
27505329	2x SC APC8° / 2x E2000, APC8° 9/125, yellow, 2m

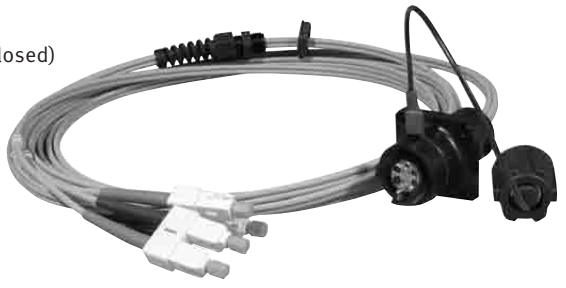
CODE	FOR INTEGRATION OF THE FCM MODULES IN FC/PC SYSTEMS
27505259	2x SC / 2x FC / PC, 50/125, green, 2m
27505267	2x SC / 2x FC / PC, 62,5/125, blue, 2m
27505330	2x SC APC8° / 2x FC / PC, 9/125, yellow, 2m
27505283	2x SC APC8° / 2x FC / APC 8°, 9/125, yellow, 2m

CODE	FOR INTEGRATION OF THE FCM MODULES IN LC-DUPLEX SYSTEMS
27505177	2x SC / 2x LC, 50/125, green, 2m
27505185	2x SC / 2x LC, 62,5/125, blue, 2m
27505331	2x SC APC8° / 2x LC PC, 9/125, yellow, 2m

FIBERFOX EBC54 Ready-Made Receptacles for FIBERFOX Connection Panels

INFO NOTES

- Coming with PG7 strain relief
- Dimensions without cables: (W) 37mm, (H) 37mm, (D) 79mm (if cap is closed)
- See technical data EBC54, fiber optic cable
- Coming with PG7 strain relief
- Four fiber channels
- Ready-made
- Incl. safety cap
- Heavy-duty



CODE	BASIS MULTIMODE 50/125µM
27700027	1x EBC54 / 4x ST, 50/125, 2m
27700025	1x EBC54 / 4x SC, 50/125, 2m
27700044	1x EBC54 / 4x E2000, 50/125, 2m
27700057	1x EBC54 / 4x LC, 50/125, 2m

CODE	BASIS MULTIMODE 62,5/125µM
27700029	1x EBC54 / 4x ST, 62,5/125, 2m
27700026	1x EBC54 / 4x SC, 62,5/125, 2m
27700024	1x EBC54 / 4x E2000, 62,5/125, 2m
27700064	1x EBC54 / 4x LC, 62,5/125, 2m

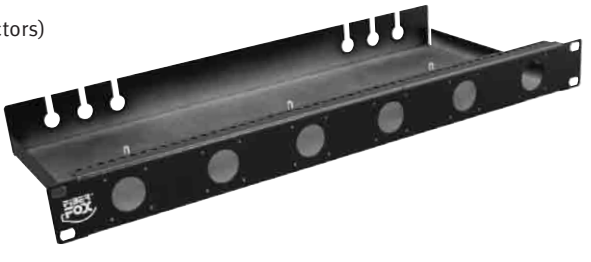
CODE	BASIS SINGLEMODE 9/125µM
27700045	1x EBC54 / 4x ST, 9/125, 2m
27700046	1x EBC54 / 4x SC, 9/125, 2m
27700047	1x EBC54 / 4x FC/PC, 9/125, 2m
27700048	1x EBC54 / 4x E2000, 9/125, 2m
27700049	1x EBC54 / 4x LC, 9/125, 2m
27700050	1x EBC54 / 4x SC APC 8°, 9/125, 2m
27700051	1x EBC54 / 4x FC/APC 8°, 9/125, 2m
27700058	1x EBC54 / 4x SC UPC, 9/125, 2m

FIBERFOX EBC Series 19" Connection Panels blank

INFO NOTES

- Panelbox: (W) 19“ (H) approx. 44mm =1 HE, (D) approx. 194mm
- Panelbox: 2mm steel plate, black powder coated
- Panelbox: Without connectors
- Panelbox: For max. 4x EBC5x or EBC7x receptacles
- Panelbox: Patchcords possible either at the front or back
- Panelbox: Closed housing

- Panel: (W) 19“, (H) approx. 44mm =1 HE, (D) 194mm (without connectors)
- Panel: 2mm steel plate, black powder coated
- Panel: Without connectors
- Panel: For max. 6x EBC5x or EBC7x receptacles
- Panel: Front panel only, no housing!



CODE	DESCRIPTION
27700037	1U, box for 4x EBC5x/7x +4x hole back/front
27700068	1U, panel for 6x EBC5x/7x +6x hole back

FIBERFOX EBC54 Ready-Made Receptacles

INFO NOTES

- Dimensions without cables: (W) 37mm, (H) 37mm, (D) 79mm (if cap is closed)
- See technical data EBC54, fiber optic cable
- Coming with PG7 strain relief
- Four fiber channels
- Ready-made
- Incl. safety cap
- Heavy-duty

CODE	BASIS MULTIMODE 50/125µM
27507010	1x EBC54 / 4x SC, 50/125, 2m
27507032	1x EBC54 / 4x LC, 50/125, 2m
27507063	1x EBC54 / 4x ST, 50/125, 2m
27507064	1x EBC54 / 4x E2000, 50/125, 2m

CODE	MULTIMODE 62,5/125µM, DESCRIPTION
27507046	1x EBC54 / 4x SC, 62,5/125, 2m
27507066	1x EBC54 / 4x LC, 62,5/125, 2m
27507065	1x EBC54 / 4x ST, 62,5/125, 2m
27507067	1x EBC54 / 4x E2000, 62,5/125, 2m

CODE	SINGLEMODE 9/125µM, DESCRIPTION
27507025	1x EBC54 / 4x SC, 9/125, 2m
27507069	1x EBC54 / 4x LC, 9/125, 2m
27507068	1x EBC54 / 4x ST, 9/125, 2m
27507070	1x EBC54 / 4x E2000, 9/125, 2m

FIBERFOX Adaptors

INFO NOTES

- Compact housing, ready-made
- Adapts 4 channel to 2 channel and vice versa
- For FIBERFOX and OpticalCon systems
- Available in singlemode and multimode

CODE	DESCRIPTION
27610000	1x EBC54MM to 2x EBC52MM
27610001	1x EBC52MM to 1x NO2MM
27610002	1x EBC54MM to 1x NO4MM
27610003	1x EBC54SM to 1x NO4SM PC
27610004	1x EBC54SM to 1x NO4SM APC8°
27610005	1x EBC54MM to 2x NO2MM
27610006	1x NO4MM to 2x NO2MM

FIBERFOX 2-Channel
Fiber Optic Multicore System

FIBERFOX EBC52 Ready-Made Cable 2-Fibers

INFO NOTES

- ø = 5mm, 2 fiber channels
- PUR flame-retardant, halogen-free
- Ready made up with connector EBC52
- Heavy-duty
- Low attenuation, low weight
- Also available as cable plug/receptacle version, coming with superior strain relief (same as back-end EBC cable connector)

FIBERFOX EBC52 READY-MADE CABLE 2-FIBERS - 1X EBC52 / 1X EBC52

CODE	MULTIMODE 50/125µM	CODE	MULTIMODE 62,5/125µM
27500430	5m	27500527	5m
27500367	25m	27500377	25m
27500368	50m	27500378	50m
27500348	100m	27500380	100m
27500349	150m	27500442	150m
27500370	250m	27500381	250m
27500371	500m	27500382	500m
27500373	1000m	27500384	1000m

FIBERFOX EBC52 READY-MADE CABLE 2-FIBERS - 1X EBC52 RECEPTACLE / 1X EBC54

CODE	MULTIMODE 50/125µM	CODE	MULTIMODE 62,5/125µM
27500492	100m	27500499	100m
27500493	250m	27500500	250m
27500494	400m	27500501	400m
27500495	500m	27500502	500m

FIBERFOX Cable Drums

INFO NOTES

- Versions up to 150m are made of rubber
- 250m (or more) versions are stackable and made of steel
- With fixing for connectors or strapping ring
- With brake
- Colour black

CODE	DESCRIPTION
27198000	Cable drum max. 150m TAC, no Singlemode !
27198004	Cable drum max. 200m TAC or 100m SMPTE
27198001	Cable drum max. 250m TAC or 150m SMPTE
27198002	Cable drum max. 500m TAC or 300m SMPTE
27198003	Cable drum max. 1000m TAC or 500m SMPTE
27198008	Cable drum max. 150m TAC with cable split
27198007	Cable drum max. 250m TAC with cable split

FIBERFOX FCM Standard Module

INFO NOTES

- (W) approx. 109mm · 1 module site, (H) approx. 44mm · 1 HE, (D) approx. 186mm
- Front 2mm steel plate, black powder coated, housing 1.5mm steel plate, galvanised
- Front FIBERFOX EBC52
- Back 1x SC-Duplex, also fits 2x Simplex (e.g. SC PC)
- All connectors with safety cap, countersunk 45° on the front
- Ready made-up on the inside

CODE	DESCRIPTION
27702011	EBC52 / 2x SC, 50/125
27702012	EBC52 / 2x SC, 62,5/125

FIBERFOX FCM Ethernet Module

INFO NOTES

- (W) approx. 109mm · 1 module site, (H) approx. 44mm · 1 HE, (D) approx. 186mm
- Front 2mm steel plate, black powder coated, housing 1.5mm steel plate, galvanised
- Front FIBERFOX EBC52
- Equipped with Mini Fast Ethernet converter
- Very low latency, wide operating temperatur range
- LED monitoring
- Back 1x Neutrik EtherCon RJ45 female, 1x Power
- All fiber connectors with safety cap, countersunk 45° on the front
- Ready made-up on the inside

CODE	DESCRIPTION
27707000	Media converter EBC52 / 1x RJ45, 50/125
27707001	Media converter EBC52 / 1x RJ45, 62,5/125

FIBERFOX FCM Frame/Housing

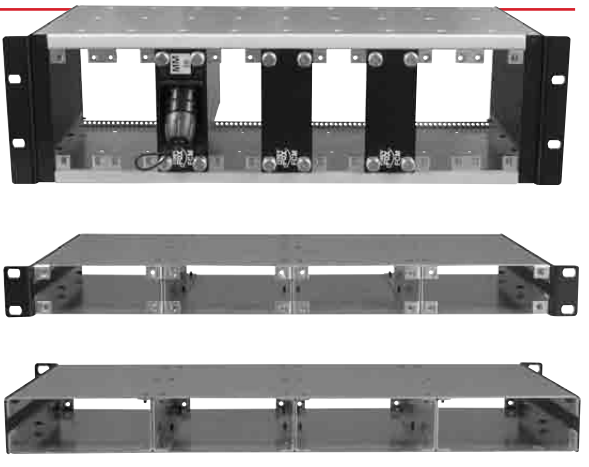
INFO NOTES

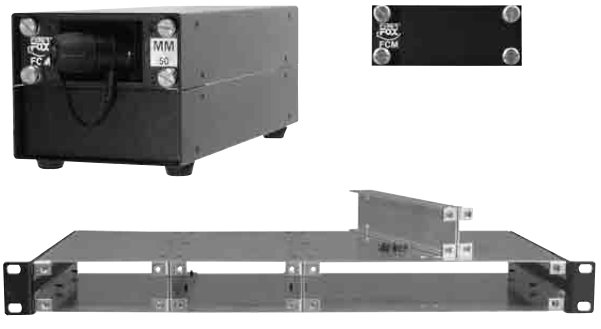
- Steel plate 1.5mm, elogalvanised, black powder coated
- All frames/housings are without FCM modules

- Frame 19“: 1U, approx. 194mm (D), for a maximum of 4x FCM modules
- Frame 19“: 3U, approx. 194mm (D), for a maximum of 9x FCM modules

- Frames Stand-Alone: Heavy, stable design, for operation of one FCM module
- Frames Stand-Alone: Integrated cable compartment and transport protection for fiber connectors

- Wallmount box: For fixing one FCM module to the wall





CODE	DESCRIPTION
27702000	19", 1U for max. 4x FCM modules, blank
27702026	19", 3U for max. 9x FCM modules vertical, blank
27702022	Wallmount box for 1x FCM module, blank
27702010	Stand-alone housing for 1x FCM module, blank
27702001	Cover plate

FIBERFOX Adaptors

INFO NOTES

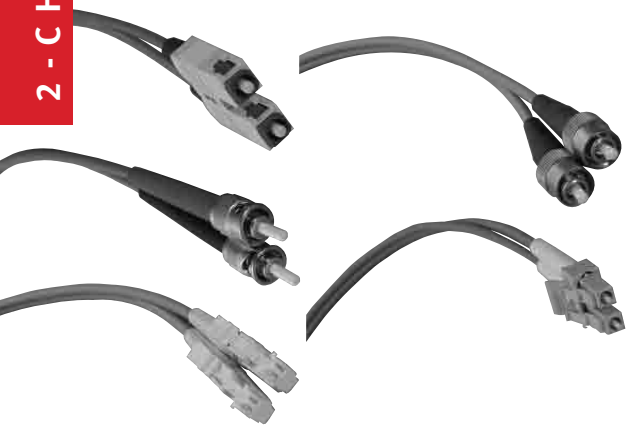
- Compact housing, ready-made
- Adapts 4 channel to 2 channel and vice versa
- For FIBERFOX and OpticalCon systems
- Available in singlemode and multimode

CODE	DESCRIPTION
27610000	1x EBC54MM to 2x EBC52MM
27610001	1x EBC52MM to 1x NO2MM
27610002	1x EBC54MM to 1x NO4MM
27610003	1x EBC54SM to 1x NO4SM PC
27610004	1x EBC54SM to 1x NO4SM APC8°
27610005	1x EBC54MM to 2x NO2MM
27610006	1x NO4MM to 2x NO2MM

FIBERFOX FCM Module Connection Cables

INFO NOTES

- ø = 2.8mm x 5.7mm - Figure 8, length see article description
- Plastic, flame-retardant, halogen-free
- Ready-made
- Colours assorted to 9/125, 50/125 and 62.5/125
- Top quality connector



CODE	FOR INTEGRATION OF THE FCM MODULES IN SC-DUPLEX SYSTEMS
27505085	2x SC / 2x SC, 50/125, green, 2m
27505096	2x SC / 2x SC, 62,5/125, blue, 2m

CODE	FOR INTEGRATION OF THE FCM MODULES IN ST SYSTEMS
27505058	2x SC / 2x ST, 50/125, green, 2m
27505067	2x SC / 2x ST, 62,5/125, blue, 2m

CODE	FOR INTEGRATION OF THE FCM MODULES IN E2000 SYSTEMS
27505201	2x SC / 2x E2000, 50/125, green, 2m
27505209	2x SC / 2x E2000, 62,5/125, blue, 2m

CODE	FOR INTEGRATION OF THE FCM MODULES IN FC/PC SYSTEMS
27505259	2x SC / 2x FC / PC, 50/125, green, 2m
27505267	2x SC / 2x FC / PC, 62,5/125, blue, 2m

CODE	FOR INTEGRATION OF THE FCM MODULES IN LC-DUPLEX SYSTEMS
27505177	2x SC / 2x LC, 50/125, green, 2m
27505185	2x SC / 2x LC, 62,5/125, blue, 2m
27505331	2x SC APC8° / 2x LC PC, 9/125, yellow, 2m

FIBERFOX EBC52 Ready-Made Receptacles for FIBERFOX Connection Panels

INFO NOTES

- Coming with PG7 strain relief
- Dimensions without cables: (W) 37mm, (H) 37mm, (D) 79mm (if cap is closed)
- See technical data EBC52, fiber optic cable
- Two fiber channels
- Ready-made
- Incl. safety cap
- Heavy-duty

CODE	BASIS MULTIMODE 50/125µM
22770060	1x EBC52 / 2x ST, 50/125, 2m
27700056	1x EBC52 / 2x SC, 50/125, 2m
27700061	1x EBC52 / 2x E2000, 50/125, 2m
27700065	1x EBC52 / 2x LC, 50/125, 2m

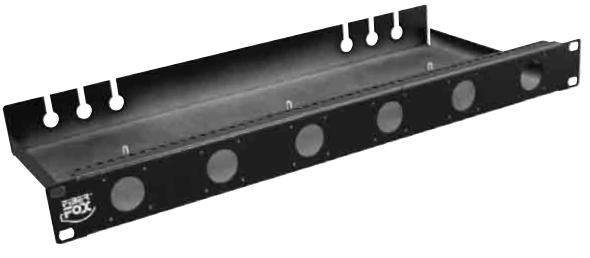
CODE	CODE BASIS MULTIMODE 62,5/125µM
27700059	1x EBC52 / 2x ST, 62,5/125, 2m
27700062	1x EBC52 / 2x SC, 62,5/125, 2m
27700063	1x EBC52 / 2x E2000, 62,5/125, 2m
27700066	1x EBC52 / 2x LC, 62,5/125, 2m

FIBERFOX EBC Series 19" Connection Panels blank

INFO NOTES

- Panelbox: (W) 19“ (H) approx. 44mm =1 HE, (D) approx. 194mm
- Panelbox: 2mm steel plate, black powder coated
- Panelbox: Without connectors
- Panelbox: For max. 4x EBC5x or EBC7x receptacles
- Panelbox: Patchcords possible either at the front or back
- Panelbox: Closed housing

- Panel: (W) 19“, (H) approx. 44mm =1 HE, (D) 194mm (without connectors)
- Panel: 2mm steel plate, black powder coated
- Panel: Without connectors
- Panel: For max. 6x EBC5x or EBC7x receptacles
- Panel: Front panel only, no housing!



CODE	DESCRIPTION
27700037	1U, box for 4x EBC5x/7x +4x hole back/front
27700068	1U, panel for 6x EBC5x/7x +6x hole back

FIBERFOX EBC52 Ready-Made Receptacles

INFO NOTES

- Dimensions without cables: (W) 37mm, (H) 37mm, (D) 79mm (if cap is closed)
- See technical data EBC52, fiber optic cable
- Two fiber channels
- Ready-made
- Incl. safety cap
- Heavy-duty

CODE	MULTIMODE 50/125µM, DESCRIPTION
27507007	1x EBC52 / 2x SC, 50/125, 2m
27507057	1x EBC52 / 2x LC, 50/125, 2m
27507056	1x EBC52 / 2x ST, 50/125, 2m
27507058	1x EBC52 / 2x E2000, 50/125, 2m

CODE	MULTIMODE 62,5/125µM, DESCRIPTION
27507059	1x EBC52 / 2x SC, 62,5/125, 2m
27507060	1x EBC52 / 2x LC, 62,5/125, 2m
27507061	1x EBC52 / 2x ST, 62,5/125, 2m
27507062	1x EBC52 / 2x E2000, 62,5/125, 2m

FIBERFOX Patchcords

Ready-Made (Outdoor)

DESCRIPTION

FIBERFOX cable in the MIL design is always used to make up this cable. Thanks to its outstanding characteristics, outdoor use is possible even under difficult conditions. If EBC are not used, attention should be paid to ensuring adequate protection of the corresponding types being used.

FIBERFOX Ready-Made Cable Outdoor 2-Fibers

INFO NOTES

- ø = 5mm, length see article description
- PUR flame-retardant, halogen-free
- ready made, with cable divider 2-fibers
- Heavy-duty
- Low attenuation
- Low weight

FIBERFOX READY-MADE CABLE OUTDOOR 2-FIBERS - 2X ST TO 2X ST

CODE	MULTIMODE 50/125µM	CODE	MULTIMODE 62,5/125µM
27500403	50m	27500313	50m
27500404	100m	27500198	100m
27500405	250m	27500312	250m
27500406	500m	27500311	500m

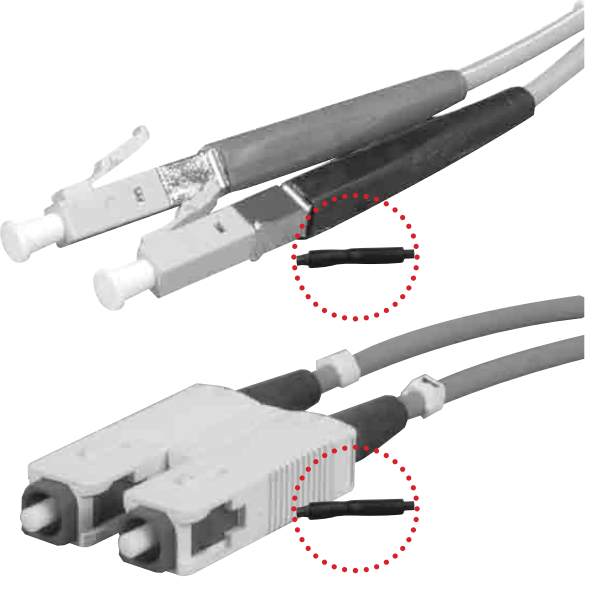
FIBERFOX READY-MADE CABLE OUTDOOR 2-FIBERS - 2X LC / 2X LC

CODE MULTIMODE 50/125µM		CODE	MULTIMODE 62,5/125µM
27500659	50m	27500661	50m
27500656	100m	27500662	100m
27500579	250m	27500663	250m
27500660	500m	27500664	500m

FIBERFOX READY-MADE CABLE OUTDOOR 2-FIBERS - 2X SC / 2X SC

CODE	MULTIMODE 50/125µM	CODE	MULTIMODE 62,5/125µM
27500415	50m	27500118	50m
27500416	100m	27500116	100m
27500417	250m	27500129	250m
27500418	500m	27500130	500m

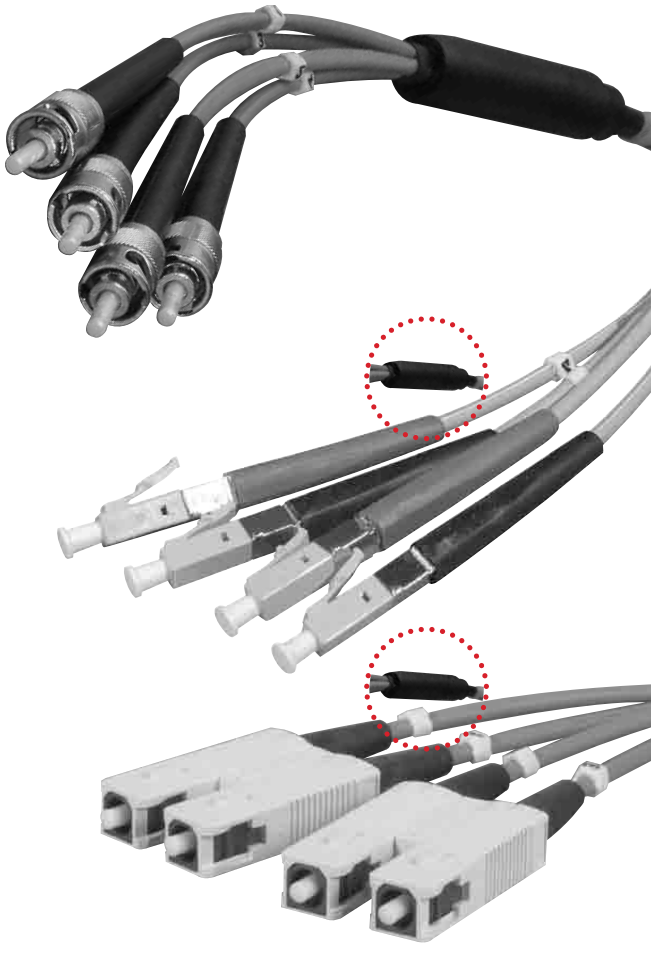
Additional versions and different lenghts on request!



FIBERFOX Ready-Made Cable Outdoor 4-Fibers

INFO NOTES

- ø = 5,5mm, length see article description
- PUR flame-retardant, halogen-free
- Ready made, with cable divider 4-fibers
- Heavy-duty
- Low attenuation
- Low weight



FIBERFOX READY-MADE CABLE OUTDOOR 4-FIBERS - 4X ST / 4X ST

CODE	MULTIMODE 50/125µM	CODE	MULTIMODE 62,5/125µM
27500319	50m	27500333	50m
27500318	100m	27500332	100m
27500238	250m	27500331	250m
27500317	500m	27500330	500m

FIBERFOX READY-MADE CABLE OUTDOOR 4-FIBERS - 4X LC / 4X LC

CODE MULTIMODE 50/125µM		CODE	MULTIMODE 62,5/125µM
27500665	50m	27500668	50m
27500467	100m	27500669	100m
27500666	250m	27500670	250m
27500667	500m	27500671	500m

FIBERFOX READY-MADE CABLE OUTDOOR 4-FIBERS - 4X SC / 4X SC

CODE	MULTIMODE 50/125µM	CODE	MULTIMODE 62,5/125µM
27500326	50m	27500339	50m
27500325	100m	27500133	100m
27500324	250m	27500338	250m
27500323	500m	27500337	500m

Additional versions and different lenghts on request!

FIBERFOX
Accessories

DESCRIPTION

Apart from the specific FIBERFOX systems, we carry the corrresponding accessories. This is particularly for ready-made patch-cords and cable drums.

FIBERFOX Patchcord Indoor Duplex

INFO NOTES

- ø = 2,8mm x 5,7mm - Figure 8, length see article description
- Plastic, flame-retardant, halogen-free
- Ready-made
- Colours sorted to 9/125, 50/125 and 62.5/125
- Top quality connectors

- Additional versions and different lenghts on request!

FIBERFOX PATCHCORD INDOOR DUPLEX - EXAMPLES

CODE	MULTIMODE LENGTH 2 METER	CODE	MULTIMODE LENGTH 5 METER
27505024	2X ST / 2X ST, 50/125, 2m	27505026	2X ST / 2X ST, 50/125, 5m
27505058	2X ST / 2x SC, 50/125, 2m	27505060	2X ST / 2x SC, 50/125, 5m
27505085	2x SC / 2x SC, 50/125, 2m	27505087	2x SC / 2x SC, 50/125, 5m
27505123	2X E2000 / 2X E2000, 50/125, 2m	27505124	2X E2000 / 2X E2000, 50/125, 5m
27505149	2x LC / 2x LC, 50/125, 2m	27505151	2x LC / 2x LC, 50/125, 5m
27505177	2x SC / 2x LC, 50/125, 2m	27505179	2x SC / 2x LC, 50/125, 5m
27505201	2x SC / 2X E2000, 50/125, 2m	27505203	2x SC / 2X E2000, 50/125, 5m
27505225	2X FC PC / 2X FC PC, 50/125, 2m	27505227	2X FC PC / 2X FC PC, 50/125, 5m
27505259	2x SC / 2X FC PC, 50/125, 2m	27505261	2x SC / 2X FC PC, 50/125, 5m

Additional versions and different lenghts on request!

FIBERFOX PATCHCORD INDOOR DUPLEX - EXAMPLES

CODE	SINGLEMODE LENGTH 2 METER	CODE	SINGLEMODE LENGTH 5 METER
27505050	2X ST / 2X ST, 9/125, 2m	27505052	2X ST / 2X ST, 9/125, 5m
27505076	2X ST / 1X SC PC, 9/125, 2m	27505078	2X ST / 1X SC PC, 9/125, 5m
27505105	2X SC PC / 2X SC PC, 9/125, 2m	27505107	2X SC PC / 2X SC PC, 9/125, 5m
27505114	2X SC APC8° / 2X SC APC8°, 9/125, 2m	27505116	2X SC APC8° / 2X SC APC8°, 9/125, 5m
27505139	2X E2000 PC / 2X E2000 PC, 9/125, 2m	27505142	2X E2000 PC / 2X E2000 PC, 9/125, 5m
27505165	2x LC PC / 2x LC PC, 9/125, 2m	27505167	2x LC PC / 2x LC PC, 9/125, 5m
27505193	2X SC PC / 2x LC PC, 9/125, 2m	27505195	2X SC PC / 2x LC PC, 9/125, 5m
27505217	2X SC PC / 2X E2000 PC, 9/125, 2m	27505219	2X SC PC / 2X E2000 PC, 9/125, 5m
27505241	2X FC PC / 2X FC PC, 9/125, 2m	27505243	2X FC PC / 2X FC PC, 9/125, 5m
27505250	2X FC APC8° / 2X FC APC8°, 9/125, 2m	27505252	2X FC APC8° / 2X FC APC8°, 9/125, 5m
27505275	2X SC PC / 2X FC PC, 9/125, 2m	27505277	2X SC PC / 2X FC PC, 9/125, 5m
27505283	2X SC APC8° / 2X FC APC8°, 9/125, 2m	27505285	2X SC APC8° / 2X FC APC8°, 9/125, 5m

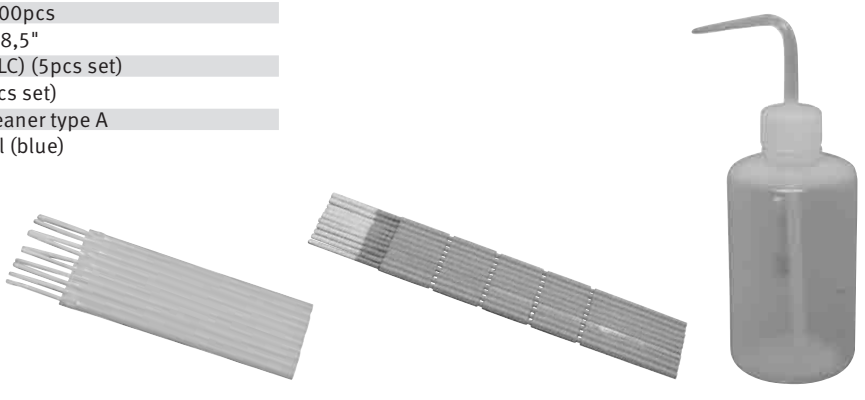
Additional versions and different lenghts on request!

FIBERFOX Measuring Tools

CODE	DESCRIPTION
27009036	Microscope 400x with adapter 2,5mm
27009040	Universal adapter 1,25mm for microscope 27009036
27009064	Single-/multimode test kit (SMLP5-5)

FIBERFOX Cleaning Tools

CODE	DESCRIPTION
27009035	Lint-free cloths 4"x4" 100pcs
27009059	KIM Wipes 280pcs 4,5x8,5"
27009027	Stick cleaners 1,25 (BJ,LC) (5pcs set)
27009028	Stick cleaners 2,50 (5pcs set)
27009029	Cletop for connector cleaner type A
27009030	Cletop replacement reel (blue)



FIBERFOX Spare Parts

On request

FIBERFOX
Techzone

FIBERFOX Connectors EBC52, EBC54

	EBC52	*EBC54*	*EBC54*
Mode:	Multimode	Multimode	Singlemode
Fibers (channels):	2	4	4
Expanded Beam:	yes	yes	yes
Insertion Loss @ 1300nm:	0,7dB typ.	0,7dB typ.	1,0dB typ.
Operating Temperature:	-40 up to +70°C	-40 up to +70°C	-40 up to +70°C
Storage Temperature:	-55 up to +85°C	-55 up to +85°C	-55 up to +85°C
Water Immersion:	› 2mtr (IP68)	› 2mtr (IP68)	› 2mtr (IP68)
Free Fall Resistance (on concrete):	500x from 1,2m heigth	500x from 1,2m heigth	500x from 1,2m heigth
Mating Cycles:	› 5000	› 5000	› 5000
Crush Resistance:	› 5 tons	› 5 tons	› 5 tons
Bump Resistance @ 40g:	› 4000 bumps	› 4000 bumps	› 4000 bumps
Tensile Load (depends on cable):	1500 N (typ.)	1500 N (typ.)	1500 N (typ.)
Flange dimensions Receptacle EBC5x:	(W) 37mm, (H) 37mm		
Dimensions Receptacle EBC5x:	(W) 37mm, (H) 37mm, (D) 82mm (with closed cap)		

FIBERFOX Connector EBC70

Optical Insertion Loss:	Typ -0.75dB, (Singlemode 9/125mm 1310nm)
Optical Return Loss:	›-45dB
Auxiliary Power Elec.:	600V ac 10A
Signal Elec.:	42V ac 1A 60V dc 1A
Auxiliary Power Contact resistance:	‹4mW
Signal Elec. Contact resistance:	‹5 mW
Operating Temperature:	-40°C to +85°C
Storage Temperature:	-55°C to +85°C
Tensile Load:	›1000N (Cable dependant)
Mating Cycles:	›5000
IP 67:	Environmental Seal rating
Crush Resistance:	›3000N Free fall, 500 onto concrete from 1.2m
Flange Dimensions Receptacle EBC7x:	(W) 30mm, (H) 30mm
Dimensions Receptacle EBC7x:	(W) 37mm, (H) 37mm, (D) 67mm (with closed cap)

FIBERFOX Cable Outdoor MIL

MECHANICAL DATA

Overall Diameter:	ø = 5 mm (2 fibers), 5,5 mm (4 fibers)
Jacket Material:	PUR flame retardend, halogen-free
Jacket Colour:	Multimode: matt black, Singlemode: matt grey
Weight:	23 kg / km (2 fibers), 27 kg / km (4 fibers)
Tensile Load (Short-Term):	1800 N
Tensile Load (Long-Term):	600 N
Minimum Bend Radius (Installation):	100 mm IEC 794-1-E11, Singlemode: 88mm
Minimum Bend Radius (Operation):	50 mm IEC 794-1-E11, Singlemode: 44mm
Impact Resistance:	1500 impacts (EIA-455-25A)
Crush Resistance:	1800 N/cm (EIA-455-41A)
Storage Temperature:	-55 up to +85°C IEC 794-1-F1
Operating Temperature:	-46 up to +71°C IEC 794-1-F1
Bend Insensitivity:	Class A (ITU-T G.657) – for Singlemode only!

OPTICAL DATA

Type of cable	***Multimode***	***Bandwidth for 850nm*** *Attenuation 3dB/km*	***Bandwidth for 1300nm*** *Attenuation 1dB/km*
27101004	2 x 62,5/125µm	200MHz/km	500MHz/km
27101009	2 x 50/125µm	600MHz/km	600MHz/km
27101005	4 x 62,5/125µm	200MHz/km	500MHz/km

Type of cable	***Singlemode Ultrabend***	***Attenuation for 1300nm***	***Attenuation for 1550nm***
27101013	4 x 9/125µm	0,5dB/km	0,5dB/km

FIBERFOX Cable Indoor

Attenuation Multimode 50/125:	2,6dB / km typ., 2,8 / km max. for 850nm
Attenuation Multimode 62,5/125:	3,0dB / km typ., 3,2/ km max. for 850nm
Attenuation Singlemode 9/125:	0,35dB / km typ., 0,5 / km max. for 1310nm
Outer Dimenions:	ø = 2,8 mm x 5,7mm
Jacket colour:	green (50/125), blue (62,5/125), yellow (9/125)
Weight:	7,1 kg / km
Tensile Load (Short-Term):	200 N
Minimum Bend Radius:	› 25mm for installation and operation
Storage Temperature:	- 30 up to + 70° C
Operating Temperature:	- 5 up to + 55° C
Characteristics:	halogen-free, flame-retardant

FIBERFOX Cable Drums

FCR-150 (not for singlemode)	(W) 310mm, (H) 360mm, (D) 230mm
FCR-200	(W) 380mm, (H) 485mm, (D) 285mm
FCR-250	(W) 445mm, (H) 554mm, (D) 310mm
FCR-500	(W) 450mm, (H) 450mm, (D) 440mm
FCR-1000	(W) 450mm, (H) 450mm, (D) 680mm

NOTICE

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Your dealer:

Manufactured under DIN EN ISO 9001

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