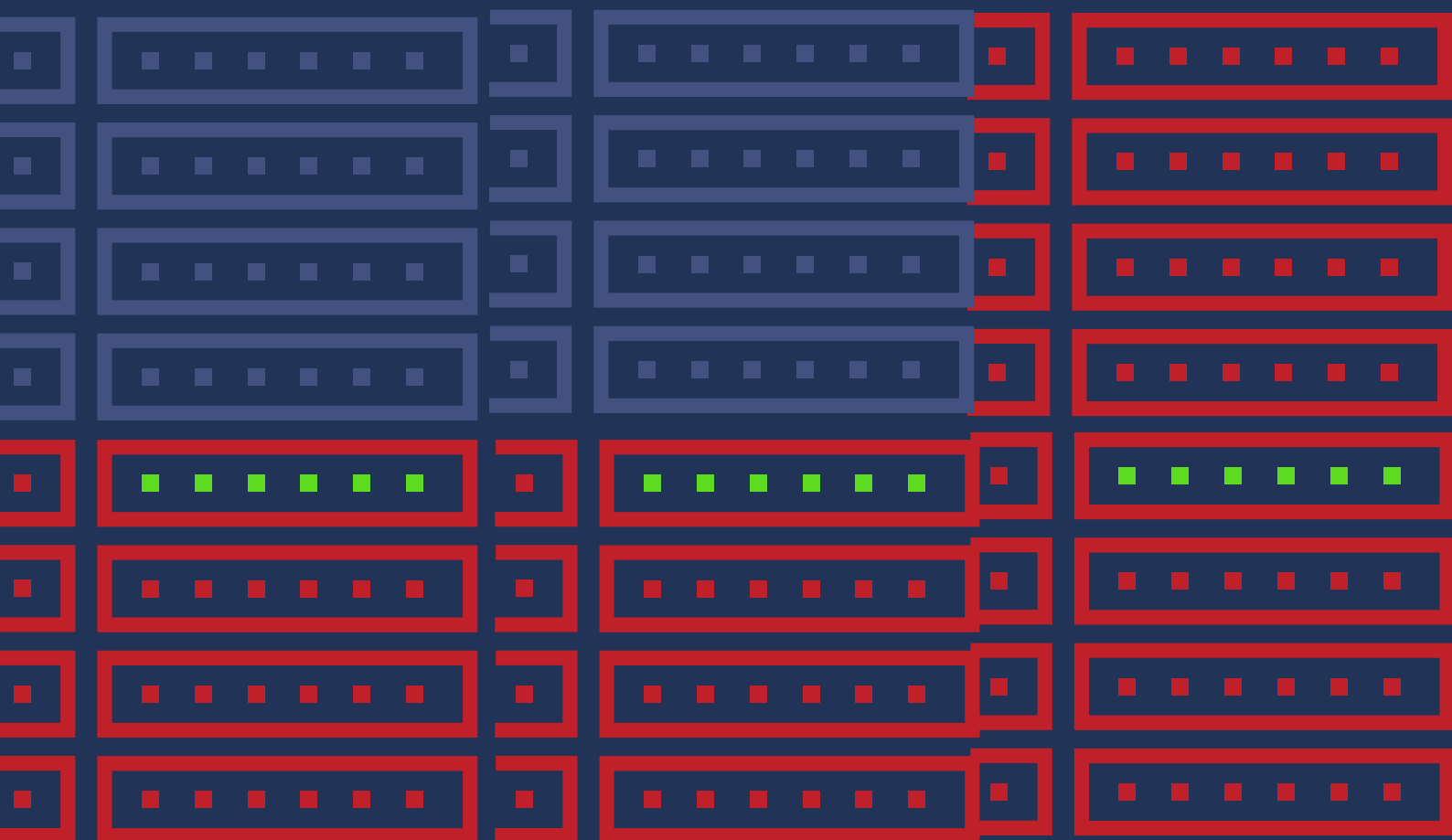


PRODUCT CATALOGUE

FIBRAIN ®

Fibrain DATA® Structured cabling



4 manufacturing centres

+80 countries

+700 employees

+100 000 000 connected people

FIBRAIN 





Made in Poland.



Table of content

FibrainDATA® structured cabling system elements:



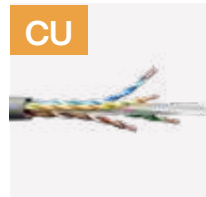
FibrainDATA®

- Structured cabling system
- Warranty program
- Partners program



01. Fiber Optic installation cables

Page 16



02. Installation cables

Page 39



03. HD RJ45 modules

Page 47



04. Copper patchcords

Page 523



05. Fiber optic adapters

Page 58



06. Pre-connectorized solutions

Page 71



Table of content

FibrainDATA® structured cabling system elements:

CU FO



07. HD Patch panels and accessories

Page 83

CU FO



08. 19" Patch Panels and accessories

Page 100

FO



09. Distribution boxes

Page 113

CU



10. Electro-installation equipment

Page 121

CU FO



11. Networks and cabinets

Page 127

CU FO



10. FibrAIM

Page 146

CU FO



13. Tools, measuring instruments & equipment

Page 163

FibrainDATA[®]

Structured Cabling System

Copper Solutions



Fiber Optic Solutions



FibrainDATA®



FibrainDATA® structured cabling system has been specifically designed with assistance from network planners and installers. As we are continuously striving for excellence, FibrainDATA® guarantees the highest quality, unique design and innovative solutions.



As our systems meet the highest Standards and requirements, they can work properly for at least 25 years. Each telecommunication system which is designed with the use of FIBRAIN components and installed by Certified Installer can possess warranty program.

Designed with assistance from network planners and installers, FibrainDATA® guarantees ease of installation and the highest performance. Exceeding Standards, fulfilling highest requirements and ensuring warranty system for at least 25 years – these are the main goals, which we have in mind when designing FibrainDATA® system. Undoubtedly, our dynamically developing R&D department and well-equipped laboratory are involved in a wide range of activities to achieve our aims and provide the best parameters.



FibrainDATA® Warranty program [PDF](#)

FibrainDATA® General Procedure of Network Certification [PDF](#)

FibrainDATA®

Warranty Program

Introduction

The Warranty Program of FibrainDATA® Structured Cabling System, further referred to as the Warranty Program, specifies the conditions of obtaining, implementing and losing the Warranty granted for FibrainDATA® Structured Cabling System.

In matters not covered in the Warranty Program individual provisions between the parties of the Program apply and generally applicable provisions of the Civil Code.

Installations performed in the FibrainDATA® Structured Cabling System can be certified, if all terms and conditions of this Warranty Program are successfully met.

FIBRAIN Sp. z o.o., as the manufacturer of FibrainDATA® Structured cabling system reserves the right to change the provisions stated in this document. The updated and present version of the Warranty Program is available on FIBRAIN website.

The terms used in the Warranty Program should be understood as stated below:

Warranty Program – Warranty Program concerning FibrainDATA® Structured Cabling System.

FIBRAIN – FIBRAIN Sp. z o.o. – Manufacturer of products which are parts of FibrainDATA® Structured Cabling System.

Products – products which are part of FibrainDATA® Structured cabling System.

User – end-user of the Installation.

Certified Installer – the entity being a natural or legal person, showing the ability to assembly, test and maintain structured cabling and having the current status of the Certified Installer of FibrainDATA® Structured cabling System. Current status confirms the ownership of Certificate issued by FIBRAIN.

Installation – passive structured cabling system, which is a set of transmission path mutually compatible, installed in the User's premises and is under Warranty Program and designed in accordance with applicable standards as well as installed by the Certified Installer of FibrainDATA® system in accordance with Manufacturer's recommendations and current standards, in particular EN 50174, ISO/IEC 14763, EN 50310, ISO/IEC 60364.

Certification of Installation – the issue of System Warranty for the User of the Installation.

Standards – international standards pertaining to design and installation of structured cabling systems, which are:

CENELEC European Standards

PN-EN 50173-1:2011	Information technology – Structured Cabling Systems – Part 1: Generic requirements
PN-EN 50173-2:2008	Information technology – Structured Cabling Systems – Part 2: Office premises (Primary standard)
PN-EN 50173-2:2008/A1:2011	Information technology – Structured Cabling Systems – Part 2: Office premises (Amendment 1)
PN-EN 50173-5:2009	Information technology – Structured Cabling Systems – Part 5: Data centers (Primary standard)
PN-EN 50173-5:2009/A1:2011	Information technology – Structured Cabling Systems – Part 5: Data centers (Primary standard) (Amendment 1)
PN-EN 50173-5:2009/A2:2013-07	Information technology – Structured Cabling Systems – Part 5: Data centers (Primary standard) (Amendment 2)
PN-EN 50174-1:2010	Information technology – Structured Cabling Systems – Part 1: Installation certification and quality assurance (Primary standard)

FibrainDATA®

PN-EN 50174-1:2010/A1:2011	Information technology – Structured Cabling Systems – Part 1: Installation certification and quality assurance (Amendment 1)
PN-EN 50174-1:2010/A2:2015-02	Information technology – Structured Cabling Systems – Part 1: Installation certification and quality assurance (Amendment 2)
PN-EN 50174-2:2010	Information technology – Structured Cabling Systems – Part 2: Planning and installing inside premises (Primary Standard)
PN-EN 50174-2:2010/A1:2011	Information technology – Structured Cabling Systems – Part 2: Planning and installing inside premises (Amendment 1)
PN-EN 50174-2:2010/A2:2015-02	Information technology – Structured Cabling Systems – Part 2: Planning and installing inside premises (Amendment 2)
PN-EN 50310:2012	Application Of Equipotential Bonding And Earthing In Buildings With Information Technology Equipment

ISO/IEC International Standards

ISO/IEC 11801:2010 (Ed. 2.2)	Information technology – Generic cabling for customer premises
ISO/IEC 24764:2010	Information technology – Generic cabling systems for data centers
ISO/IEC 14763-2:2012	Information technology – Implementation and operation of customer premises cabling – Part 2: Planning and installation
ISO/IEC 14763-2:2012/Amd 1:2015	Information technology – Implementation and operation of customer premises cabling – Part 2: Planning and installation
ISO/IEC TR 14763-2-1:2011	Information technology – Implementation and operation of customer premises cabling – Part 2-1: Planning and installation - Identifiers within administration systems
ISO/IEC 14763-3:2014	Information technology – Implementation and operation of customer premises cabling – Part 3: Testing of optical fibre cabling
ISO/IEC 14763-3:2014/Cor 1:2015	Information technology – Implementation and operation of customer premises cabling – Part 3: Testing of optical fibre cabling
ISO/IEC TR 24750:2007	Information technology – Assessment and mitigation of installed balanced cabling channels in order to support of 10GBASE-T

ISO/IEC International Standards

ANSI/TIA-568-C.0	Generic Telecommunications Cabling for Customer Premises, Ed. C, Amd. 2, 08-2012
ANSI/TIA-568-C.1	Commercial Building Telecommunications Cabling Standard, Ed. C, Amd. 2, 05-2012
ANSI/TIA-568-C.2	Balanced Twisted-Pair Telecommunication Cabling and Components Standard, Ed. C, Err. 04-2014
ANSI/TIA-568-C.3	Optical Fiber Cabling Components Standard, Ed. C, Amd. 1, 10-2011
ANSI/TIA-942-A	Telecommunications Infrastructure Standard for Data Centers, 2012
ANSI/TIA-942-A-1	Telecommunications Infrastructure Standard for Data Centers Addendum 1, 04-2013
ANSI/TIA-606-B	Administration Standard for Telecommunications Infrastructure, 2012

Warranty Program

Measurement & certification of network

Copper network measurements

In order to obtain the System Warranty for the installation, the Certified Installer is required to perform measurements of the copper network as recommended by IEC 61935-1 and only with the use of testing equipment listed below:

Producer	Model	Certification limit
Fluke Networks	DSX-8000	Cat5/ClassD ÷ Cat.6A/ClassEA
Fluke Networks	DSX-5000	Cat5/ClassD ÷ Cat.6A/ClassEA
Fluke Networks	DSX-600/602	Cat5/ClassD ÷ Cat.6A/ClassEA
IDEAL Industries	IanTEK II/III/IV	Cat5/ClassD ÷ Cat.6A/ClassEA*
WireXpert	WX500/WX4500	Cat5/ClassD ÷ Cat.6A/ClassEA
VIAVI	Certifier40G	Cat5/ClassD ÷ Cat.6A/ClassEA
*AEM	TestPro CV100	Cat5/ClassD ÷ Cat.6A/ClassEA

* firmware 4.1.308 or higher

The Certified Installer is required to use the optical power meter with a valid calibration, follow the manufacturer's instruction of measuring equipment and FibrainDATA® Vademecum.

The Certified Installer is required to configure the instrument appropriately to the parameters of certified network with particular attention to:

- Test Limit
- Topology
- The correctness of markings in measured links

It is permitted to perform the measurements of copper lines in the area of the channel (Channel) and/or broadband connection (Permanent Link). In the case of the measurement channel it is absolutely necessary to fill all the links subjected to certification patch cords produced by FIBRAIN.

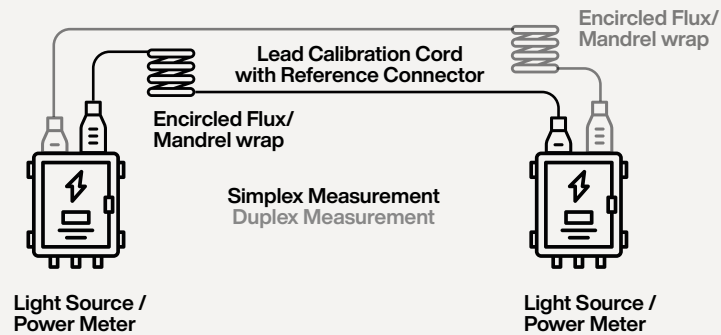
Fiber optic links measurements

Fiber optic link measurements should be performed based on the guidelines included in ISO/IEC 14763-3. Only measuring equipment that allows for the implementation of measurement procedures in accordance with IEC 14763-3 may be used to certify a fiber optic network. A Certified Installer is required to use a meter with a valid calibration, follow the recommendations of the measuring equipment manufacturer and the FibrainDATA® Vademecum

Fiber optic measurements must be performed in accordance with the following requirements:

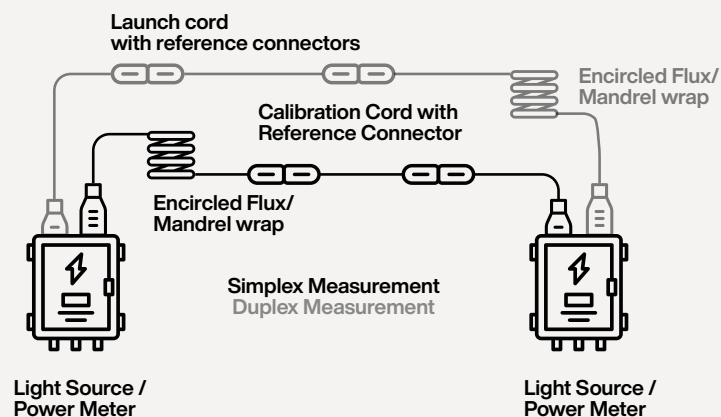
1. Measurements must be performed in 2 directions for 2 wavelengths: 850/1300 nm (MM), 1310/1550 nm (SM)
2. Multimode test reference cables (TRC) used for measurement must be equipped with at least mandrels, but encircled flux cables are recommended.
3. The reference level must be set using the "one jumper method" or "3 jumper method".

FibrainDATA®



1 jumper method

6. The patch cables used must be reference cables (TRC), which must be verified by their measurement carried out in accordance with the diagram below.



3 jumper method

Desired results: $\leq 0.1\text{dB (MM)}$; $\leq 0.2\text{dB (SM)}$;

Mated pair transmission performance

d) Maximum insertion loss ^{b, c} [dB]	Other	0.75	IEC 61300-3-34
	Splice	0.3	IEC 61073-1
Minimum return loss [dB]	Multimode	20	IEC 61300-3-6
	Single-mode	35	

b) As required in IEC 61753-1-1, Class M1

c) Insertion loss values of connectors and splices shall be met with the referenced test method when the optical source produces an overfilled launch condition (for example, an LED source). Measurements with an optical source that produces an underfilled launch condition (for example, a laser source) will always produce lower insertion loss values.

d) The connectors used with the specified SC duplex adaptors shall meet the IEC 60874-14 (simplex) or IEC 60874 (duplex) series of detail specifications.

FibrainDATA®

Warranty Program

**Cable optical fibre attenuation (maximum)
dB/km**

	OM3 and OM4 multimode		OM5 multimode		OS1a single-mode			OS2 single-mode		
	850nm	1300nm	850nm	1300nm	1310nm	1383nm	1550nm	1310nm	1383nm	1550nm
Wavelength	850nm	1300nm	850nm	1300nm	1310nm	1383nm	1550nm	1310nm	1383nm	1550nm
Attenuation	3.5	1.5	3.0	1.5	1.0	1.0	1.0	0.4	0.4	0.4

Connecting hardware	MMF		SMF	
	Attenuation (random mated)	Attenuation (mated against reference)	Attenuation (mated against reference)	Attenuation (mated against reference)
IEC 62664-1-1 Performance Grade B	0.30dB max. – 50% 0.60dB max. – 97%	0.50dB max.		
In future IEC 62664-1-2 Performance Grade C ^a			0.30dB max. – 50% 0.60dB max. – 97%	0.50dB max.
ISO/IEC 11801	0.75dB max. – 100%		0.75dB max. – 100%	

a) Under consideration

6. A visual inspection of the connectors is required on both the test cables and the measured link. If the connectors are dirty, they must be cleaned using materials and tools required for this type of operation (dust-free wipes, isopropyl alcohol, cleaning tools)

The Certified Installer shall configure the instrument appropriately to the parameters of certified network with particular attention to:

- Test Limit
- Topology
- The correctness of markings in measured links

For certification measurements, it is permissible to use a power meter (LSPM) and/or a reflectometer (OTDR). In the case of using an OTDR meter for measurements, it is absolutely necessary to use both launch and tail cords. Both types must be terminated with reference connectors,

FibrainDATA®

Certification procedure

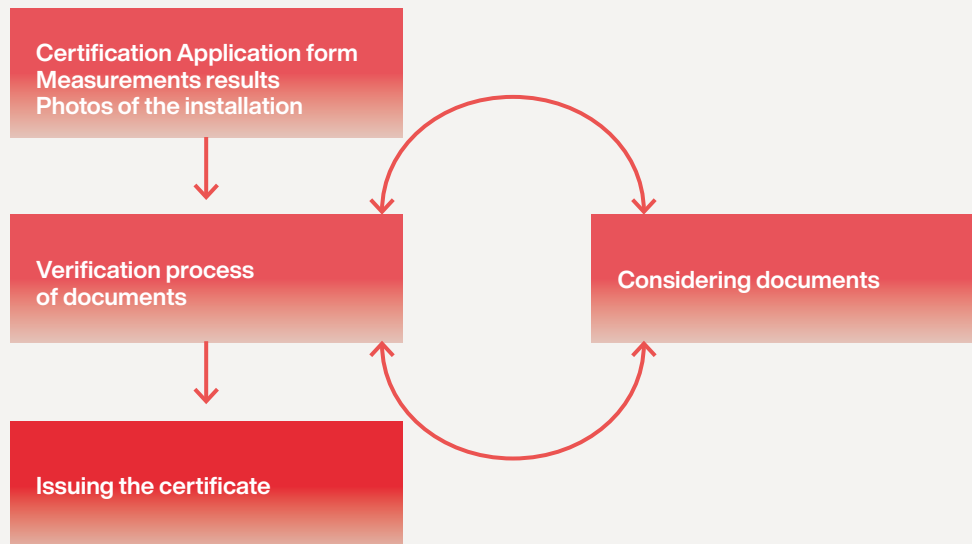
After finishing the installation, the Certified Installer is obliged to prepare and provide the required documents to FIBRAIN.

In the event of incompatibilities in the documents or installation, the Certified Installer is obliged to remove them and complete documents for the purpose of continuation of the certification procedure.

FIBRAIN verifies the Installation.

After successful completion of the certification procedure FIBRAIN issues a Certificate of System Warranty.

The Certified Installer shall deliver the Certificate of Warranty System to the User.



FibrainDATA® Structured Cabling Systems

Copper Solutions

Express 5e

Express - Complete D-class system, includes all the components of 5e category which are required when structured cabling system is installed. The system is available in 2 options: UTP and FTP. In both solutions are based on cables with increased frequency up to 200 MHz. Additionally, system includes multi-pair cables of 5e category, which entirely comply with ISO/IEC 11801 norm.

Quick 6

Quick - Complete E-class system includes all components of 6 category which are required when structured cabling system is installed. Comprehensive portfolio of installation cables (U/UTP, F/UTP, U/FTP, S/FTP), as well as increased frequency up to 500 MHz, allow us to fulfill the requirements of even the most demanding customers.

Rapid 6a

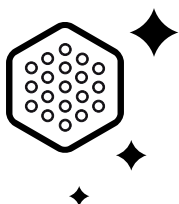
Rapid - Complete EA-class system, contains complete range of 6A category components. Solutions fully provide 10Gbps transmission in complete 100m of transmission channel. A system is based on shielded version of transmission components.

ULTRA 7TA

Ultra - Solutions are adjusted to future applications, ensuring assumptions of 7 and 7A categories. It is also based on high quality of telecommunication cables as F/FTP, S/FTP.

Voice

Voice - A system is prepared to be used in digital and analog telephone signal transmission. It perfectly complements telecommunication solution.

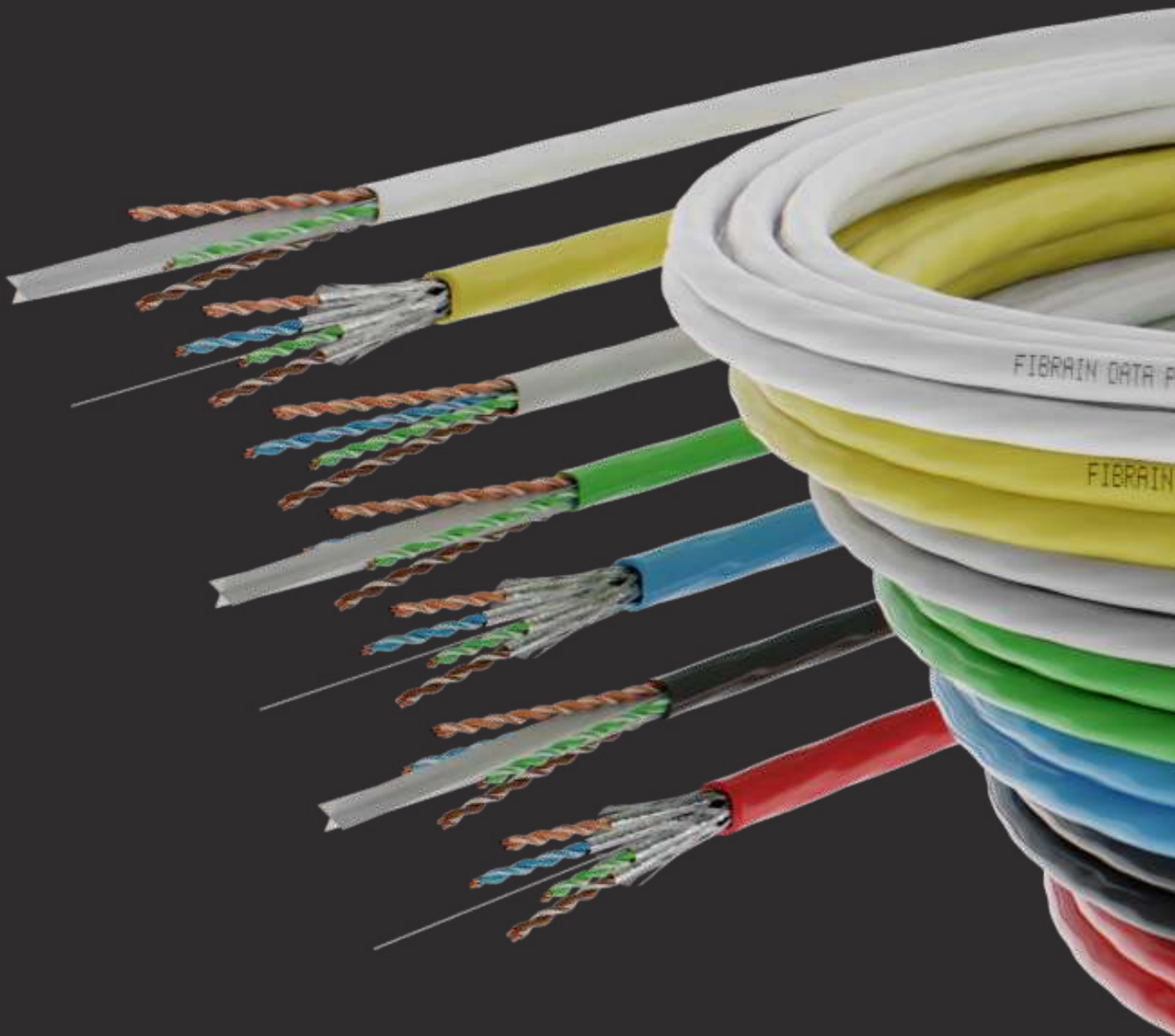


Fiber optic solutions - Full comprehensive solution being a part of FIBRAINData cabling system.

Offer of FIBRAIN consists of either MM and SM cabling which are segregated according to efficiency. Full scope categories OM1-OM4 for MM and OS1/OS2 for SM. Whole portfolio in full range is based on Bend Insensitive Multimode Fibers (BIMF) and Bend Insensitive Singlemode Fibers (BISF) what make the installation easier keeping the highest transmission parameters on adequate level.

FIBRAINDATA offers complete scope of FO connectors, starting from legacy ST, FC ending on the most modern LC and MPO/MTP. FIBRAINData cabling system is ready for the most demanding applications including 40G and 100G in full range of length according to ISO11801 & IEEE.

Our well-known and fully certified solutions are divided into specific systems which comply with the **highest requirements and standards.**

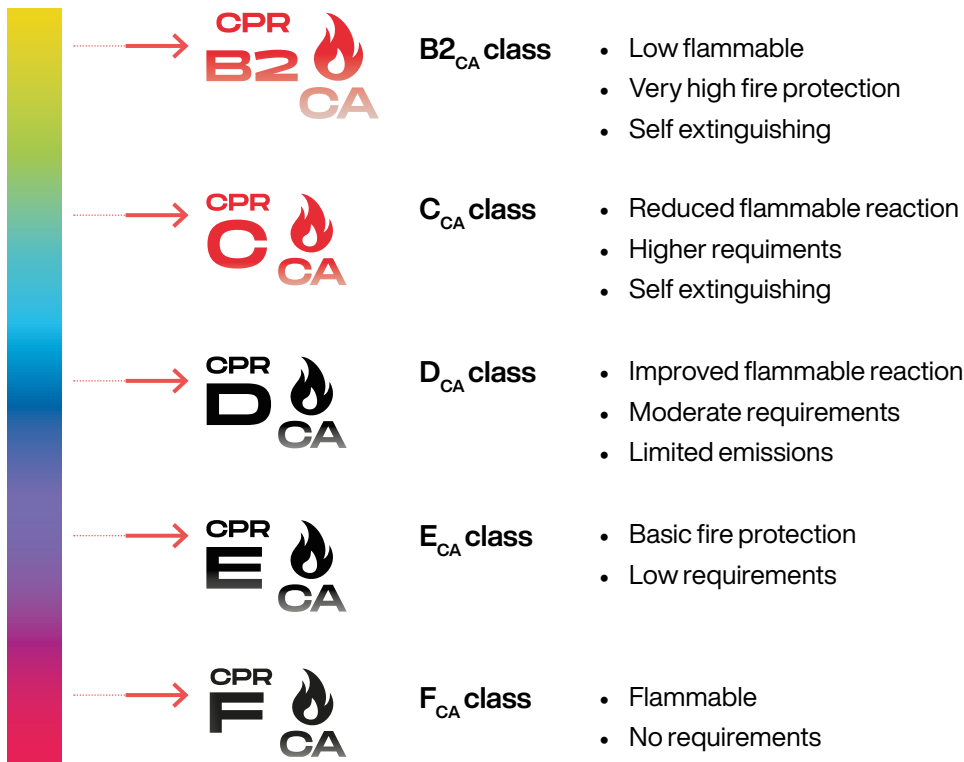


01. Fiber optic installation cables



CPR classification

Ensuring fire safety in buildings is paramount, and one crucial aspect is the classification of cable fire performance as per the Construction Products Regulation (CPR). Under CPR, cables are categorized into several fire performance classes, each indicating their behavior in fire conditions.



Popular recommendations to use:

NEW
B₂_{CA} & C_{CA} CPR class cables
now in FIBRAIN products portfolio



- Hospitals
- Airports
- Multi-storey buildings
- Fire exits in public buildings
- High density of people



- Public buildings
- Hotels
- Schools
- Office buildings
- Medium density of people



- Commercials buildings: restaurants, sports bars etc.
- Residential (medium density)



- Residential (low density)
- General installations in some areas



- Outdoor applications

EXO-FD75 VC-D21

FO

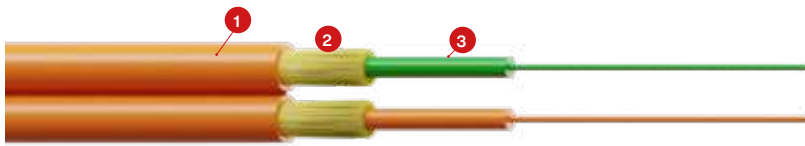
New designs
with fire
resistance
class



All cables in accordance
with **CPR Construction**
Product Regulation.

Duplex ZIP

Cable 1.8–3.0mm



1. FRLSOH outer jacket
2. Aramid yarns
3. Central tight buffer tube with colored fibers

- **Distribution systems cable**
- **For patchcords and pigtails**
- **Terminals connection**
- **Fire retardant LSOH jacket with low coefficient of friction**
- **Aramid yarns**
- **250µm colored fiber**

Version	Fibres [pcs]	Ø Nominal dimension (±5%)	Nominal weight (±5%)	Max allowed tension	Crush
2F	2	1.8 x 3.7mm	8kg/km	300N	500N/10cm
2F	2	2.0 x 4.1mm	8kg/km	300N	500N/10cm
2F	2	2.4 x 4.8mm	11kg/km	300N	700N/10cm
2F	2	2.8 x 5.7mm	16kg/km	650N	1000N/10cm
2F	2	3.0 x 6.1mm	16kg/km	300N	1000N/10cm

Temperature range

Installation	Operation	Transport&Storage
+5°C to +40°C	-10°C to +60°C	-20°C to +60°C

Drop cables

FIBRAIN drop cables due to their design, including high mechanical strength, flexibility and reduced memory effect ensure quick and simple installation in FTTH networks.



ESM



Resibend Plus



CPR



LSOH



Up to 4 fibers



VC-Dxx 1F

- VC-D30 3.0 mm
- VC-D40 4.0 mm



VC-Dxx 2F

- VC-D40 4.0 mm



VC-Dxx ESM 2F

- VC-D21 2.15 mm
- VC-D21C 2.15 mm
- VC-D30 3.0 mm
- VC-D40 4.0 mm



VC-Dxx ESM 4F

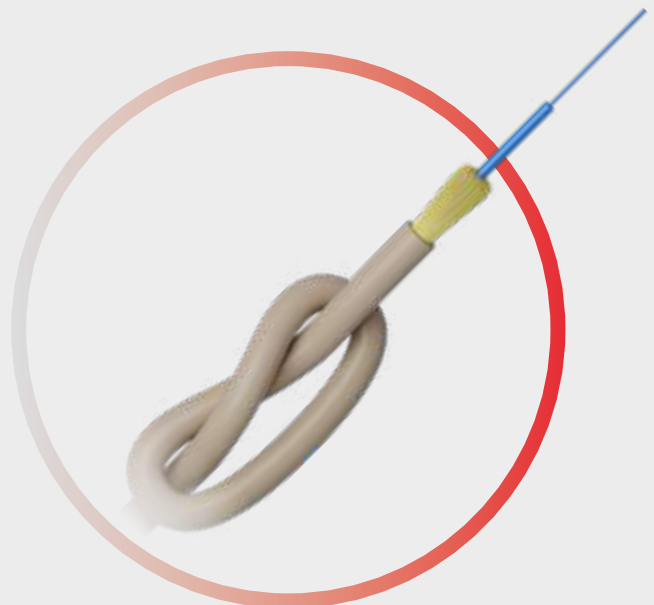
- VC-D21 2.15 mm
- VC-D21C 2.15 mm
- VC-D30 3.0 mm
- VC-D40 4.0 mm



VC-DCY 1-4F

Resibend

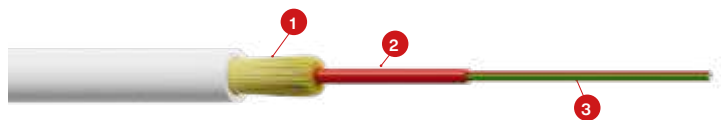
Cables with Resibend fibers fit perfectly into FTTH application needs. Due to the minimization of bending losses, they can be installed directly around corners in apartments and offices, compact cabinets and customer outlets.



VC-D21



FTTH Single LSOH Jacket Cable with Aramid Yarns Reinforcement and Easy Section Module (ESM)



1. LSOH outer jacket
2. High modulus aramid yarns
3. Easy Section Module (ESM) with optical fibers

- Last mile connection
- Drop cable
- Fully dielectric
- LAN and FTTx networks
- Sub-cable



Version	Fibres [pcs]	Fibres per module [pcs]	Ø Nominal (±0.1mm)	Nominal weight (±10%)	Max allowed tension	Max operational tension	Crush
1M2F	2	2	2.15mm	4kg/km	200N	75N	300N/10cm
1M4F	4	4	2.15mm	4.1kg/km	200N	75N	

Temperature range

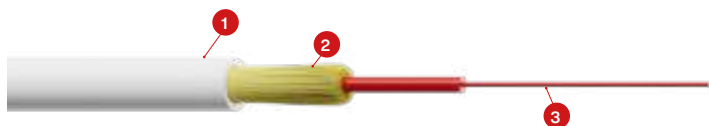
Installation	Operation	Transport&Storage
-5°C to +55°C	-20°C to +70°C	-40°C to +70°C

CRP Euroclass	Fibres	REFERENCE NO.
CPR B2ca	2F (ESM)	VC-D21-02-xxx
CPR B2ca	4F (ESM)	VC-D21-04-xxx
CPR Cca	2F (ESM)	VC-D21C-02-xxx
CPR Cca	4F (ESM)	VC-D21C-04-xxx

*xxx – product code depending of type and number of fiber, sheath and fibers color, type of tube

VC-D30

FTTH Single Jacket LSOH Minibreakout – 1F 900µm Drop Cable with Aramid Strength



1. LSOH outer jacket
2. High modulus aramid yarns
3. Optical fiber in 900µm buffer

- **Customer connection**
- **Fully dielectric**
- **Last mile connection**
- **LAN and FTTX networks**
- **Distribution network**
- **ODF connections**
- **Inside house OLT connection**



Version	Fibres [pcs]	Buffer diameter	Ø Nominal (±0.1mm)	Nominal weight (±10%)	Max allowed tension	Max static tension	Crush
1F	1	900µm	3mm	8kg/km	170N	60N	1000N/10cm

Temperature range

Installation	Operation	Transport&Storage
-5°C to +55°C	-20°C to +70°C	-40°C to +70°C

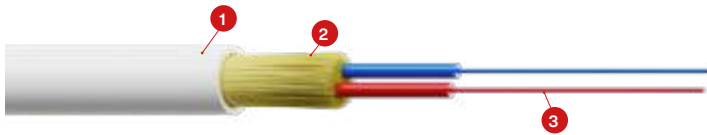
CRP Euroclass	Fibres	REFERENCE NO.
CPR Dca	1F	VC-D30-01-xxx
CPR Dca	2F (ESM)	VC-D30E-02-xxx
CPR Dca	4F (ESM)	VC-D30E-04-xxx

*xxx – product code depending of type and number of fiber, sheath and fibers color, type of tube

VC-D40



FTTH Single Jacket LSOH Minibreakout – 1-2 x 900µm – Drop Cable with Aramid Strength Members



1. LSOH outer jacket
2. High modulus aramid yarns
3. Optical fiber in 900µm buffer

- **Customer connection**
- **Fully dielectric**
- **Last mile connection**
- **LAN and FTTH networks**
- **Distribution network**
- **ODF connections**
- **Inside house OLT connection**



Version	Fibres [pcs]	Ø Nominal (+0.1/-0.2mm)	Nominal weight (±10%)	Max allowed tension	Max static tension	Crush
1F	1	4.1mm	15kg/km	400N	150N	1500N/10cm
2F	2	4.1mm	15kg/km	400N	150N	

Temperature range

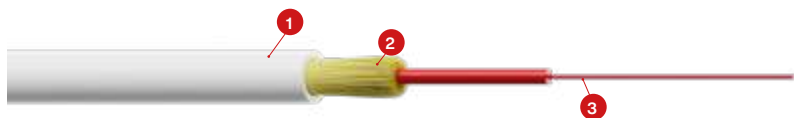
Installation	Operation	Transport&Storage
-5°C to +55°C	-20°C to +70°C	-40°C to +70°C

CRP Euroclass	Fibres	REFERENCE NO.
CPR Dca	1F	VC-D40-01-xxx
CPR Dca	2F	VC-D40-02-xxx
CPR Dca	2F (ESM)	VC-D40E-02-xxx
CPR Dca	4F (ESM)	VC-D40E-04-xxx

*xxx – product code depending of type and number of fiber, sheath and fibers color, type of tube

VC-D Resibend

FTTH Single Jacket LSOH Minibreakout 1-4F 900um – Drop Cable with Aramid Strength Members – Resibend



1. LSOH outer jacket (white by default)
2. High modulus aramid yarns
3. Optical fiber in buffer



RESIBEND



- **Optical cable with aramid yarns reinforcement**
- **For customer connection**
- **Fully dielectric cable**
- **Last mile connection**
- **LAN and FTTX networks**
- **Distribution network**
- **ODF connections**
- **Inside house OLT connection**

	Fibres [pcs]	Fibres per buffer/module [pcs]	Ø Nominal (±0.1%)	Nominal weight (±10%)	Max allowed tension	Max static tension	Crush
VC-D30 Resibend							
1T1F	1	1	3mm	8kg/km			
1M2F	2	2	3mm	9kg/km	170N	60N	1000N/10cm
1M4F	4	4	3mm	9kg/km			
VC-D40 Resibend							
1T1F	1	1	4.1mm	15kg/km			
2T1F	2	1	4.1mm	15kg/km	400N	150N	1500N/10cm
1M2F	2	2	4.1mm	15kg/km			
1M4F	4	4	4.1mm	15kg/km			

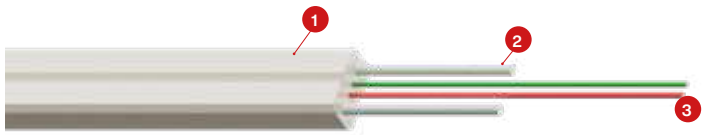
Temperature range

Installation	Operation	Transport&Storage
-5°C to +55°C	-20°C to +70°C	-40°C to +70°C

VC-DCY



FTTH LSOH Flat Drop Cable - 1-4F 250µm - with FRP Rods



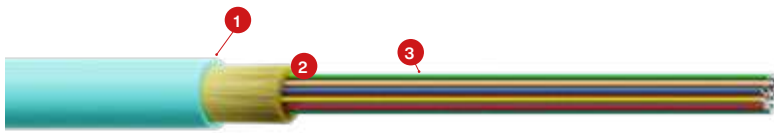
1. LSOH outer jacket LSOH (white/ivory/black)
2. FRP rods
3. Optical fibers 250µm

- FTTH drop cable
- Customer connection
- Fully dielectric
- Last mile connection
- LAN and FTTX networks
- Distribution network
- ODF connections
- Inside house OLT connection

Version	Fibres [pcs]	Outer dimensions	Min. bending radius	Nominal weight (±10%)	Max allowed tension	Max static tension	Crush
1-4F	1-4	3.1x2.0±0.1mm max 3.1x2.0±0.2mm	15-40mm	15kg/km	400N	150N	1500N/10cm

DC-PRIM

Single jacket LSOH cable with aramid yarns reinforcement



1. LSOH outer jacket
2. High modulus aramid yarns
3. 250µm optical fibers

- **Customer connection**
- **Fully dielectric**
- **LAN and FTTX networks**
- **Aramid yarns reinforcement**
- **250µm optical fibers**

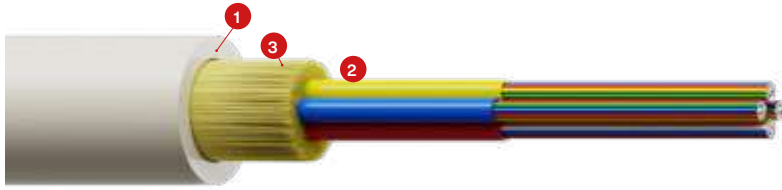
Version	Fibres [pcs]	Ø Nominal (±5%)	Nominal weight (±10%)	Max allowed tension	Max static tension	Crush
12F	12	3.0mm	8kg/km	350N	150N	150N/10cm

Temperature range

Installation	Operation	Transport&Storage
-5°C to +55°C	-10°C to +70°C	-20°C to +70°C

LDC-RISER

Indoor use cable with easy section modules and aramid yarns reinforcement up to 72F



- 1. LSOH outer sheath
- 2. Easy section modules with optical fibres
- 3. Aramid yarns

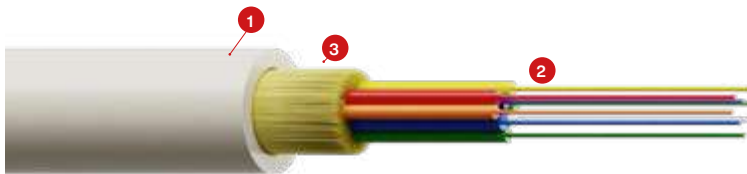
- Indoor use
- CPR class: FCA
- Fully dielectric
- Easy section modules – up to 12 fibres each
- Aramid yarns as a strain relief
- Flame retardant, ivory LSOH outer sheath

Version	Fibres total count [pcs]	Fibres per module [pcs]	Nominal (±0.3%)	Nominal weight (±10%)	Max short term tensile load	Crush
4M x 4F	16	4	7.4mm	40kg/km	1000N	1500N/10cm
6M x 4F	24	4	7.4mm	42kg/km		
8M x 4F	32	4	7.4mm	44kg/km		
8M x 6F	48	6	7.4mm	44kg/km		
1M x 12F	12	12	7.4mm	44kg/km		
2M x 12F	24	12	7.4mm	45kg/km		
4M x 12F	48	12	7.6mm	48kg/km		
6M x 12F	72	12	8.5mm	56kg/km		

LDC LSOH



Indoor mini-breakout cable up to 24 fibres with aramid strength members LDC



1. LSOH outer sheath
2. Buffer tubes (LSOH) or Easy Ejection Modules (LSOH)
3. Aramid yarns as strain relief

- Cable for indoor installation
- Buffer tubes 1F 0.9mm in constructions up to 12 fibres
- ESM 2F 0.9mm in constructions with more than 12 fibres
- Fully dielectric cable
- Flameretardant LSOH outer sheath

Version	Buffer tubes (1F per buffer)[pcs]	ESM (2F per module) [pcs]	Ø Nominal (±5%)	Nominal weight (±10%)	Max allowed tension	Max static tension	Crush
2F	2	0	4.5mm	21kg/km	500N	125N	500N/10cm
4F	4	0	5mm	26kg/km			
6F	6	0	5.5mm	30kg/km			
8F	8	0	6mm	35kg/km	700N	175N	
10F	10	0	6.5mm	40kg/km			
12F	12	0	6.5mm	45kg/km	700N	175N	
16F	0	8	6mm	36kg/km	500N	125N	
24F	0	12	6.5mm	46kg/km	700N	175N	

Temperature range

Installation	Operation	Transport&Storage
-5°C to +55°C	0°C to +70°C	-40°C to +70°C

LDC PUR



Indoor / Outdoor mini-breakout cable up to 24 fibers with aramid strength members



1. Outer jacket – PUR
2. Buffer tubes (LSOH) or Easy Section Modules (ESM)
3. Aramid yarns as strain relief

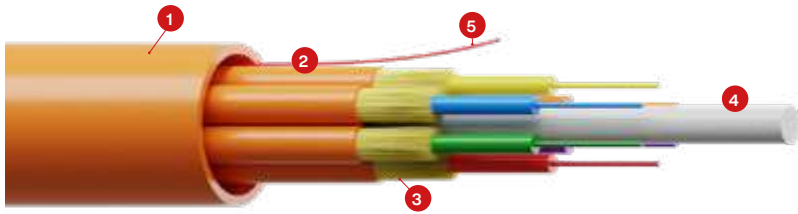
- **Cable for indoor or outdoor installation**
- **Buffer tubes 1F 0.9mm in constructions up to 12 fibres**
- **ESM 2F 0.9mm in variants with more than 12 fibers**
- **Fully dielectric**
- **Aramid yarns as tensile elements**
- **Halogen free and flame retardant outer jacket**

Version	Buffer tubes (1F per buffer)[pcs]	ESM (2F per module) [pcs]	Ø Nominal (±5%)	Nominal weight (±10%)	Max allowed tension	Max static tension	Crush
2F	2	0	6.2mm	28kg/km	500N	250N	2000N/10cm
4F	4	0	6.2mm	29kg/km	500N	250N	
6F	6	0	6.5mm	33kg/km	600N	250N	
12F	12	0	7.5mm	45kg/km	700N	350N	
24F	0	12	7.5mm	47kg/km	700N	350N	

Temperature range

Installation	Operation	Transport&Storage
-10°C to +55°C	-40°C to +70°C	-40°C to +70°C

Indoor / outdoor breakout cable up to 24 fibers with subcables LBR



1. UV stabilized LSOH outer jacket
2. Subcables with tight tubes (LSOH)
3. Aramid yarns as strain relief
4. Central FRP strength member
5. Ripcord

- **Cable for indoor installation**
- **For distribution networks in multifamily buildings**
- **For use in fire exposed places**
- **FTTD Connections**
- **Fully dielectric cable**

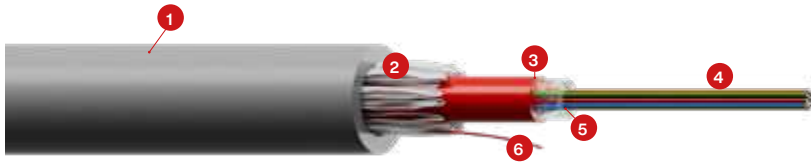
Version	Subcables [pcs]	Ø Nominal (±5%)	Nominal weight (±10%)	Max allowed tension	Max static tension	Crush
4F	4	6.5mm	48kg/km	750N	250N	
6F	6	7.5mm	63kg/km	1200N	400N	
8F	8	8.7mm	85kg/km	1500N	500N	
12F	12	10.9mm	126kg/km	1500N	500N	2000N/10cm
16F	16	11.3mm	121kg/km	1700N	550N	
18F	18	11.3mm	131kg/km	1700N	550N	
24F	24	13.0mm	179kg/km	2000N	660N	

Temperature range

Installation	Operation	Transport&Storage
-5°C to +55°C	-20°C to +70°C	-40°C to +70°C

EXO-D0

Universal single jacket LSOH central loose tube cable with fiberglass reinforcement



1. LSOH outer jacket
2. Glass yarns
3. Central tube (PBT)
4. Optical fibers
5. Thixotropic filling compound
6. Ripcord

- **Internal installation**
- **External installation into teletechnical ducts**
- **Fully dielectric**
- **Basic rodent protection**
- **LAN and FTTX networks**
- **Distribution network**
- **ODF connections**



Version	Fibres [pcs]	Fibres per tube [pcs]	Ø Nominal (±0.3mm)	Nominal weight (±10%)	Max allowed tension	Max static tension	Crush
1T x 2-24F	2- 24	2- 24	5.5mm	37kg/km	1300N	400N	1500N/10cm

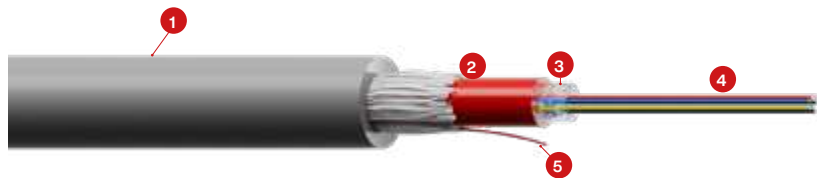
Temperature range

Installation	Operation	Transport&Storage
+5°C to +40°C	-10°C to +60°C	-20°C to +60°C

EXO-G



Universal single jacket LSOH central loose tube cable with fiberglass reinforcement



- 1. LSOH outer jacket
- 2. Glass yarns
- 3. Central tube (PBT) with filling compound
- 4. Optical fibers 250µm
- 5. Ripcord

- **Internal installation**
- **External installation into teletechnical ducts**
- **Fully dielectric**
- **Basic rodent protection**
- **LAN and FTTX networks**
- **Distribution network**
- **ODF connections**



Version	Fibres [pcs]	Fibres per tube [pcs]	Ø Nominal (±5%)	Nominal weight (±10%)	Max allowed tension	Max static tension	Crush
EXO-GI							
1T x 2F	2	2	6.1mm	38kg/km	2700N	500N	1500N/10cm
1T x 4F	4	4	6.1mm	38kg/km			
1T x 6F	6	6	6.1mm	39kg/km			
1T x 8F	8	8	6.1mm	40kg/km			
1T x 12F	12	12	6.1mm	40kg/km			
1T x 16F	16	16	6.1mm	41kg/km			
1T x 18F	18	18	6.1mm	42kg/km			
1T x 24F	24	24	6.1mm	42kg/km			
EXO-G0							
1T x 2F	2	2	5.9mm	37kg/km	2000N	500N	1500N/10cm
1T x 4F	4	4	5.9mm	37kg/km			
1T x 6F	6	6	5.9mm	37kg/km			
1T x 8F	8	8	5.9mm	37kg/km			
1T x 12F	12	12	5.9mm	38kg/km			
1T x 16F	16	16	5.9mm	38kg/km			
1T x 18F	18	18	5.9mm	38kg/km			
1T x 24F	24	24	5.9mm	40kg/km			

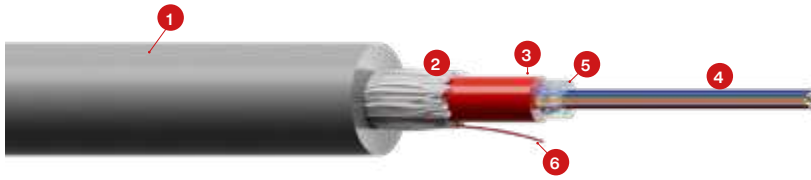


Universal single jacket LSOH central loose tube cable with fiberglass reinforcement

Version	Fibres [pcs]	Fibres per tube [pcs]	Ø Nominal (±5%)	Nominal weight (±10%)	Max allowed tension	Max static tension	Crush
EXO-GU							
1T x 2F	2	2	5.8mm	34kg/km			
1T x 4F	4	4	5.8mm	34kg/km			
1T x 6F	6	6	5.8mm	35kg/km			
1T x 8F	8	8	5.8mm	35kg/km	1800N	400N	1500N/10cm
1T x 12F	12	12	5.8mm	35kg/km			
1T x 16F	16	16	5.8mm	35kg/km			
1T x 18F	18	18	5.8mm	35kg/km			
1T x 24F	24	24	5.8mm	35kg/km			

EXO-FD75

Universal single LSOH jacket central loose tube cable with fiberglass reinforcement



1. LSOH outer jacket
2. Water-blocking fiberglass yarns
3. Central tube
4. Optical fibers
5. Thixotropic filling compound
6. Ripcord – two pieces on opposite sides

- Thermoplastic, UV stabilized, flame retardant outer jacket
- Various colors available on demand
- Central tube Ø3.0mm with thixotropic filing compound and up to 24pcs optical fibers
- Glass yarns as a strain relief and water absorbent elements
- Polyester ripcords – two pieces on opposite sides



Version	Fibres [pcs]	Ø Nominal (±5%)	Nominal sheath thickness	Nominal weight (±10%)	Max allowed tension	Max static tension	Crush
1T 2F	2	7.2mm	1.5mm	65kg/km	2000N	2000N	1600N/10cm
1T 24F	2	7.2mm	1.5mm	65kg/km			

Temperature range

Installation	Operation	Transport&Storage
-5°C to +55°C	-10°C to +60°C	-40°C to +70°C

CRP Euroclass

REFERENCE NO.

CPR B2ca

EXO-FD75-xxx

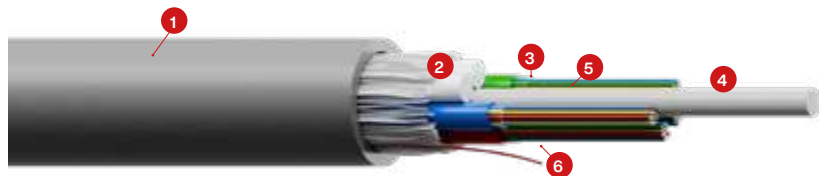
CPR Cca

EXO-FD75C-xxx

*xxx – product code depending of type and number of fiber, sheath and fibers color, type of tube

BDC-MSA

Basic duct cable with multitube structure



1. LSOH sheath
2. Water-blocking fiberglass yarns
3. Filling compound
4. Water-blocking yarns
5. Central strength member (FRP)
6. Loose tubes (PBT)
7. Fillers
8. Optical fibres
9. Ripcord

- For installation into existing ducts
- LSOH outer sheath
- Fully dielectric Fiberglass yarns as a strain relief and rodent protection
- Rodent protection
- Loose tubes (PBT Ø 1.8mm) with filing compound
- Fillers (if applicable)



Version	Fibres [pcs]	Fibres per tube [pcs]	Ø Nominal (±5%)	Nominal weight (±10%)	Max allowed tension	Max static tension	Crush
1-6T x 2F	2-12	2	8.2mm	64kg/km	1500N	900N	1500N/10cm
1-6T x 4F	4-24	4	8.2mm	65kg/km	1500N	800N	
1-6T x 6F	6-36	6	8.2mm	65kg/km	1500N	700N	
1-6T x 8F	8-48	8	8.2mm	66kg/km	1500N	600N	
1-6T x 12F	12-72	12	8.2mm	69kg/km	1500N	550N	
8T x 6F	48	6	9.3mm	85kg/km	2000N	1000N	
8T x 12F	96	12	9.3mm	86kg/km	1600N	650N	
12T x 12F	144	12	11.5mm	126kg/km	1800N	850N	

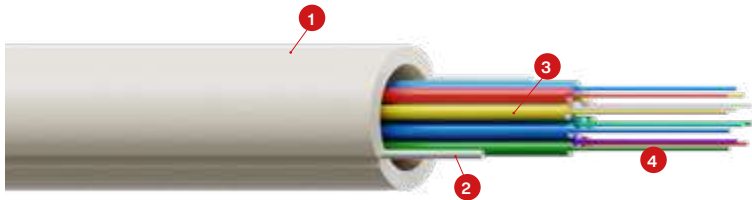
Temperature range

Installation	Operation	Transport&Storage
-5°C to +55°C	-10°C to +60°C	-40°C to +70°C

EAC RAS



Easy access single LSOH jacket cable with retractable buffers



- **Distribution cable**
- **For laying in risers**
- **FTTH feeder**
- **Easy access and installation**
- **FRP strength members inside cable jacket**
- **LSOH outer jacket**



Version	Fibres [pcs]	Fibres per module [pcs]	Ø Nominal (±5%)	Nominal weight (±10%)	Max allowed tension	Crush
8F	8	8	8.7mm	68kg/km	400N	1000N/10cm
12F	12	12	8.7mm	72kg/km	400N	
16F	16	16	12.0mm	98kg/km	600N	
24F	24	24	12.0mm	106kg/km	600N	

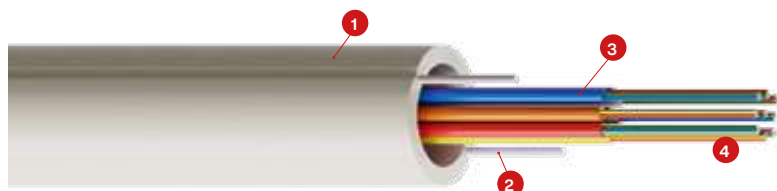
Temperature range

Installation	Operation	Transport&Storage
-5°C to +55°C	-20°C to +70°C	-40°C to +70°C

EAC-RAM ESM



Easy access, single LSOH jacket cable with retractable Easy Section Modules (ESM)



1. LSOH outer sheath
2. Dielectric strength members in cable jacket
3. Easy Section Module (ESM) 2-12F
4. Optical fibres 250µm

- **Distribution cable**
- **For laying in risers**
- **FTTH feeder**
- **Easy access and installation**
- **FRP strength members inside cable jacket**
- **Optical fibres in bundles**



Version	Fibres [pcs]	Modules [pcs]	Ø Nominal (±5%)	Nominal weight (±10%)	Max allowed tension	Crush
2F Easy Section Modules	2-24	1-12	8.7mm	69kg/km	400N	1000N/10cm
	26-30	13-15	10.5mm	83kg/km	400N	
	32-48	16-24	12.0mm	106kg/km	600N	
4F Easy Section Modules	2-48	1-12	8.7mm	70kg/km	400N	
	52-60	13-15	10.5mm	85kg/km	400N	
	64-96	16-24	12.0mm	110kg/km	600N	
6F Easy Section Modules	6-48	1-8	8.7mm	75kg/km	400N	
	54-72	9-12	10.5mm	112kg/km	400N	
	78-96	13-16	12.0mm	130kg/km	600N	
8F Easy Section Modules	8-32	1-4	8.7mm	67kg/km	400N	
	40-96	5-12	10.5mm	90kg/km	400N	
12F Easy Section Modules	12-48	1-4	8.7mm	70kg/km	400N	
	60-96	5-8	10.5mm	90kg/km	400N	
	108-144	9-12	12.0mm	115kg/km	600N	

Temperature range

Installation	Operation	Transport&Storage
-5°C to +60°C	-10°C to +60°C	-40°C to +70°C

VC-T501



FTTH indoor/outdoor double jacket drop cable with aramid yarns and FRP rods reinforcement



1. HDPE outer jacket
2. Aramid yarns
3. LSOH subcable
4. FRP rod
5. Easy Section Module with optical fibres
6. Ripcord

- Drop cable for FTTH networks
- Optical access cable with aramid yarns reinforcement
- Direct buried construction
- Fully dielectric cable
- Last mile connection



Euroclass of inner cable

Version	Fibers [pcs]	Fibers per module [pcs]	Total elements	Ø Nominal ±0.2	Nominal weight ±10mm	Max allowed tension	Crush
1x1F	1	1	1	5.0mm	25kg/km	800N	2000N/10cm
1x2F	2	2	1	5.0mm	25kg/km	800N	
1x2F	4	4	1	5.0mm	25kg/km	800N	

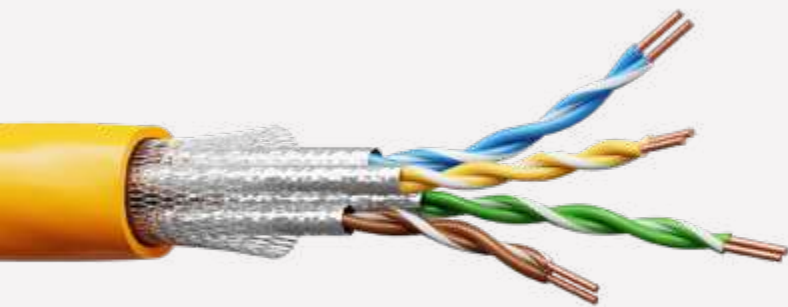
Fiber count

Loading conditions	Span	Installed sag (2%)	Tension	Total sag	Horizontal sag	Vertical sag
NESC light	100m	2m	800N	4.2m	4m	1.5m
NESC medium	45m	0.9m	800N	2m	1.3m	1.6m
NESC heavy	20m	0.4m	800N	0.8m	0.5m	0.8m

Temperature range

Installation	Operation	Transport&Storage
-15°C to +55°C	-40°C to +70°C	-40°C to +70°C

02. Installation cables





Compact dimensions



Full range of performance



Excellent transmission parameters

CPR Classified Cables



All cables in accordance with CPR Construction Product Regulation

Installation cables

FibrainDATA® Cat.5e U/UTP

4 twisted pairs copper installation cable



5.0mm



200MHz

- Cat.5e
- 200MHz
- Cable nominal diameter: 5.0mm
- Conductor nominal diameter AWG24
- NVP 68%
- Separation class: B

VARIANT

REFERENCE NO.

● PVC, CPR E _{CA} class, 305m box, grey	XE100.101
● PVC, CPR E _{CA} class, 500m reel, grey	XE100.102
● PVC, CPR E _{CA} class, 1000m reel, grey	XE100.103
● LSZH, CPR D _{CA} class - s2, d2, a1, 305m box, green	XE100.105
● LSZH, CPR D _{CA} class - s2, d2, a1, 500m reel, green	XE100.106
● LSZH, CPR D _{CA} class - s2, d2, a1, 1000m reel, green	XE100.107

FibrainDATA® Cat.5e U/UTP

4 twisted pairs copper installation cable



5.6mm



200MHz

- Cat.5e
- 200MHz
- Cable nominal diameter: 5.6mm
- Conductor nominal diameter WG24
- NVP 68%
- Separation class: C

VARIANT

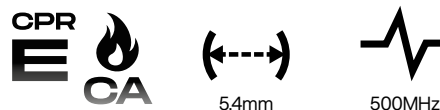
REFERENCE NO.

● PVC, CPR E _{CA} class, 305m box, grey	XE100.111
● PVC, CPR E _{CA} class, 500m reel, grey	XE100.112
● PVC, CPR E _{CA} , 1000m reel, grey	XE100.113
● LSZH, CPR D _{CA} class - s2, d2, a1, 305m box, green	XE100.115
● LSZH, CPR D _{CA} class - s2, d2, a1, 500m reel, green	XE100.116
● LSZH, CPR D _{CA} class - s2, d2, a1, 1000m reel, green	XE100.117

Installation cables

FibrainDATA® Cat.6 U/UTP

4 twisted pairs copper installation cable

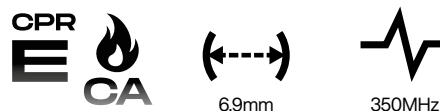


- Cat.6
- 500 MHz
- Cable nominal diameter 5.4mm
- Conductor nominal diameter AWG23
- NVP 68%
- Separation class: B

VARIANT	REFERENCE NO.
● PVC, CPR E _{CA} class, 305m box, grey	XQ100.101
● PVC, CPR E _{CA} class, 500m reel, grey	XQ100.102
● LSZH, CPR D _{CA} class - s2, d2, a1, 305m box, green	XQ100.105
● LSZH, CPR D _{CA} class - s2, d2, a1, 500m reel, green	XQ100.106

FibrainDATA® Cat.6 F/UTP

4 twisted pairs copper installation cable



- Cat.6
- 350MHz
- Cable nominal diameter 6.9mm
- Conductor nominal diameter AWG23
- NVP 70%
- Separation class: C

VARIANT	REFERENCE NO.
● LSZH, CPR D _{CA} class - s2, d2, a1, 305m box, green	XQ100.115
● LSZH, CPR D _{CA} class - s2, d2, a1, 500m reel, green	XQ100.116

Installation cables

FibrainDATA® Cat.6 U/FTP

4 twisted pairs copper installation cable



6.9 mm



400 MHz



- Cat.6
- 400 MHz
- Cable nominal diameter 6.9mm
- Conductor nominal diameter AWG23
- NVP 79%
- Separation class: C

VARIANT

REFERENCE NO.

● LSZH, CPR D_{ca} class - s2, d2, a1, 500m reel, blue

XQ1221046320

FibrainDATA® Cat.6_A U/FTP

4 twisted pairs copper installation cable



6.9 mm



500 MHz



- Cat. 6_A
- 500 MHz
- Cable nominal diameter 6.9 mm
- Conductor nominal diameter AWG23
- NVP 79%
- Separation class: C

VARIANT

REFERENCE NO.

● LSFRZH, CPR D_{ca} class - s2, d2, a1, 500m reel, aqua

XR1281046320

FibrainDATA® Cat. 6_A S/FTP

4 twisted pairs copper installation cable



7.2 mm



500 MHz



- Cat. 6_A
- 500 MHz
- Cable nominal diameter 7.2 mm
- Conductor nominal diameter AWG23
- NVP 79%
- Separation class: D

VARIANT

REFERENCE NO.

● LSFRZH, CPR D_{ca} class - s2, d2, a1, 500m reel, aqua

XR1481046321

Installation cables

FibrainDATA® Cat. 6_A S/FTP

4 twisted pairs copper installation cable



- Cat. 6_A
- 650MHz
- Cable nominal diameter 7.4mm
- Conductor nominal diameter AWG23
- NVP 79%
- Separation class: D

VARIANT

REFERENCE NO.

● LSFRZH, CPR B2_{CA} class - s1a, d1, a1, 500m reel, aqua

XR1431048130

FibrainDATA® Cat. 6_A F/FTP

4 twisted pairs copper installation cable



- Cat. 6_A
- 650MHz
- Cable nominal diameter 7.5mm
- Conductor nominal diameter AWG23
- NVP 79%
- Separation class: C

VARIANT

REFERENCE NO.

● LSFRZH, CPR B2_{CA} class - s1a, d1, a1, 1000m reel, aqua

XR1331048136

FibrainDATA® Cat.7 S/FTP

4 twisted pairs copper installation cable



- Cat.7
- 900MHz
- Cable nominal diameter 7.3mm
- Conductor nominal diameter AWG23
- NVP 79%
- Separation class: D

VARIANT

REFERENCE NO.

● LSFRZH, CPR D_{CA} class - s2, d1, a1, 500m reel, orange

XX1441046321

Installation cables

FibrainDATA® Cat.7_A S/FTP

4 twisted pairs copper installation cable



7.8mm



1200MHz

- Cat. 7_A
- 1200MHz
- Cable nominal diameter 7.8mm
- Conductor nominal diameter AWG23
- NVP 76%
- Separation class: D

VARIANT

REFERENCE NO.

● LSFRZH, CPR D_{CA} class - s2, d1, a1, 500m reel, yellow

XS1451046321

FibrainDATA® Cat.7_A S/FTP

4 twisted pairs copper installation cable



7.9mm



1200MHz

- Cat.7_A
- 1200 MHz
- Cable nominal diameter 7.9mm
- Conductor nominal diameter AWG23
- NVP 76%
- Separation class: C

VARIANT

REFERENCE NO.

● LSFRZH, CPR B2_{CA} class - s1a, d1, a1, 500m reel, yellow

XS1451048130

HD

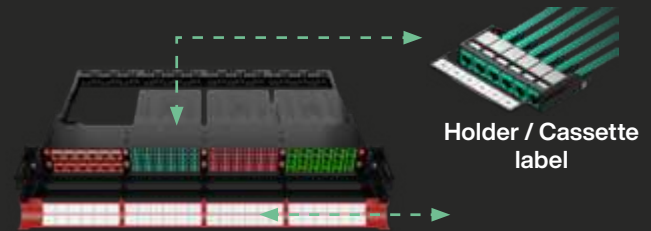
FIBRAIN HIGH DENSITY

FIBRAIN HD family

→ hd.FIBRAIN.com

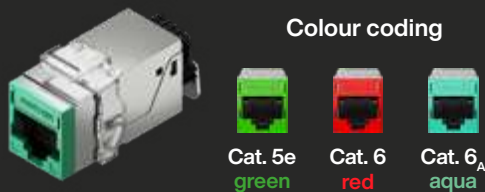
1 Patch Panels

Scalability / Freedom of arrangement / Modularity
Wide range of applications / Saving precious space in the 19" rack / Quick and easy installation



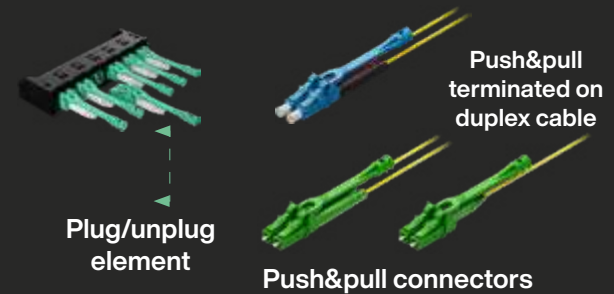
2 HD RJ45 modules

Wide range of applications / Saving precious space in the 19" rack / Quick and easy installation



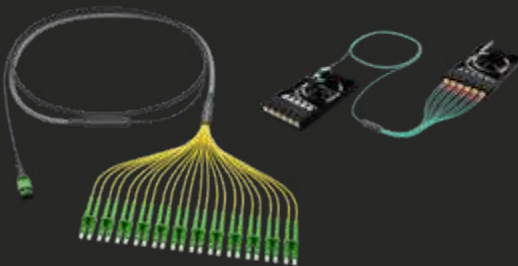
3 HD patchcords

6/12 FO variants / SM/MM fibers / PC/APC polishing / Uniboot option



4 Harness cables

Wide range of applications / Saving precious space in the 19" rack / Quick and easy installation



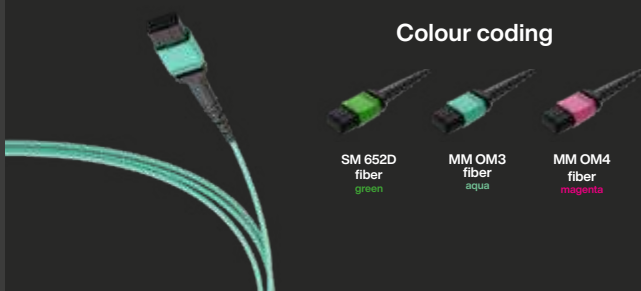
5 Copper patchcords

Compact dimensions / Full range of performance / Colour identification



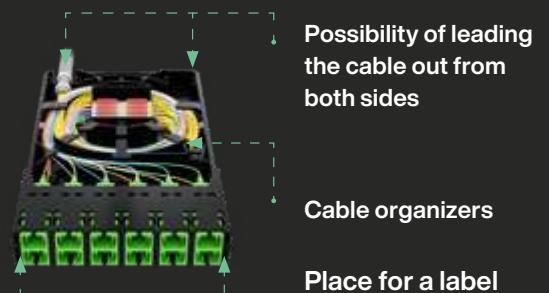
6 MPO trunk cables

A/B/C polarization / PC/APC polishing / Gender F/F F/M, M/F / MTP® standard



7 HD FO cassettes

6/12 FO ports / SC/LC interface support / Closed construction dust protection



03. HD RJ45 modules



Scalability / Freedom of arrangement / Modularity

Wide range of applications /
Saving precious space in the 19" rack
/ Quick and easy installation



Compact
dimensions



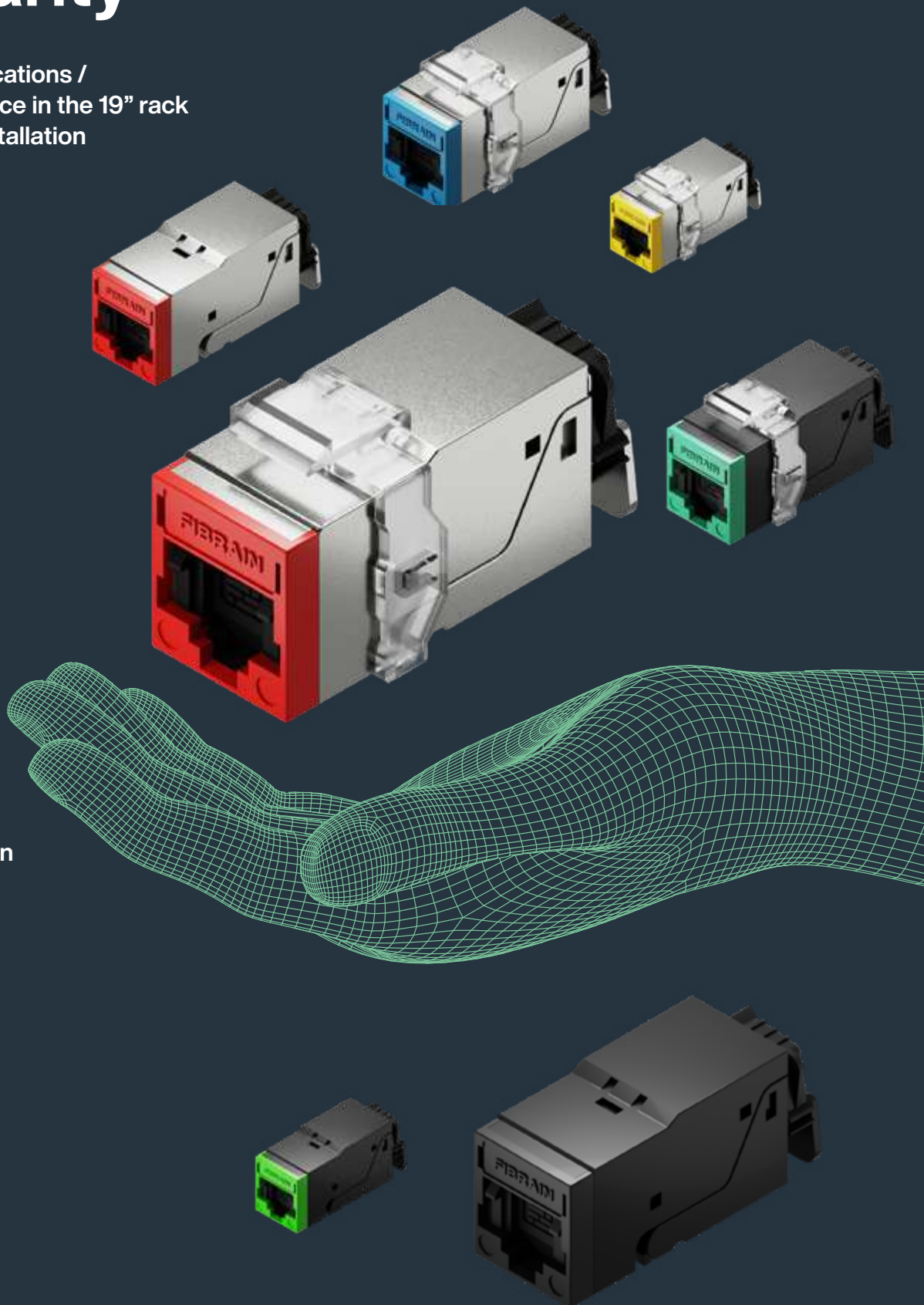
Full range
of performance



Excellent transmission
parameters



IDC technology



HD RJ45 modules

HD RJ45 module Cat.5, unshielded (u)



Compact dimensions



IDC technology



Easy to install

- IDC technology
- Colour identification
- Anti-dust cover
- Body material: Plastic (UL94-V0)
- Min. connection cycles std/typ: 750/1000
- Min. module re-termination: 20
- Possibility of tool-less module termination
- Pair furcation sequence identification 568A/568B
- Performance proven by certificates

VARIANT

REFERENCE NO.

● Cat.5e/u, HD, up to 48p/1U, no keystone adapter, green	XE100
● Cat.5e/u, HD, up to 48p/1U, keystone adapter, green	XE110

HD RJ45 module Cat.5, shielded (s)



Compact dimensions



IDC technology



Easy to install

- IDC technology
- Colour identification
- Anti-dust cover
- Body material: Die cast
- Shielding 360°
- Min. connection cycles std/typ: 750/1000
- Min. module re-termination: 20
- Possibility of tool-less module termination
- Pair furcation sequence identification 568A/568B
- Performance proven by certificates

VARIANT

REFERENCE NO.

● Cat.5e/s, HD, up to 48p/1U, no keystone adapter, green	XE200
● Cat.5e/s, HD, do 48p/1U, keystone adapter, green	XE210

HD RJ45 modules

HD RJ45 module Cat.6, unshielded (u)



Compact dimensions



IDC technology



Easy to install

- IDC technology
- Colour identification
- Anti-dust cover
- Body material: Plastic (UL94-V0)
- Min. connection cycles std/typ: 750/1000
- Min. module re-termination: 20
- Possibility of tool-less module termination
- Pair furcation sequence identification 568A/568B
- Performance proven by certificates

VARIANT

REFERENCE NO.

● Cat.6/u, HD, up to 48p/1U, no keystone adapter, red	XQ100
● Cat.6/u, HD, up to 48p/1U, keystone adapter, red	XQ110

HD RJ45 module Cat.6, shielded (s)



Compact dimensions



IDC technology



Easy to install

- IDC technology
- Colour identification
- Anti-dust cover
- Body material: Die cast
- Shielding 360°
- Min. connection cycles std/typ: std/typ1000
- Min. module re-termination: 20
- Possibility of tool-less module termination
- Pair furcation sequence identification 568A/568B
- Performance proven by certificates

VARIANT

REFERENCE NO.

● Cat.6/s, HD, up to 48p/1U, no keystone adapter, red	XQ200
● Cat.6/s, HD, up to 48p/1U, keystone adapter, red	XQ210

HD RJ45 modules

HD RJ45 module Cat.6_A, unshielded (u)



Compact dimensions



IDC technology



Easy to install

- IDC technology
- Colour identification
- Anti-dust cover
- Body material: Plastic (UL94-V0)
- Min. connection cycles std/typ: 750/1000
- Min. module re-termination: 20
- Possibility of tool-less module termination
- Pair furcation sequence identification 568A/568B
- Performance proven by certificates

VARIANT

REFERENCE NO.

● Cat.6 _A /u, HD, up to 48p/1U, no keystone adapter, aqua	XR100
● Cat.6 _A /u, HD, up to 48p/1U, keystone adapter, aqua	XR110

HD RJ45 module Cat.6_A, shielded (s)



Compact dimensions



IDC technology



Easy to install

- IDC technology
- Colour identification
- Anti-dust cover
- Body material: Die cast
- Shielding 360°
- Min. connection cycles std/typ: 750/1000
- Min. module re-termination: 20
- Possibility of tool-less module termination
- Pair furcation sequence identification 568A/568B
- Performance proven by certificates

VARIANT

REFERENCE NO.

● Cat.6A/s, HD, do 48p/1U, no keystone adapter, aqua	XR200
● Cat.6A/s, HD, do 48p/1U, no keystone adapter, aqua	XR210

HD RJ45 modules

Cat.6_A connector for manual termination, shielded (s)



- Qualified Cat.6A performance according to: ISO 11801, EN 50173, ANSI/TIA 568.2-D
- Screened
- The highest quality guaranteeing large margins of transmission parameters over the requirements of the standards
- The best performance in conjunction with FibrainDATA connection modules
- Component complies to IEC 60603-7-51
- Efficient signal compensation inside a module
- Module construction equipped with an element for attaching the inserted cable without the use of cable ties
- IDC termination technology
- Pins covered with layer of gold
- Wire manager guaranty a minimal untwist of wire pairs
- Metal housing ensuring EMC 360° protection
- Color coding enabled
- Identification according 568B

VARIANT

Cat.6_A, 4P, straight 180°

Cat.6_A, 4P, angled every 90°

REFERENCE NO.

XR300

XR310

Straight field connector



90° angled field connector



04. Copper patchcords



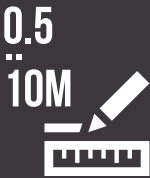
Patchcords **are the last, but not least** element of the transmission line, before active devices.



Compact dimensions



Full range of performance



Standard length
0.5 – 10m



Copper Patchcords

Cat.5e patchcord, unshielded U/UTP, LSZH, 200MHz



200MHz



5.2mm



- Mechanically terminated
- Colour identification
- Cable nominal diameter 5.2mm
- Conductor nominal diameter AWG 26/7
- Connector material: Plastic
- Min. connection cycles std/typ: 750/1000
- Pair furcation sequence identification 568B
- LSZH outer sheath
- PoE/PoE+ support

VARIANT

REFERENCE NO.

● Cat.5e, U/UTP, LSZH, 200MHz, grey, 0.5m	XEP0050.GY020
● Cat.5e,U/UTP, LSZH, 200MHz, grey, 1.0m	XEP0100.GY020
● Cat.5e, U/UTP, LSZH, 200MHz, grey, 2.0m	XEP0200.GY020
● Cat.5e, U/UTP, LSZH, 200MHz, grey, 3.0m	XEP0300.GY020
● Cat.5e, U/UTP, LSZH, 200MHz, grey, 5.0m	XEP0500.GY020

Cat.5e patchcord, shielded F/UTP, LSZH, 200MHz



200MHz



5.6mm



- Mechanically terminated
- Colour identification
- Cable nominal diameter 5.6mm
- Conductor nominal diameter AWG 26/7
- Connector material: Plastic
- Min. connection cycles std/typ: 750/1000
- Pair furcation sequence identification 568B
- LSZH outer sheath
- PoE/PoE+ support

VARIANT

REFERENCE NO.

● Cat.5e, F/UTP, LSZH, 200MHz, grey, 0.5m	XEP0050.GY120
● Cat.5e,F/UTP, LSZH, 200MHz, grey, 1.0m	XEP0100.GY120
● Cat.5e, F/UTP, LSZH, 200MHz, grey, 2.0m	XEP0200.GY120
● Cat.5e, F/UTP, LSZH, 200MHz, grey, 3.0m	XEP0300.GY120
● Cat.5e, F/UTP, LSZH, 200MHz, grey, 5.0m	XEP0500.GY120

Copper Patchcords

Cat.6 patchcord, unshielded U/UTP, LSZH, 450MHz



- Mechanically terminated
- Colour identification
- Cable nominal diameter 5.2mm
- Conductor nominal diameter AWG 26/7
- Connector material: Plastic
- Min. connection cycles std/typ: 750/1000
- Pair furcation sequence identification 568B
- LSZH outer sheath
- PoE/PoE+ support

VARIANT	REFERENCE NO.
● Cat.6, U/UTP, LSZH, 450MHz, grey, 0.5m	XQP0050.GY020
● Cat.6, U/UTP, LSZH, 450MHz, grey, 1.0m	XQP0100.GY020
● Cat.6, U/UTP, LSZH, 450MHz, grey, 2.0m	XQP0200.GY020
● Cat.6, U/UTP, LSZH, 450MHz, grey, 3.0m	XQP0300.GY020
● Cat.6, U/UTP, LSZH, 450MHz, grey, 5.0m	XQP0500.GY020

AVAILABLE JACKET COLOURS ● Grey (GY) ● Yellow (YE) ● Green (GY) ● Red (RD) ● Blue (BL)

Cat.6 patchcord, shielded S/FTP, LSFRZ, 900MHz



- Mechanically terminated
- Colour identification
- Cable nominal diameter 5.9mm
- Conductor nominal diameter AWG 26/7
- Connector material: Plastic
- Min. connection cycles std/typ: 750/1000
- Pair furcation sequence identification 568B
- LSFRZH outer sheath
- PoE/PoE+ support

VARIANT	REFERENCE NO.
● Cat.6, S/FTP, LSZH, 900MHz, grey, 0.5m	XQP0050.GY420
● Cat.6, S/FTP, LSZH, 900MHz, grey, 1.0m	XQP0100.GY420
● Cat.6, S/FTP, LSZH, 900MHz, grey, 2.0m	XQP0200.GY420
● Cat.6, S/FTP, LSZH, 900MHz, grey, 3.0m	XQP0300.GY420
● Cat.6, S/FTP, LSZH, 900MHz, grey, 5.0m	XQP0500.GY420

AVAILABLE JACKET COLOURS ● Grey (GY) ● Yellow (YE) ● Green (GY) ● Red (RD) ● Blue (BL)

Copper Patchcords

CU

Cat.6_A patchcord, shielded S/FTP, LSFRZH, 900MHz



- Mechanically terminated
- Colour identification
- Cable nominal diameter 5.9mm
- Conductor nominal diameter AWG 26/7
- Connector material: Plastic
- Min. connection cycles std/typ: 750/1000
- Pair furcation sequence identification 568B
- LSFRZH outer sheath
- PoE/PoE+ support

VARIANT

REFERENCE NO.

● Cat.6 _A S/FTP, LSFRZH, 900MHz, grey, 0.5m	XRP0050.GY420
● Cat.6 _A S/FTP, LSFRZH, 900MHz, grey, 1.0m	XRP0100.GY420
● Cat.6 _A S/FTP, LSFRZH, 900MHz, grey, 2.0m	XRP0200.GY420
● Cat.6 _A S/FTP, LSFRZH, 900MHz, grey, 3.0m	XRP0300.GY420
● Cat.6 _A S/FTP, LSFRZH, 900MHz, grey, 5.0m	XRP0500.GY420

AVAILABLE JACKET COLOURS

- Grey (GY)
 Yellow (YE)
 Green (GY)
 Red (RD)
 Blue (BL)

05. Fiber optic adapters



Fiber optic adapters

SC PC/APC fiber optic adapters

A101 series STANDARD ONE-PIECE



- basic elements of optical fiber lines enabling connection of optical fibers and cables terminated with a SC connector type
- adapters are constructed in one-piece technology, without any welded points, which guarantees more durable design and increased side loading performance
- equipped with a metal mounting clip providing assembly without a screw
- a fully ceramic sleeve, also in multimode adapters, is a characteristic feature of Standard One-Piece SC adapters
- available in simplex or duplex version with flange or flangeless construction in 6 colors

SC simplex adapters with flange



VARIANT	REFERENCE NO.
● SC APC Simplex, SM, green, flange, black dust cup	A101-SCA-SX-1113
● SC PC Simplex, SM, blue, flange, black dust cup	A101-SC-SX-1123
● SC PC Simplex, MM, beige, flange, black dust cup	A101-SC-SX-1153
● SC PC Simplex, MM, aqua, flange, black dust cup	A101-SC-SX-1163
● SC PC Simplex, MM, violet OM4, flange, black dust cup	A101-SC-SX-1173
● SC PC Simplex, MM, green lime OM5, flange, black dust cup	A101-SC-SX-1193
● SC APC Simplex, SM, green, flange, transparent dust cup	A101-SCA-SX-111T
● SC PC Simplex, SM, blue, flange, transparent dust cup	A101-SC-SX-112T
● SC PC Simplex, MM, beige, flange, transparent dust cup	A101-SC-SX-115T
● SC PC Simplex, MM, aqua, flange, transparent dust cup	A101-SC-SX-116T
● SC PC Simplex, MM, violet OM4, flange, transparent dust cup	A101-SC-SX-117T

SC simplex adapters without flange



VARIANT	REFERENCE NO.
● SC APC Simplex, SM, green, flangeless, black dust cup	A101-SCA-SX-1113
● SC PC Simplex, SM, blue, flangeless, black dust cup	A101-SC-SX-1123
● SC PC Simplex, MM, beige, flangeless, black dust cup	A101-SC-SX-1153
● SC PC Simplex, MM, aqua, flangeless, black dust cup	A101-SC-SX-1163
● SC PC Simplex, MM, violet OM4, flangeless, black dust cup	A101-SC-SX-1173
● SC PC Simplex, MM, green lime OM5, flangeless, black dust cup	A101-SC-SX-1193

Fiber optic adapters

SC PC/APC fiber optic adapters

A101 series STANDARD ONE-PIECE



- basic elements of optical fiber lines enabling connection of optical fibers and cables terminated with a SC connector type
- adapters are constructed in one-piece technology, without any welded points, which guarantees more durable design and increased side loading performance
- equipped with a metal mounting clip providing assembly without a screw
- a fully ceramic sleeve, also in multimode adapters, is a characteristic feature of Standard One-Piece SC adapters
- available in simplex or duplex version with flange or flangeless construction in 6 colors

SC duplex adapter with flange



VARIANT	REFERENCE NO.
● SC APC Duplex, SM, green, flange, black dust cup	A101-SCA-DX-1113
● SC PC Duplex, SM, blue, flange, black dust cup	A101-SC-DX-1123
● SC PC Duplex, MM, beige, flange, black dust cup	A101-SC-DX-1153
● SC PC Duplex, MM, aqua, flange, black dust cup	A101-SC-DX-1163
● SC PC Duplex, MM, violet OM4, flange, black dust cup	A101-SC-DX-1173
● SC PC Duplex, MM, green lime OM5, flange, black dust cup	A101-SC-DX-1193
● SC APC Duplex, SM, green, flange, transparent dust cup	A101-SCA-DX-111T
● SC PC Duplex, SM, blue, flange, transparent dust cup	A101-SC-DX-112T
● SC PC Duplex, MM, beige, flange, transparent dust cup	A101-SC-DX-115T
● SC PC Duplex, MM, aqua, flange, transparent dust cup	A101-SC-DX-116T
● SC PC Duplex, MM, violet OM4, flange, transparent dust cup	A101-SC-DX-117T

SC duplex adapter without flange



VARIANT	REFERENCE NO.
● SC APC duplex, SM, green, flangeless, black dust cup	A101-SCA-DX-2113
● SC PC Duplex, SM, blue, flangeless, black dust cup	A101-SC-DX-2123
● SC PC Duplex, MM, beige, flangeless, black dust cup	A101-SC-DX-2153
● SC PC Duplex, MM, aqua, flangeless, black dust cup	A101-SC-DX-2163
● SC PC Duplex, MM, violet OM4, flangeless, black dust cup	A101-SC-DX-2173
● SC PC Duplex, MM, green lime OM5, flangeless, black dust cup	A101-SC-DX-2193

Fiber optic adapters

SC PC/APC shuttered fiber optic adapters

A20 series PREMIUM ONE-PIECE



- basic elements of optical fiber lines enabling connection of optical fibers and cables terminated with a SC connector type
- adapters are constructed in one-piece technology, without any welded points, which guarantees more durable design and increased side loading performance
- equipped with a metal mounting clip providing assembly without a screw
- a fully ceramic sleeve, also in multimode adapters, is a characteristic feature of Standard One-Piece SC adapters
- available in simplex or duplex version with flange or flangeless construction in 6 colors
- dust protection
- equipped with internal or external shutter - protect against laser radiation and guarantees protection for the eyes

SC simplex adapter with flange and with external shutter



VARIANT	REFERENCE NO.
● SC APC Simplex, SM, green, flange, external shutter	AS20-SCA-SX-21113
● SC PC Simplex, SM, blue, flange, external shutter	AS20-SC-SX-21123
● SC PC Simplex, MM, beige, flange, external shutter	AS20-SC-SX-21153
● SC PC Simplex, MM, aqua OM3, flange, external shutter	AS20-SC-SX-21163
● SC PC Simplex, MM, violet OM4, flange, external shutter	AS20-SC-SX-21173
● SC PC Simplex, MM, green lime OM5, flange, external shutter	AS20-SC-SX-21193

SC simplex adapter without flange and with external shutter



VARIANT	REFERENCE NO.
● SC APC Simplex, SM, green, flangeless, external shutter	AS20-SCA-SX-22113
● SC PC Simplex, SM, blue, flangeless, external shutter	AS20-SC-SX-22123
● SC PC Simplex, MM, beige, flangeless, external shutter	AS20-SC-SX-22153
● SC PC Simplex, MM, aqua, flangeless, external shutter	AS20-SC-SX-22163
● SC PC Simplex, MM, violet OM4, flangeless, external shutter	AS20-SC-SX-22173
● SC PC Simplex, MM, green lime OM5, flangeless, external shutter	AS20-SC-SX-22193

Fiber optic adapters

SC PC/APC shuttered fiber optic adapters

A20 series PREMIUM ONE-PIECE



- basic elements of optical fiber lines enabling connection of optical fibers and cables terminated with a SC connector type
- adapters are constructed in one-piece technology, without any welded points, which guarantees more durable design and increased side loading performance
- equipped with a metal mounting clip providing assembly without a screw
- a fully ceramic sleeve, also in multimode adapters, is a characteristic feature of Standard One-Piece SC adapters
- available in simplex or duplex version with flange or flangeless construction in 6 colors
- dust protection
- equipped with internal or external shutter - protect against laser radiation and guarantees protection for the eyes

SC duplex adapter with flange and with external shutter



VARIANT	REFERENCE NO.
● SC APC Duplex, SM, green, flange, external shutter	AS20-SCA-DX-21113
● SC PC Duplex, SM, blue, flange, external shutter	AS20-SC-DX-21123
● SC PC Duplex, MM, beige, flange, external shutter	AS20-SC-DX-21153
● SC PC Duplex, MM, aqua OM3, flange, external shutter	AS20-SC-DX-21163
● SC PC Duplex, MM, violet OM4, flange, external shutter	AS20-SC-DX-21173
● SC PC Duplex, MM, green lime OM5, flange, external shutter	AS20-SC-DX-21193

SC duplex adapter without flange and with external shutter



VARIANT	REFERENCE NO.
● SC APC Duplex, SM, green, flangeless, external shutter	AS20-SCA-DX-22113
● SC PC Duplex, SM, blue, flangeless, external shutter	AS20-SC-DX-22123
● SC PC Duplex, MM, beige, flangeless, external shutter	AS20-SC-DX-22153
● SC PC Duplex, MM, aqua, flangeless, external shutter	AS20-SC-DX-22163
● SC PC Duplex, MM, violet OM4, flangeless, external shutter	AS20-SC-DX-22173
● SC PC Duplex, MM, green lime OM5, flangeless, external shutter	AS20-SC-DX-22193

Fiber optic adapters

SC PC/APC shuttered fiber optic adapters

A20 series PREMIUM ONE-PIECE



- basic elements of optical fiber lines enabling connection of optical fibers and cables terminated with a SC connector type
- adapters are constructed in one-piece technology, without any welded points, which guarantees more durable design and increased side loading performance
- equipped with a metal mounting clip providing assembly without a screw
- a fully ceramic sleeve, also in multimode adapters, is a characteristic feature of Standard One-Piece SC adapters
- available in simplex or duplex version with flange or flangeless construction in 6 colors
- dust protection
- equipped with internal or external shutter - protect against laser radiation and guarantees protection for the eyes

SC simplex adapter with flange and with internal shutter



VARIANT	REFERENCE NO.
● SC APC Simplex, SM, green, flange, internal shutter	AS20-SCA-SX-11113
● SC PC Simplex, SM, blue, flange, internal shutter	AS20-SC-SX-11123
● SC PC Simplex, MM, beige, flange, internal shutter	AS20-SC-SX-11153
● SC PC Simplex, MM, aqua OM3, flange, internal shutter	AS20-SC-SX-11163
● SC PC Simplex, MM, violet OM4, flange, internal shutter	AS20-SC-SX-11173
● SC PC Simplex, MM, green lime OM5, flange, internal shutter	AS20-SC-SX-11193

SC simplex adapter without flange and with internal shutter



VARIANT	REFERENCE NO.
● SC APC Simplex, SM, green, flangeless, internal shutter	AS20-SCA-SX-12113
● SC PC Simplex, SM, blue, flangeless, internal shutter	AS20-SC-SX-12123
● SC PC Simplex, MM, beige, flangeless, internal shutter	AS20-SC-SX-12153
● SC PC Simplex, MM, aqua OM3, flangeless, internal shutter	AS20-SC-SX-12163
● SC PC Simplex, MM, violet OM4, flangeless, internal shutter	AS20-SC-SX-12173
● SC PC Simplex, MM, green lime OM5, flangeless, internal shutter	AS20-SC-SX-12193

Fiber optic adapters

SC PC/APC shuttered fiber optic adapters

A20 series PREMIUM ONE-PIECE



- basic elements of optical fiber lines enabling connection of optical fibers and cables terminated with a SC connector type
- adapters are constructed in one-piece technology, without any welded points, which guarantees more durable design and increased side loading performance
- equipped with a metal mounting clip providing assembly without a screw
- a fully ceramic sleeve, also in multimode adapters, is a characteristic feature of Standard One-Piece SC adapters
- available in simplex or duplex version with flange or flangeless construction in 6 colors
- dust protection
- equipped with internal or external shutter - protect against laser radiation and guarantees protection for the eyes

SC duplex adapter with flange and with internal shutter



VARIANT	REFERENCE NO.
● SC APC Duplex, SM, green, flange, internal shutter	AS20-SCA-DX-11113
● SC PC Duplex, SM, blue, flange, internal shutter	AS20-SC-DX-11123
● SC PC Duplex, MM, beige, flange, internal shutter	AS20-SC-DX-11153
● SC PC Duplex, MM, aqua OM3, flange, internal shutter	AS20-SC-DX-11163
● SC PC Duplex, MM, violet OM4, flange, internal shutter	AS20-SC-DX-11173
● SC PC Duplex, MM, green lime OM5, flange, internal shutter	AS20-SC-DX-11193

SC simplex adapter without flange and with internal shutter



VARIANT	REFERENCE NO.
● SC APC Duplex, SM, green, flangeless, internal shutter	AS20-SCA-DX-12113
● SC PC Duplex, SM, blue, flangeless, internal shutter	AS20-SC-DX-12123
● SC PC Duplex, MM, beige, flangeless, internal shutter	AS20-SC-DX-12153
● SC PC Duplex, MM, aqua, flangeless, internal shutter	AS20-SC-DX-12163
● SC PC Duplex, MM, violet OM4, flangeless, internal shutter	AS20-SC-DX-12173
● SC PC Duplex, MM, green lime OM5, flangeless, internal shutter	AS20-SC-DX-12193

Fiber optic adapters

LC PC/APC fiber optic adapters

A001 series STANDARD ONE-PIECE



- basic elements of optical fiber lines enabling connection of optical fibers and cables terminated with a LC connector type
- adapters are constructed in one-piece technology, without any welded points, which guarantees more durable design and increased side loading performance
- equipped with a metal mounting clip providing assembly without a screw
- a fully ceramic sleeve, also in multimode adapters, is a characteristic feature of Standard One-Piece LC adapters
- available in duplex or quad (4X) version with flange or flangeless construction in 6 colors

LC duplex adapter with flange



VARIANT	REFERENCE NO.
● LC APC Duplex, SM, green, flange, white dust cup	A001-LCA-DX-1118
● LC PC Duplex, SM, blue, flange, white dust cup	A001-LC-DX-1128
● LC PC Duplex, MM, beige, flange, white dust cup	A001-LC-DX-1158
● LC PC Duplex, MM, aqua, flange, white dust cup	A001-LC-DX-1168
● LC PC Duplex, MM, violet OM4, flange, white dust cup	A001-LC-DX-1178
● LC PC Duplex, MM, green lime OM5, flange, white dust cup	A001-LC-DX-1198

LC duplex adapter without flange



VARIANT	REFERENCE NO.
● LC APC Duplex, SM, green, flangeless, white dust cup	A001-LCA-DX-2118
● LC PC Duplex, SM, blue, flangeless, white dust cup	A001-LC-DX-2128
● LC PC Duplex, MM, beige, flangeless, white dust cup	A001-LC-DX-2158
● LC PC Duplex, MM, aqua, flangeless, white dust cup	A001-LC-DX-2168
● LC PC Duplex, MM, violet OM4, flangeless, white dust cup	A001-LC-DX-2178
● LC PC Duplex, MM, green lime OM5, flangeless, white dust cup	A001-LC-DX-2198

Fiber optic adapters

LC PC/APC fiber optic adapters

A001 series STANDARD ONE-PIECE



- basic elements of optical fiber lines enabling connection of optical fibers and cables terminated with a LC connector type
- adapters are constructed in one-piece technology, without any welded points, which guarantees more durable design and increased side loading performance
- equipped with a metal mounting clip providing assembly without a screw
- a fully ceramic sleeve, also in multimode adapters, is a characteristic feature of Standard One-Piece LC adapters
- available in duplex or quad (4X) version with flange or flangeless construction in 6 colors

LC quad adapter with flange



VARIANT	REFERENCE NO.
● LC APC Quad, SM, green, flange, white dust cup	A001-LCA-4X-1118
● LC PC Quad, SM, blue, flange, white dust cup	A001-LC-4X-1128
● LC PC Quad, MM, beige, flange, white dust cup	A001-LC-4X-1158
● LC PC Quad, MM, aqua, flange, white dust cup	A001-LC-4X-1168
● LC PC Quad, MM, violet OM4, flange, white dust cup	A001-LC-4X-1178
● LC PC Quad, MM, green lime OM5, flange, white dust cup	A001-LC-4X-1198

LC quad adapter without flange



VARIANT	REFERENCE NO.
● LC APC Quad, SM, green, flangeless, white dust cup	A001-LCA-4X-2118
● LC PC Quad, SM, blue, flangeless, white dust cup	A001-LC-4X-2128
● LC PC Quad, MM, beige, flangeless, white dust cup	A001-LC-4X-2158
● LC PC Quad, MM, aqua, flangeless, white dust cup	A001-LC-4X-2168
● LC PC Quad, MM, violet OM4, flangeless, white dust cup	A001-LC-4X-2178
● LC PC Quad, MM, green lime OM5, flangeless, white dust cup	A001-LC-4X-2198

Fiber optic adapters

LC duplex adapter with flange and with external shutter

A001 series STANDARD ONE-PIECE



- basic elements of optical fiber lines enabling connection of optical fibers and cables-terminated with a LC connector type
- adapters are constructed in one-piece technology, without any welded points, which guarantees more durable design and increased side loading performance
- equipped with a metal mounting clip providing assembly without a screw
- a fully ceramic sleeve, also in multimode adapters, is a characteristic feature of Premium One-Piece LC adapters
- available in duplex or quad (4X) version with flange or flangeless construction in 6 colors
- dust protection
- equipped with internal or external shutter - protect against laser radiation and guarantees protection for the eyes

LC duplex adapter with flange and with external shutter



VARIANT	REFERENCE NO.
● LC APC duplex, SM, green, flange, external shutter	AS02-LCA-DX-21118
● LC PC duplex, SM, blue, flange, external shutter	AS02-LC-DX-21128
● LC PC duplex, MM, beige, flange, external shutter	AS02-LC-DX-21158
● LC PC duplex, MM, aqua OM3, flange, external shutter	AS02-LC-DX-21168
● LC PC duplex, MM, violet OM4, flange, external shutter	AS02-LC-DX-21178
● LC PC duplex, MM, green lime OM5, flange, external shutter	AS02-LC-DX-21198

LC duplex adapter without flange and with external shutter



VARIANT	REFERENCE NO.
● LC APC duplex, SM, green, flangeless, external shutter	AS02-LCA-DX-22118
● LC PC duplex, SM, blue, flangeless, external shutter	AS02-LC-DX-22128
● LC PC duplex, MM, beige, flangeless, external shutter	AS02-LC-DX-22158
● LC PC duplex, MM, aqua OM3, flangeless, external shutter	AS02-LC-DX-22168
● LC PC duplex, MM, violet OM4, flangeless, external shutter	AS02-LC-DX-22178
● LC PC duplex, MM, green lime OM5, flangeless, external shutter	AS02-LC-DX-22198

Fiber optic adapters

LC quad adapter with flange and with external shutter

A001 series STANDARD ONE-PIECE



- basic elements of optical fiber lines enabling connection of optical fibers and cables terminated with a LC connector type
- adapters are constructed in one-piece technology, without any welded points, which guarantees more durable design and increased side loading performance
- equipped with a metal mounting clip providing assembly without a screw
- a fully ceramic sleeve, also in multimode adapters, is a characteristic feature of Standard One-Piece LC adapters
- available in duplex or quad (4X) version with flange or flangeless construction in 6 colors

LC quad adapter with flange and with external shutter



VARIANT	REFERENCE NO.
● LC APC quad, SM, green, flange, external shutter	AS02-LCA-4X-21118
● LC PC quad, SM, blue, flange, external shutter	AS02-LC-4X-21128
● LC PC quad, MM, beige, flange, external shutter	AS02-LC-4X-21158
● LC PC quad, MM, aqua OM3, flange, external shutter	AS02-LC-4X-21168
● LC PC quad, MM, violet OM4, flange, external shutter	AS02-LC-4X-21178
● LC PC quad, MM, green lime OM5, flange, external shutter	AS02-LC-4X-21198

LC quad adapter without flange and with external shutter



VARIANT	REFERENCE NO.
● LC APC quad, SM, green, flangeless, external shutter	AS02-LCA-4X-22118
● LC PC quad, SM, blue, flangeless, external shutter	AS02-LC-4X-22128
● LC PC quad, MM, beige, flangeless, external shutter	AS02-LC-4X-22158
● LC PC quad, MM, aqua OM3, flangeless, external shutter	AS02-LC-4X-22168
● LC PC quad, MM, violet OM4, flangeless, external shutter	AS02-LC-4X-22178
● LC PC quad, MM, green lime OM5, flangeless, external shutter	AS02-LC-4X-22198

Fiber optic adapters

LC duplex adapter with flange and with internal shutter

A001 series STANDARD ONE-PIECE



- basic elements of optical fiber lines enabling connection of optical fibers and cables terminated with a LC connector type
- adapters are constructed in one-piece technology, without any welded points, which guarantees more durable design and increased side loading performance
- equipped with a metal mounting clip providing assembly without a screw
- a fully ceramic sleeve, also in multimode adapters, is a characteristic feature of Standard One-Piece LC adapters
- available in duplex or quad (4X) version with flange or flangeless construction in 6 colors

LC duplex adapter with flange and with internal shutter



VARIANT	REFERENCE NO.
● LC APC duplex, SM, green, flange, internal shutter	AS02-LCA-DX-11118
● LC PC duplex, SM, blue, flange, internal shutter	AS02-LC-DX-11128
● LC PC duplex, MM, beige, flange, internal shutter	AS02-LC-DX-11158
● LC PC duplex, MM, aqua OM3, flange, internal shutter	AS02-LC-DX-11168
● LC PC duplex, MM, violet OM4, flange, internal shutter	AS02-LC-DX-11178
● LC PC duplex, MM, green lime OM5, flange, internal shutter	AS02-LC-DX-11198

LC duplex adapter without flange and with internal shutter



VARIANT	REFERENCE NO.
● LC APC duplex, SM, green, flangeless, internal shutter	AS02-LCA-DX-12118
● LC PC duplex, SM, blue, flangeless, internal shutter	AS02-LC-DX-12128
● LC PC duplex, MM, beige, flangeless, internal shutter	AS02-LC-DX-12158
● LC PC duplex, MM, aqua OM3, flangeless, internal shutter	AS02-LC-DX-12168
● LC PC duplex, MM, violet OM4, flangeless, internal shutter	AS02-LC-DX-12178
● LC PC duplex, MM, green lime OM5, flangeless, internal shutter	AS02-LC-DX-12198

Fiber optic adapters

LC quad adapter with flange and with external shutter

A001 series STANDARD ONE-PIECE



- basic elements of optical fiber lines enabling connection of optical fibers and cables terminated with a LC connector type
- adapters are constructed in one-piece technology, without any welded points, which guarantees more durable design and increased side loading performance
- equipped with a metal mounting clip providing assembly without a screw
- a fully ceramic sleeve, also in multimode adapters, is a characteristic feature of Standard One-Piece LC adapters
- available in duplex or quad (4X) version with flange or flangeless construction in 6 colors

LC quad adapter with flange and with internal shutter



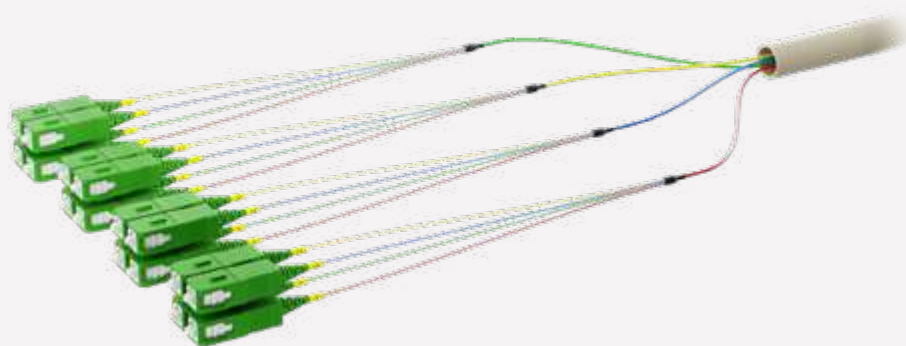
VARIANT	REFERENCE NO.
● LC APC quad, SM, green, flange, internal shutter	AS02-LCA-4X-11118
● LC PC quad, SM, blue, flange, internal shutter	AS02-LC-4X-11128
● LC PC quad, MM, beige, flange, internal shutter	AS02-LC-4X-11158
● LC PC quad, MM, aqua OM3, flange, internal shutter	AS02-LC-4X-11168
● LC PC quad, MM, violet OM4, flange, internal shutter	AS02-LC-4X-11178
● LC PC quad, MM, green lime OM5, flange, internal shutter	AS02-LC-4X-11198

LC quad adapter without flange and with internal shutter



VARIANT	REFERENCE NO.
● LC APC quad, SM, green, flangeless, internal shutter	AS02-LCA-4X-12118
● LC PC quad, SM, blue, flangeless, internal shutter	AS02-LC-4X-12128
● LC PC quad, MM, beige, flangeless, internal shutter	AS02-LC-4X-12158
● LC PC quad, MM, aqua OM3, flangeless, internal shutter	AS02-LC-4X-12168
● LC PC quad, MM, violet OM4, flangeless, internal shutter	AS02-LC-4X-12178
● LC PC quad, MM, green lime OM5, flangeless, internal shutter	AS02-LC-4X-12198

06. Pre-connectorized solutions



Plug&Play solution to quick connection between distribution points



6/12 FO
variants



SM/MM
fibers



PC/APC
polishing



Uniboot
option

Patch Cords & Pigtails

Gold Pigtails



- fiber optic cable with 0.9/1.8/2.8 mm diameter one-side terminated with connector
- single- and multi-mode optical fiber
- LSOH cable jacket
- wide range of available connectors: SC/LC/E2000/FC/ST with PC or APC polishing type
- length tailored to the customer's needs
- pigtails terminated on 0.9mm buffer cable available as sets or individually packed

VARIANT	REFERENCE NO.
Pigtail SC APC, G652D 09/125, 2m length, yellow 0.9mm cable	G-SCA-XX-S-002.0-P9-A-09-Y
Pigtail SC APC, G657A1 09/125, 2m length, yellow 0.9mm cable	G-SCA-XX-S-002.0-P9-D-09-Y
Pigtail SC PC, G652D 09/125, 2m length, yellow 0.9mm cable	G-SC-XX-S-002.0-P9-A-09-Y
Pigtail SC PC, G657A1 09/125, 2m length, yellow 0.9mm cable	G-SC-XX-S-002.0-P9-D-09-Y
Pigtail LC APC, G652D 09/125, 2m length, yellow 0.9mm cable	G-LCA-XX-S-002.0-P9-A-09-Y
Pigtail LC APC, G657A1 09/125, 2m length, yellow 0.9mm cable	G-LCA-XX-S-002.0-P9-D-09-Y
Pigtail SC PC, OM3 50/125, 2m length, aqua 0.9mm cable	G-SC-XX-S-002.0-P9-K-09-AQ
Pigtail SC PC, OM4 50/125, 2m length, violet magenta 0.9mm cable	G-SC-XX-S-002.0-P9-L-09-V
Pigtail LC PC, OM3 50/125, 2m length, aqua 0.9mm cable	G-LC-XX-S-002.0-P9-K-09-AQ
Pigtail LC PC, OM4 50/125, 2m length, violet magenta 0.9mm cable	G-LC-XX-S-002.0-P9-L-09-V
Pigtail E2000 APC, G652D 09/125, 2m length, yellow 0.9mm cable	G-E2A-XX-S-002.0-P9-A-09-Y

Patch Cords & Pigtails

Gold Patch Cords



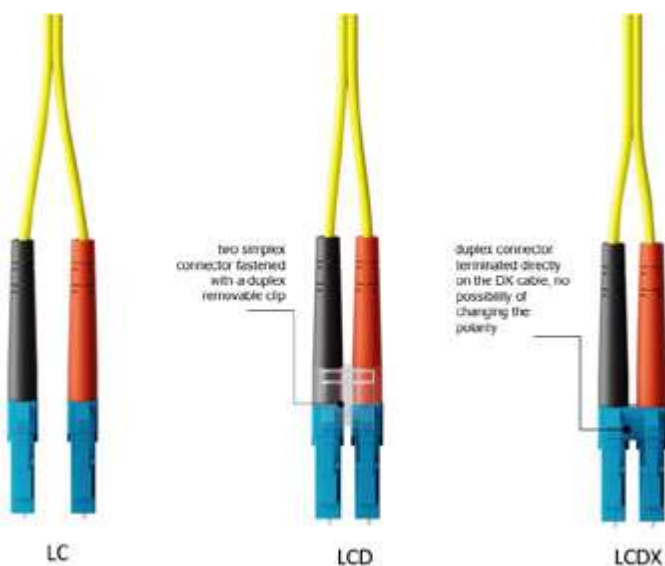
- fiber optic cable with 0.9/1.8/2.8 mm diameter one-side terminated with connector
- single- and multi-mode optical fiber
- LSOH cable jacket
- wide range of available connectors: SC/LC/E2000/FC/ST with PC or APC polishing type
- length tailored to the customer's needs
- pigtails terminated on 0.9mm buffer cable available as sets or individually packed

VARIANT

REFERENCE NO.

Patch cord SC APC/SC APC SM G657A1 yellow 2m simplex 1.8mm	G-SCA-XX-S-002.0-P9-A-09-Y
Patch cord SC PC/SC PC SM G657A1 yellow 2m simplex 1.8mm	G-SCA-XX-S-002.0-P9-D-09-Y
Patch cord LC APC/LC APC SM G657A1 yellow 2m simplex 1.8mm	G-SC-XX-S-002.0-P9-A-09-Y
Patch cord LC PC/LC PC SM G657A1 yellow 2m simplex 1.8mm	G-SC-XX-S-002.0-P9-D-09-Y
Patch cord LC PC/LC PC SM OM3 aqua 2m duplex 1.8mm	G-LCA-XX-S-002.0-P9-A-09-Y
Patch cord LC PC/LC PC SM OM4 violet magenta 2m duplex 1.8mm	G-LCA-XX-S-002.0-P9-D-09-Y

CODING THE LC CONNECTOR VARIANT ON DUPLEX CABLES



Patch Cords&Pigtails

Cross-connect drop Patch Cords&Pigtails

PA0, PA1, PA2, PA3, PA4



- drop cable patch cords and pigtails designed to be used in FTTH networks between a customer outlet and an ONT equipment
- terminated on VC-Dxx fiber optic cable family, diameter 2.0/3.0/4.0 mm
- LSOH cable jacket with CPR classification
- wide range of available connectors: SC/LC/E2000/FC/ST with PC or APC polishing type
- length tailored to the customer's needs
- LC duplex drop patch cords are produce with AB polarity type as a standard
- depending on a number of terminated fibers and a cable, the connector is terminated directly on the cable's sheath or performed as a short fanout

VARIANT	REFERENCE NO.
Cross-connect drop patch cord VC-D30 RESIBEND PLUS 0,5M 1J G.657B3+ 01SCAPC/01SCAPC	PA0-01SCA-01SCA-000.5-04G-1
Cross-connect drop patch cord VC-D30 RESIBEND PLUS 1M 1J G.657B3+ 01SCAPC/01SCAPC	PA0-01SCA-01SCA-001.0-04G-1
Cross-connect drop patch cord VC-D30 RESIBEND PLUS 2M 1J G.657B3+ 01SCAPC/01SCAPC	PA0-01SCA-01SCA-002.0-04G-1
Cross-connect drop patch cord VC-D30 RESIBEND PLUS 3M 1J G.657B3+ 01SCAPC/01SCAPC	PA0-01SCA-01SCA-003.0-04G-1
Cross-connect drop patch cord VC-D30 RESIBEND PLUS 5M 1J G.657B3+ 01SCAPC/01SCAPC	PA0-01SCA-01SCA-005.0-04G-1

CABLES TYPE AVAILABLE

VC-D20/D30/D40 ,
 VC-D20E/D30E/D40E,
 VC-D30RP/D0RP,
 VC-DCY,
 AERO-DR03

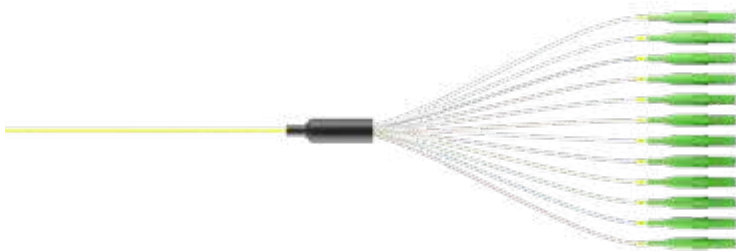
Patch Cords & Pigtails

TCF pre-connectorized multi-fiber cables



- The solution provides termination of loose tube cables
- Furcation point protected by a plastic tube and a heatshrink sleeve
- Fibers directly from the cable are inserted into 0.9mm tube or 1.8mm or 2.8mm
- High quality
- Easy and fast installation
- Plug&Play solution
- Common in structured cable system
- Wide range of fiber optic connectors

VARIANT	REFERENCE NO.
Pre-connectorized EXO-G0-LSOH 200M 4G OM4 02LC/02LC Easylink1	TCF-02LC00502-02LC00502-09L04-200-11-2
Pre-connectorized EXO-G0-LSOH 250M 4G OM4 02LC/02LC Easylink1	TCF-02LC00502-02LC00502-09L04-250-11-2
Pre-connectorized EXO-G0-LSOH 200M 4J G652D 04LC/04LC Easylink1	TCF-04LC01001-04LC01001-09A04-200-11-2
Pre-connectorized EXO-G0-LSOH 200M 8J G652D 08LC/08LC Easylink1	TCF-08LC01001-08LC01001-09A08-200-11-2
Pre-connectorized EXO-G0-LSOH 200M 12J G652D 12LC/12LC Easylink1	TCF-12LC01001-12LC01001-09A12-200-11-2



Patch Cords & Pigtails

PTF pre-connectorized multi-fiber cables



- Furcation point is protected by a metal sleeve with a boot protecting the cable from moving and bending
- Possibility to mount protective tube, which can be used as a pulling grip
- Solution dedicated up to 24 fibers inserted into 1.8mm fanouts strengthened by kevlar fibers
- Possibility to mount cable gland PG16, which can be used during installation PTF plug&play solution in the patch panel
- Easy and fast installation
- Common in structured cable systems
- Wide range of fiber optic connectors
- High quality

VARIANT	REFERENCE NO.
Pre-connectorized EXO-G0-LSOH 50M 12J G652D 12LC/12LC Easylink2	PTF-12LC2095M-12LC2095M-09A12-050-211
Pre-connectorized EXO-G0-LSOH 75M 12J G652D 12LC/12LC Easylink2	PTF-12LC2095M-12LC2095M-09A12-075-211
Pre-connectorized EXO-G0-LSOH 100M 12J G652D 12LC/12LC Easylink2	PTF-12LC2095M-12LC2095M-09A12-100-211
Pre-connectorized EXO-G0-LSOH 200M 12J G652D 12LC/12LC Easylink2	PTF-12LC2095M-12LC2095M-09A12-200-211

Furcation point is protected by a metal sleeve with a flexible cable protection



Patch Cords & Pigtails

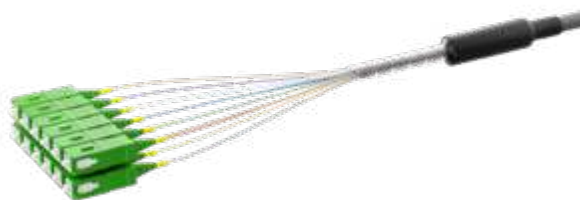
HF pre-connectorized multi-fiber cables



- The solution is based on breakout and minibreakout cables
- Wide range of fiber optic connectors
- Plug&play solution
- Total length and fanout's length according to customer needed
- Furcation point is protected by heatshrink sleeve
- Economic and universal solution
- Easy and fast installation
- Common in structured cable system
- High quality

VARIANT	REFERENCE NO.
Pre-connectorized LDC 10M 12J G652D 12LC/12LC MINIBREAKOUT	HF-12LC01500-12LC01500-03A12-010-11-1
Pre-connectorized LDC 20M 12J G652D 12LC/12LC MINIBREAKOUT	HF-12LC01500-12LC01500-03A12-020-11-1
Pre-connectorized LDC 30M 12J G652D 12LC/12LC MINIBREAKOUT	HF-12LC01500-12LC01500-03A12-030-11-1
Pre-connectorized LDC 40M 12J G652D 12LC/12LC MINIBREAKOUT	HF-12LC01500-12LC01500-03A12-040-11-1
Pre-connectorized LDC 50M 12J G652D 12LC/12LC MINIBREAKOUT	HF-12LC01500-12LC01500-03A12-050-11-1

TEF pre-connectorized multi-fiber cables



- Designed to be used in various indoor and outdoor FTTx applications
- Furcation point based on epoxy filler provides extra protection
- High furcation point crush resistance
- Furcation point construction based on epoxy filler provides extra protection,
- Stable attenuation in variable temperature conditions
- Wide range of fiber optic connectors
- A spiral wrap prevents 0.9 mm tube from kinking
- High quality.

VARIANT	REFERENCE NO.
Pre-connectorized EXO-G0-PE 40M 12J G652D 12SCAPC/12SCAPC SAFEBRANCH 1	TEF-12SA00502-12SA00502-10A12-040-22-1
Pre-connectorized EXO-G0-PE 60M 12J G652D 12SCAPC/12SCAPC SAFEBRANCH 1	TEF-12SA00502-12SA00502-10A12-060-22-1
Pre-connectorized EXO-G0-PE 80M 12J G652D 12SCAPC/12SCAPC SAFEBRANCH 1	TEF-12SA00502-12SA00502-10A12-080-22-1
Pre-connectorized EXO-G0-PE 40M 12J G652D 12LCAPC/12LCAPC SAFEBRANCH 1	TEF-12LA00502-12LA00502-10A12-040-22-1
Pre-connectorized EXO-G0-PE 60M 12J G652D 12LCAPC/12LCAPC SAFEBRANCH 1	TEF-12LA00502-12LA00502-10A12-060-22-1

Patch Cords & Pigtails

Cross-connect LCdx UNIBOOT cable



- Cross-connect LCdx cable
- Terminated on simplex 2FO round cable with uniboot construction, which protect against exceed bending
- Cable with diameter 1.8-2.8mm with SM or MM fiber
- Length according to customer needs
- Very good optical and mechanical parameters
- Possibility of polarity change for flat polishing type of connector (PC type)

PARAMETER	SM PC CONNECTOR	SM APC CONNECTOR	MM PC CONNECTOR
IL _{MAX} (61300-3-4)	≤ 0.17 dB	≤ 0.20 dB	≤ 0.20 dB*
IL _{TYP} (61300-3-4)	≤ 0.15 dB	≤ 0.16 dB	≤ 0.12 dB
RL (61300-3-6)	≥ 55 dB	≥ 65 dB	≥ 35 dB
Optical grade	B	B	-

VARIANT	REFERENCE NO.
Cross-connect patch cord LCdx-LCdx, uniboot, g657a1, 2m, type AA	UB-G-LCU-LCU-002.0-022-D-18-Y-AA
Cross-connect patch cord LCdx-LCdx, uniboot, g657a1, 2m, type AB	UB-G-LCU-LCU-002.0-022-D-18-Y-AB
Cross-connect patch cord LCdx-LCdx, uniboot, om4, 3m, type AB	UB-G-LCU-LCU-003.0-022-L-18-V-AB
Cross-connect patch cord LCdx-LCdx, uniboot, om4, 5m, type AB	UB-G-LCU-LCU-005.0-022-L-18-V-AB
Cross-connect patch cord LCdx-LCdx, uniboot, om4, 10m, type AB	UB-G-LCU-LCU-010.0-022-L-18-V-AB

MPO trunk cables

MPO trunk cable APC 652D, type A, 12FO



- DC Prim connection cable terminated with a female/male MPO connector on both sides
- 12 optical fibers 652D
- Cable diameter: 3.0mm
- Yellow LS0H cable outer sheath
- Green connector
- APC 8° polishing
- Polarization A/B/C
- $IL_{MAX} \leq 0.4$ dB
- $IL_{AVG} \leq 0.20$ dB
- $RL \geq 65$ dB

VARIANT	REFERENCE NO.
● MPO trunk cable APC female – MPO APC female, 652D, type A, 1m	G-12-MTPA.F-MTPA.F-R30-001-1-A-A
F/F ● MPO trunk cable APC female – MPO APC female, 652D, type A, 2m	G-12-MTPA.F-MTPA.F-R30-002-1-A-A
F/F ● MPO trunk cable APC female – MPO APC female, 652D, type A, 3m	G-12-MTPA.F-MTPA.F-R30-003-1-A-A
F/F ● MPO trunk cable APC female – MPO APC female, 652D, type A, 5m	G-12-MTPA.F-MTPA.F-R30-005-1-A-A
F/F ● MPO trunk cable APC female – MPO APC female, 652D, type A, 10m	G-12-MTPA.F-MTPA.F-R30-010-1-A-A
F/F ● MPO trunk cable APC female – MPO APC female, 652D, type A, 15m	G-12-MTPA.F-MTPA.F-R30-015-1-A-A

VARIANT	REFERENCE NO.
M/M ● MPO trunk cable APC male – MPO APC male, 652D, type A, 1m	G-12-MTPA.M-MTPA.M-R30-001-1-A-A
M/M ● MPO trunk cable APC male – MPO APC male, 652D, type A, 2m	G-12-MTPA.M-MTPA.M-R30-002-1-A-A
M/M ● MPO trunk cable APC male – MPO APC male, 652D, type A, 3m	G-12-MTPA.M-MTPA.M-R30-003-1-A-A
M/M ● MPO trunk cable APC male – MPO APC male, 652D, type A, 5m	G-12-MTPA.M-MTPA.M-R30-005-1-A-A
M/M ● MPO trunk cable APC male – MPO APC male, 652D, type A, 10m	G-12-MTPA.M-MTPA.M-R30-010-1-A-A
M/M ● MPO trunk cable APC male – MPO APC male, 652D, type A, 15m	G-12-MTPA.M-MTPA.M-R30-015-1-A-A

VARIANT	REFERENCE NO.
F/M ● MPO trunk cable APC female – MPO APC male, 652D, type A, 1m	G-12-MTPA.F-MTPA.M-R30-001-1-A-A
F/M ● MPO trunk cable APC female – MPO APC male, 652D, type A, 2m	G-12-MTPA.F-MTPA.M-R30-002-1-A-A
F/M ● MPO trunk cable APC female – MPO APC male, 652D, type A, 3m	G-12-MTPA.F-MTPA.M-R30-003-1-A-A
F/M ● MPO trunk cable APC female – MPO APC male, 652D, type A, 5m	G-12-MTPA.F-MTPA.M-R30-005-1-A-A
F/M ● MPO trunk cable APC female – MPO APC male, 652D, type A, 10m	G-12-MTPA.F-MTPA.M-R30-010-1-A-A
F/M ● MPO trunk cable APC female – MPO APC male, 652D, type A, 15m	G-12-MTPA.F-MTPA.M-R30-015-1-A-A

MPO trunk cables

MPO trunk cable PC – MPO PC, OM3, type A, 12FO



- Connection cable terminated with a female/male MPO connector on both sides
- 12 OM3 optical fibers
- Cable diameter: 3.0mm
- Aqua LSOH cable outer sheath
- Aqua connector
- APC 8° polishing
- Polarization A/B/C
- $IL_{MAX} \leq 0.4$ dB
- $IL_{AVG} \leq 0.20$ dB
- $RL \geq 35$ dB



LSOH



657A1 SM fiber

VARIANT

REFERENCE NO.

M	Pre-connectorized cable DC-Prim LSOH MPO.M-12xLC PC, 657A1, 5m	TEF-01MPOA.M-12LC00501-01A12-005-01-1
M	Pre-connectorized cable DC-Prim LSOH MPO.M-12xLC PC, 657A1, 10m	TEF-01MPOA.M-12LC00501-01A12-010-01-1
M	Pre-connectorized cable DC-Prim LSOH MPO.M-12xLC PC, 657A1, 15m	TEF-01MPOA.M-12LC00501-01A12-015-01-1
M	Pre-connectorized cable DC-Prim LSOH MPO.M-12xLC PC, 657A1, 20m	TEF-01MPOA.M-12LC00501-01A12-020-01-1
M	Pre-connectorized cable DC-Prim LSOH MPO.M-12xLC PC, 657A1, 25m	TEF-01MPOA.M-12LC00501-01A12-025-01-1

Pre-connectorized cable MPO(m)-12xLC APC, SM, G652D



LSOH



657A1 SM fiber

VARIANT

REFERENCE NO.

M	Pre-connectorized cable DC-Prim LSOH MPO.M-12xLC APC, 657A1, 5m	TEF-01MPOA.M-12LA00501-01A12-005-01-1
M	Pre-connectorized cable DC-Prim LSOH MPO.M-12xLC APC, 657A1, 10m	TEF-01MPOA.M-12LA00501-01A12-010-01-1
M	Pre-connectorized cable DC-Prim LSOH MPO.M-12xLC APC, 657A1, 15m	TEF-01MPOA.M-12LA00501-01A12-015-01-1
M	Pre-connectorized cable DC-Prim LSOH MPO.M-12xLC APC, 657A1, 20m	TEF-01MPOA.M-12LA00501-01A12-020-01-1
M	Pre-connectorized cable DC-Prim LSOH MPO.M-12xLC APC, 657A1, 25m	TEF-01MPOA.M-12LA00501-01A12-025-01-1

Pre-connectorized cable MPO(m)-12xLC APC, SM, G652D



LSOH



657A1 SM fiber

VARIANT

REFERENCE NO.

F	Pre-connectorized cable DC-Prim LSOH MPO.F-12xLC PC, 657A1, 5m	TEF-01MPOA.F-12LC00501-01A12-005-01-1
F	Pre-connectorized cable DC-Prim LSOH MPO.F-12xLC PC, 657A1, 10m	TEF-01MPOA.F-12LC00501-01A12-010-01-1
F	Pre-connectorized cable DC-Prim LSOH MPO.F-12xLC PC, 657A1, 15m	TEF-01MPOA.F-12LC00501-01A12-015-01-1
F	Pre-connectorized cable DC-Prim LSOH MPO.F-12xLC PC, 657A1, 20m	TEF-01MPOA.F-12LC00501-01A12-020-01-1
F	Pre-connectorized cable DC-Prim LSOH MPO.F-12xLC PC, 657A1, 25m	TEF-01MPOA.F-12LC00501-01A12-025-01-1

MPO-LC harness cables

Pre-connectorized cable MPO(m)-12xLC PC, SM, G652D



- DC-Prim pre-connectorized cable
- Male MPO connector terminated directly on the cable
- LC PC connectors on the opposite side
- Yellow LSOH outer sheath
- Fanouts length: 50 cm
- Male MPO connector
- 652D Single-Mode fiber
- Furcation point on the LC connectors side secured with epoxy resin

VARIANT	REFERENCE NO.
F/F ● MPO trunk cable PC female – MPO PC female, OM3, type A, 1m	G-12-MTPF-MTPF-R30-001-1-K-A
F/F ● MPO trunk cable PC female – MPO PC female, OM3, type A, 2m	G-12-MTPF-MTPF-R30-002-1-K-A
F/F ● MPO trunk cable PC female – MPO PC female, OM3, type A, 3m	G-12-MTPF-MTPF-R30-003-1-K-A
F/F ● MPO trunk cable PC female – MPO PC female, OM3, type A, 5m	G-12-MTPF-MTPF-R30-005-1-K-A
F/F ● MPO trunk cable PC female – MPO PC female, OM3, type A, 10m	G-12-MTPF-MTPF-R30-010-1-K-A
F/F ● MPO trunk cable PC female – MPO PC female, OM3, type A, 15m	G-12-MTPF-MTPF-R30-015-1-K-A

VARIANT	REFERENCE NO.
M/M ● MPO trunk cable PC male – MPO PC male, OM3, type A, 1m	G-12-MTPM-MTPM-R30-001-1-K-A
M/M ● MPO trunk cable PC male – MPO PC male, OM3, type A, 2m	G-12-MTPM-MTPM-R30-002-1-K-A
M/M ● MPO trunk cable PC male – MPO PC male, OM3, type A, 3m	G-12-MTPM-MTPM-R30-003-1-K-A
M/M ● MPO trunk cable PC male – MPO PC male, OM3, type A, 5m	G-12-MTPM-MTPM-R30-005-1-K-A
M/M ● MPO trunk cable PC male – MPO PC male, OM3, type A, 10m	G-12-MTPM-MTPM-R30-010-1-K-A
M/M ● MPO trunk cable PC male – MPO PC male, OM3, type A, 15m	G-12-MTPM-MTPM-R30-015-1-K-A

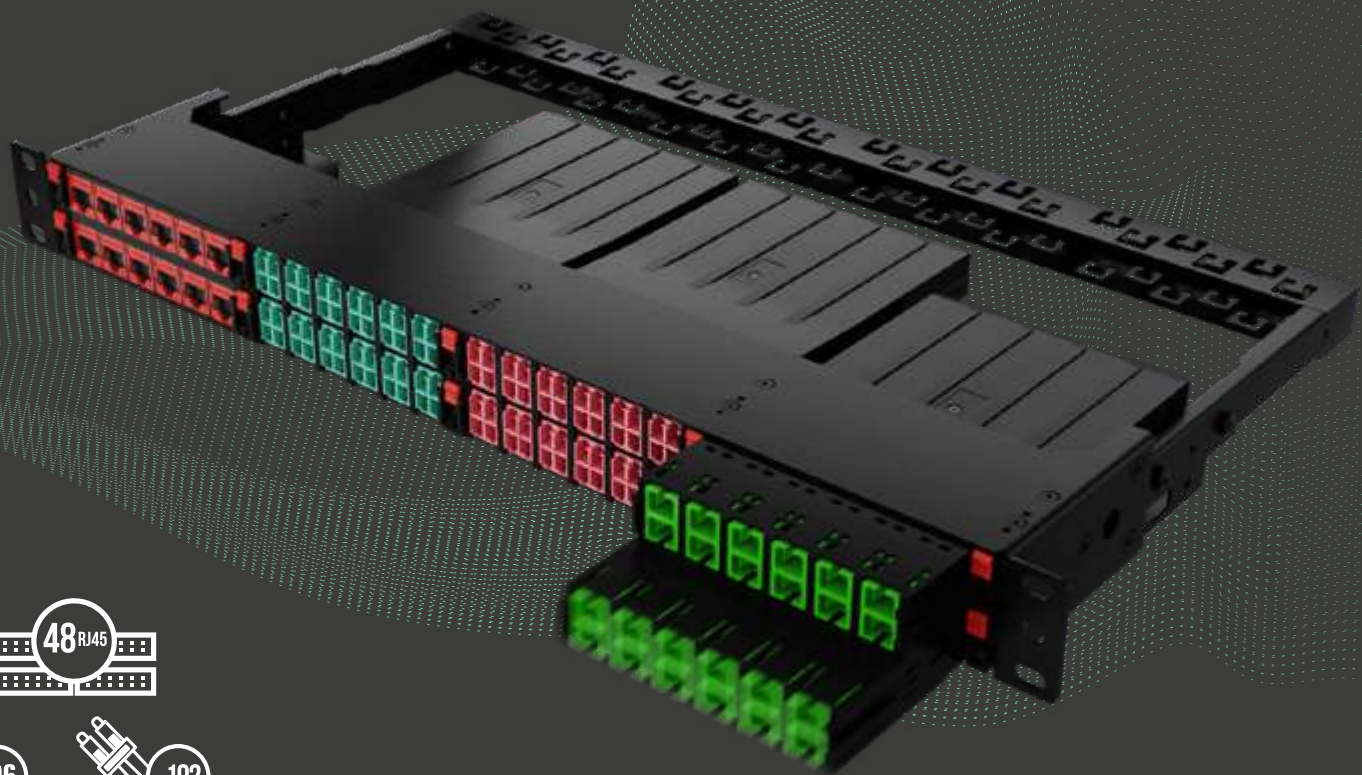
VARIANT	REFERENCE NO.
F/M ● MPO trunk cable PC female – MPO PC male, OM3, type A, 1m	G-12-MTPF-MTPM-R30-001-1-K-A
F/M ● MPO trunk cable PC female – MPO PC male, OM3, type A, 2m	G-12-MTPF-MTPM-R30-002-1-K-A
F/M ● MPO trunk cable PC female – MPO PC male, OM3, type A, 3m	G-12-MTPF-MTPM-R30-003-1-K-A
F/M ● MPO trunk cable PC female – MPO PC male, OM3, type A, 5m	G-12-MTPF-MTPM-R30-005-1-K-A
F/M ● MPO trunk cable PC female – MPO PC male, OM3, type A, 10m	G-12-MTPF-MTPM-R30-010-1-K-A
F/M ● MPO trunk cable PC female – MPO PC male, OM3, type A, 15m	G-12-MTPF-MTPM-R30-015-1-K-A

07. HD Patch Panels and accessories



Scalability / Freedom of arrangement / Modularity

Wide range of applications /
Saving precious space in the 19" rack
/ Quick and easy installation



High density



8-slot modular design



FO+Cu hybrid



MADE IN POLAND

25 YEAR SYSTEM WARRANTY

HD 19" Patch Panels



Patch Panel for cassettes HD 0.5U, without grounding, empty



- Modular configuration system
 - Possibility for FO/Cu assembling
 - Rear basis for cable assembling
- Capacity: 4 slots for FO insertion
- Max ports density
 - 96 ports FO with LCdx
 - 48 ports FO with SCsx
 - 24 ports FO with ST/FC
- Prepared for different type of cassettes
 - Spliced (HD SPL)
 - MPO type
 - Breakout (HD BOT)

TECHNICAL SPECIFICATION

Dimensions: Height [U] x Width [inch] x Depth [mm]	0.5U x 19" x 250 (U=44.45 mm)
Material	Frame – powder paint coated steel. Guidance – Plastic
IP Protection	IP 20 according to PN-EN 60529
Color [RAL]	Black, RAL 9005
Weight [kg]	0.8
Scople of supply	Frame, empty
Temperature range [°C]	-40 to +70



VARIANT

REFERENCE NO.

Patch Panel HD 0.5U for FO cassettes, empty

XBU00

HD 19" Patch Panels



Patch Panel for cassettes HD 1U, without grounding, empty



- Modular configuration system
 - Possibility for FO/Cu assembling
 - Rear bar for cable assembling
 - Optional cable manager installed at the front
- Capacity: 8 slots for FO/Cu insertion
- Max ports density
 - 48 ports/1U for copper
 - 192 ports for FO (for LCdx)
 - 96 ports FO wit SCsx
 - 48 ports FO with FC/ST
- Prepared for different type of cassettes
 - Spliced (HD SPL)
 - MPO type
 - Breakout (HD BOT)

TECHNICAL SPECIFICATION

Dimensions: Height [U] x Width [inch] x Depth [mm]	1U x 19" x 250 (U=44.45 mm)
Material	Frame – powder paint coated steel. Guidance – Plastic
IP Protection	IP 20 according to PN-EN 60529
Color [RAL]	Black, RAL 9005
Weight [kg]	1.2
Scople of supply	Frame, empty
Temperature range [°C]	-40 to +70



VARIANT

Patch Panel for cassettes HD 1U, empty

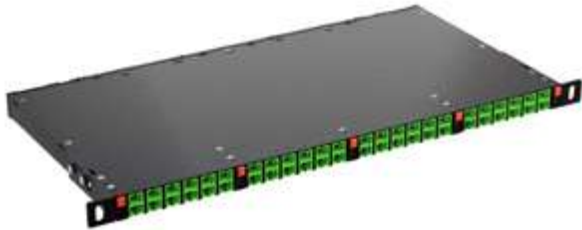
REFERENCE NO.

XPU00

HD 19" Patch Panels

Patch Panel HD 0.5U

- Fiber optic Patch Panel in the form of a fixed shelf with removable cover
- Capacity: up to 2 splice tray SCM-A-xx, up to 4 adapter holder
- Maximum splice capacity: 48
- Range of supported connectors: LCd, SC, E2000, ST, FC – MM/SM



TECHNICAL SPECIFICATION

Dimensions: Height [U] x Width [inch] x Depth [mm]	0.5 U x 19" x 230 (U=44.45 mm)
Material	Powder painted steel

Number of adapter slots	LC DX, ST, FC adapter number	SC, E2000 adapter number
6	6	6
12	12	12
24	24	24
48	-	48



1U splice panel max. 48 splices

VARIANT	REFERENCE NO.
Patch Panel HD 0.5U, equipped in 48 SCA adapters, 48x SCA G657A1 pigtails	XAU10-51ID
Patch Panel HD 0.5U, equipped in 48 SC adapters, 48x SC G657A1 pigtails	XAU10-41ID
Patch Panel HD 0.5U, equipped in 24 LC DX adapters, 48x LC G657A1 pigtails	XAU10-21IC
Patch Panel HD 0.5U, equipped in 24 LCA DX adapters, 48x LCA G657A1 pigtails	XAU10-31IC

HD 19" Patch Panels

Patch Panel HD 1U



- Fiber optic Patch Panel in the form of a fixed shelf with removable cover
- Capacity: up to 4 splice tray SCM-A-xx, up to 8 adapter holder
- Max. splice capacity: 96
- Range of supported connectors: LCd, SC, E2000, ST, FC – MM/SM

TECHNICAL SPECIFICATION

Dimensions: Height [U] x Width [inch] x Depth [mm]	1U x 19" x 230 (U=44,45 mm)
Material	Frame – powder paint coated steel. Guidance – plastic

Number of adapter slots	LCDX, ST, FC adapter number	SC, E2000 adapter number
6	6	6
12	12	12
24	24	24
48	48	48
72	-	72
96	-	96



1U splice panel max. 96 splices

VARIANT	REFERENCE NO.
Patch Panel HD 1U, equipped in 96 SCA adapters, 96x SCA G657A1 pigtails	XDU10-51E
Patch Panel HD 1U, equipped in 96 SC adapters, 96x SC G657A1 pigtails	XDU10-41E
Patch Panel HD 1U, equipped in 48 LC DX adapters, 96x LC G657A1	XDU10-21ID
Patch Panel HD 1U, equipped in 48 LCA DX adapters, 96x LCA G657A1 pigtails	XDU10-31ID

HD 19" Patch Panels

Fibrain extendable Patch Panel HD 0.5U for 48 splices



- Height 0.5U
- Maximum adapter capacity: 48xSC SX/ LC DX/ E2000/ 24x ST/FC (4 adapter holders)
- Full extension on telescopic rails
- Front plate equipped with handles for easy opening
- Maximum splice capacity: 48
- Range of supported connectors: LCd, SC, E2000, FC, ST – MM/SM

TECHNICAL SPECIFICATION

Dimensions: Height [U] x Width [inch] x Depth [mm]	0.5U x 19" x 284
Material	Powder painted steel

Number of adapter slots	LC DX, ST, FC adapter number	SC, E2000 adapter number
6	6	6
12	12	12
24	24	24
48	-	48



VARIANT	REFERENCE NO.
Extendable Patch Panel HD 0.5U, equipped in 48 SCA adapters, 48x SCA G657A1 pigtails	XCU10-511D
Extendable Patch Panel HD 0.5U, equipped in 48 SC adapters, 48x SC G657A1 pigtails	XCU10-411D
Extendable Patch Panel HD 0.5U, equipped in 24 LC DX adapters, 48x LC G657A1 pigtails	XCU10-211C
Extendable Patch Panel HD 0.5U, equipped in 24 LCA DX adapters, 48x LCA G657A1 pigtails	XCU10-311C

HD 19" Patch Panels

Dual section Patch Panel HD 1U



- Height 1U, dual section Patch Panel
- 0.5U – section for cable tube reserve
- 0.5U – removable section for adapters and splice cassette
- Maximum splice capacity: 48
- Full extension on telescopic rails
- Holder for cable central member element
- Range of supported connectors: LCd, SC, E2000, ST, FC – MM/SM

TECHNICAL SPECIFICATION

Dimensions: Height [U] x Width [inch] x Depth [mm]	1U x 19" x 260 (U=44,45 mm)
Material	Powder painted steel

Number of adapter slots	LCDX, ST, FC adapter number	SC, E2000 adapter number
6	6	6
12	12	12
24	24	24
48	-	48



VARIANT	REFERENCE NO.
Dual section Patch Panel HD 1U, equipped in 48 SCA adapters, 48x SCA G657A1 pigtails	XEU10-51ID
Dual section Patch Panel HD 1U, equipped in 48 SC adapters, 48x SC G657A1 pigtails	XEU10-41ID
Dual section Patch Panel HD 1U, equipped in 24 LC DX adapters, 48x LC G657A1 pigtails	XEU10-21IC
Dual section Patch Panel HD 1U, equipped in 24 LCA DX adapters, 48x LCA G657A1 pigtails	XEU10-31IC

19" Patch Panels



Pivot swivel Patch Panel with side access PSR-HD-A0



- SCM-A splice cassettes
- Splice capacity:
 - 96 splices in 1U (6 adapter holders)
 - 192 splices in 2U (12 adapter holders)
 - 288 splices in 3U (18 adapter holders)
- Patch Panel installation on back or front rack profile
- Panel available in rotating left or right side of Patch Panel (depends on version)
- Possibilities of termination cables on side or back of Patch Panel
- Hinged flap of Patch Panel protects patchcords from damages
- 2U and 3U Patch Panels can be combined with RT-01 tube divider

TECHNICAL SPECIFICATION

Height	1U	2U	3U
Width	19"		
Depth [mm]	315		
Max. number of adapters	72	144	216
Max. number of splices	96	192	288
Max. number of splice trays	4	8	12
Max. line cable diameter [mm]	12		
Casing material	powder painted steel		



VARIANT

FIBRAIN HD 1U 19" rotational Patch Panel equipped in 72x SCA adapters, 4x SCM-A-24H cassettes, RAL 7035

FIBRAIN HD 2U 19" rotational Patch Panel equipped in 144x SCA adapters, 8x SCM-A-24H cassettes, RAL 7035

FIBRAIN HD 3U 19" rotational Patch Panel equipped in 216x SCA adapters, 12x SCM-A-24H cassettes, RAL 7035

REFERENCE NO.

PSR-HD-A0-01-R-042-072121-00000000-000-1

PSR-HD-A0-02-R-082-144121-00000000-000-1

PSR-HD-A0-03-R-122-216121-00000000-000-1

HD 19" Patch Panels



Patch Panel for cassettes HD 3U, empty



- Modular configuration system
 - Possibility for FO/Cu assembling
 - Suitable for SPL cassettes, MPO cassettes, BOT cassettes
- Capacity: 20 slots for FO/Cu insertion
- Max. port density
 - 240 ports for SC SX FO
 - 480 ports for LCdx FO
 - 120 ports for ST/FC FO
 - 120 ports/3U for copper
- Full range of connectors
 - RJ45/u (unshielded) – kat.5, kat.6, kat.6_A
 - LCdx, SC, FC, ST – MM/SM

TECHNICAL SPECIFICATION

Dimensions: Height [U] x Width [inch] x Depth [mm]	3U x 19" x 185 (U=44.45 mm)
Material	Frame – powder paint coated steel. Guidance – Plastic
IP Protection	IP 20 according to PN-EN 60529
Color [RAL]	Black, RAL 9005
Weight [kg]	2.65
Scope of supply	Frame, empty
Temperature range [°C]	-40 to +70



3U modular max. 120p (CU)/480p (FO LC Duplex)

VARIANT

REFERENCE NO.

Patch Panel HD 3U for cassettes without grounding, empty

XFU00

HD 19" Patch Panels



FO adapter holder, HD, Black



- Fits a single slot in HD Patch Panel
- Available in 6 or 12 ports configuration
- Suitable for LCdx, SC, E2000, ST, FC interface
- Fully equipped with adapters FO holder for HD Patch Panel (quantity depends on cassette type)
- Dedicated holes for label
- Holder Height: ½U

TECHNICAL SPECIFICATION

Dimensions: Height x Width x Depth [mm]	21 x 100 x 37
Material	Plastic

VARIANT	REFERENCE NO.
FO adapter holder HD 6 x SC/APC, SM, G.657A1	XMI1051A
FO adapter holder HD 12 x SC/APC, SM, G.657A1	XMN1051B
FO adapter holder HD 6 x LCdx, SM, G.657A1	XMI1021A
FO adapter holder HD 12 x LCdx, SM, G.657A1	XMN1021B

Holder for HD Patch Panel for 6 x RJ45 empty



- Flexible configuration system:
 - Modularity up to 1 port
 - Support for all categories of Fibrain HD, screened connection modules: kat.5/s, kat.6/s, kat.6_A/s
 - Method of installing connection modules: without adapter
 - Optional port labeling
- Dedicated places for cable fastening
- Max density: 6 x RJ45/s per holder
- Max density in HD Patch Panel: 8 holders per HD Patch Panel

VARIANT	REFERENCE NO.
Holder for HD Patch Panel for 6 x RJ45, unscreened, empty	XMU00
Holder for HD Patch Panel for 6 x RJ45, screened, empty	XMS00

HD FO cassettes

MPO / Breakout / FO splices cassettes

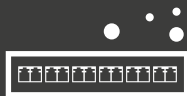
Fiber optic splice cassette
Equipped with 6/12 SC adapters



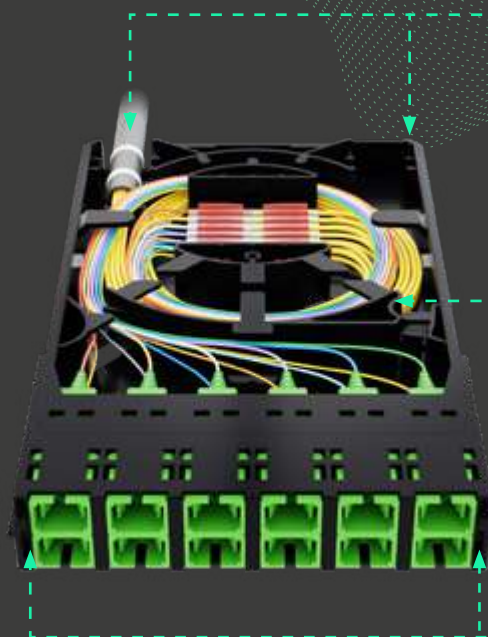
6/12 FO ports



SC/LC interface support



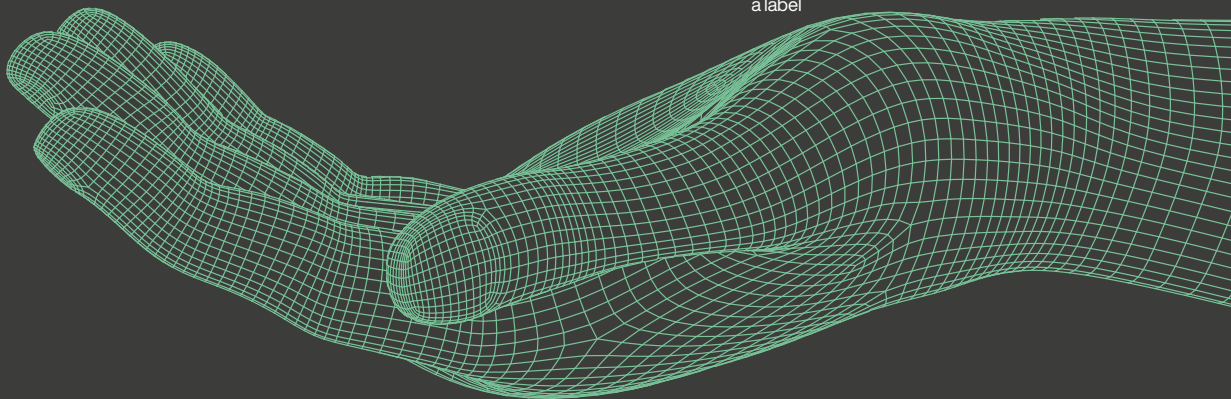
Closed construction
- dust protection



Possibility of leading the cable out from both sides

Cable organizers

Place for a label



Fiber optic breakout cassette

Equipped with 6/12 SC adapters

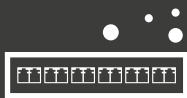
FIBRAIN®



6/12 FO ports



SC/LC interface support



Closed construction
- dust protection



Possibility of leading the cable out from both sides

Cable organizers

Place for a label

Fiber optic MPO cassette

Equipped with 6/12 SC adapters

MTP®



A/B/C polarization



6/12 FO ports



SC/LC interface support



Closed construction
- dust protection



Possibility of leading the cable out from both side

Cable organizers

Place for a label

HD 19" Patch Panels



FO breakout cassette HD, black



- Fits a single slot in HD Patch Panel
- Easy assembling by modular construction
- Available in 6 or 12 ports configuration
- Suitable for LCdx, SC, E2000, ST, FC interface
- Fully equipped FO breakout cassette (quantity of the equipment depends on cassette type)
- Adapted for mounting pre-connectorized cables of the TEF HD (THxx) series
- Cassette height: 1/2U

TECHNICAL SPECIFICATION

Dimensions: Height x Width x Depth [mm]	21 x 100 x 169
Material	Plastic

CASSETTE TYPE	E2/E2A	SC/SCA	LC/LCA	ST/FC
6 ports	4 simplex adapters	6 simplex adapters	6 duplex adapters	6 adapters
12 ports	8 simplex adapters	12 simplex adapters	12 duplex adapters	NA

VARIANT	REFERENCE NO.
BOT cassette 6 x SC/APC, SM, G.657A1	XMH1051A
BOT cassette 12 x SC/APC, SM, G.657A1	XMR1051B
BOT cassette 6 x LCdx, SM, G.657A1	XMH1021A
BOT cassette 12 x LCdx, SM, G.657A1	XMR1021B

HD 19" Patch Panels



FO splice cassette HD, black



- Fits a single slot in HD Patch Panel
- Easy assembling by modular construction
- Available in 6 or 12 ports configuration
- Suitable for LCdx, SC, E2000, ST, FC interface
- Fully equipped FO breakout cassette (quantity of the equipment depends on cassette type)
 - FO adapters
 - Fiber optic pigtails
 - Splice magazine
 - Splice protectors
- Cassette height: ½U

TECHNICAL SPECIFICATION

Dimensions: Height x Width x Depth [mm]	21x100 x 169
Material	Plastic

CASSETTE TYPE	E2/E2A	SC/SCA	LC/LCA	ST/FC
6 ports	4 simplex adapters 4 pigtails Splice magazine 4 splice protectors	6 simplex adapters 6 pigtails Splice magazine 6 splice protectors	6 duplex adapters 12 pigtails Splice magazine 12 splice protectors	6 adapters 6 pigtails Splice magazine 6 splice protectors
12 ports	8 simplex adapters 8 pigtails Splice magazine 8 splice protectors	12 simplex adapters 12 pigtails Splice magazine 12 splice protectors	12 duplex adapters 24 pigtails 2 splice magazine 24 splice protectors	NA

VARIANT	REFERENCE NO.
SPL cassette 6 x SC/APC, SM, G.657A1	XMG1051A
SPL cassette 12 x SC/APC, SM, G.657A1	XMP1051B
SPL cassette 6 x LCdx, SM, G.657A1	XMG1021A
SPL cassette 12 x LCdx, SM, G.657A1	XMP1021B

HD 19" Patch Panels



FO MPO cassette HD, black



- Fits a single slot in HD Patch Panel
- Easy assembling by modular construction
- Available in configuration with 1 x MPO and 2 x MPO
- Available in 6 or 12 ports configuration
- A/B connections
- Suitable for LCdx, SC, E2000, ST, FC interface (for E2000 up to 8 adapters max.)
- Fully equipped FO MPO cassette (quantity of the equipment depends on cassette type)
 - FO adapters
 - Direct split
 - MPO adapter
- Cassette height: ½U

TECHNICAL SPECIFICATION

Dimensions: Height x Width x Depth [mm]	21 x 100 x 169
Material	Plastic

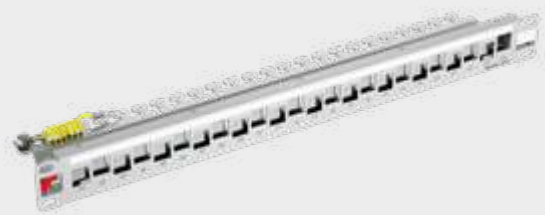
CASSETTE TYPE	1 x MPO	2 x MPO
6 ports SC/SCA/E2/E2A/ST/FC	6 simplex adapters: SC/SCA/E2/E2A/ST/FC/FCA Direct split MPO-6xSC/SCA/E2/E2A/ST/FC/FCA MPO adapter	12 simplex adapters: SC/SCA 2 Direct split MPO-6xSC/SCA 2 MPO adapter
12 ports SC/SCA	12 simplex adapters: SC/SCA Direct split MPO-12xSC/SCA MPO adapter	NA
6 ports LC/LCA	6 duplex adapters: LC/LCA Direct split MPO-6xLCdx/LCAdx MPO adapter	NA
12 ports LC/LCA	12 duplex adapters: LC/LCA Direct split MPO-12xLCdx/LCAdx MPO adapter	12 duplex adapters: LC/LCA 2 Direct split MPO-6xLCdx/LCAdx 2 MPO adapter

VARIANT	REFERENCE NO.
FO cassette, 1 x MPO/f, typ A, 6 x LCdx, SM, G.657A1	XMA1021IA
FO cassette, 1 x MPO/f, typ A, 12 x SC, SM, G.657A1	XMA1041IB
FO cassette, 2 x MPO/f, typ A, 12 x LCdx, SM, G.657A1	XMJ1021IB
FO cassette, 1 x MPO/m, typ B, 12 x SC /APC, SM, G.657A1	XMD1051IB

HD19" Patch Panels accessories

VARIANT		REFERENCE NO.
	HD Patch Panel port blind plug, black	XBCS0
	HD Patch Panel port blind plug, grey	XBCS1
	HD holder/cassette label, black	XL00
	HD holder/cassette label, grey	XL10
	Integrated patchcord cable organizer for HD Patch Panel, 1U, red front	ORGHD1U0
	Integrated patchcord cable organizer for HD Patch Panel, 1U, grey front	ORGHD1U1
	Patchcord cable organizer, 1U, red front	ORGSA1U0
	Tool for removing holders / cassettes from HD Patch Panels	XK0

08. 19" Patch Panels and accessories



19" Patch Panels FO

Equipment presented in this section is a very important part of fiber optic network. It is also the end or the beginning of each optical path.



The construction of the equipment is based on telescopic fiber optic, rotating or modular Patch Panels. Each of these solution is specifically designed and depends on network topology, number of optical points, as well as quantity and capacity of fiber optic cables.

These solutions are often linked to optical network, thus our proposal concentrates the most significant elements of xWDM network as it integrates them in common Patch Panels which are equipped with specialized front panels.



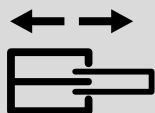
View of 1U Patch Panel



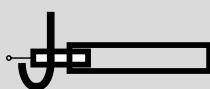
View of 2U Patch Panel



View of 3U Patch Panel



Full extension



Holder for cable central member



SCM-C splice tray



SCM-A splice cassette

19" Patch Panels



PST-Ax Premium telescopic Patch Panel



- Available in 1U and 2U
- Full opening on telescopic rails
- Cable entries in a rear part of the shelf (4 pcs in 1U and 8 pcs in 2U) are available in two configuration:
 - perpendicular cable entries in PST-A1-x type
 - cable entries at an angle of 45° and perpendicular in PST-A2-x type
- Internal perforation to manage tubes and fibers
- Faceplates ready for mounting adapters without screws
- Optional front shelf to facilitate the management of patchcords
- Adjustable side handles
- Front plates can be optionally locked with a key
- Holder for the strength element of cable

TECHNICAL SPECIFICATION	PST-Ax-01	PST-Ax-02
Dimensions: Height [U] x Width [inch] x Depth [mm]	1U x 19" x 255	2U x 19" x 255
Max. cassette capacity	4	8
Material	Powder painted steel	



FIBRAIN 1U telescopic fiber optic Patch Panel with front plate



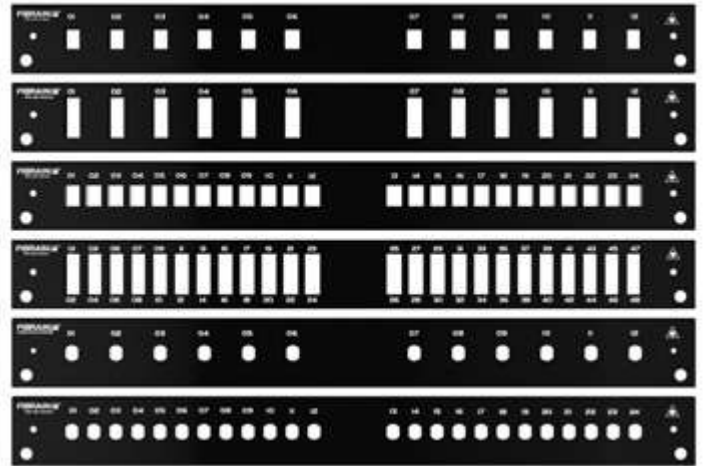
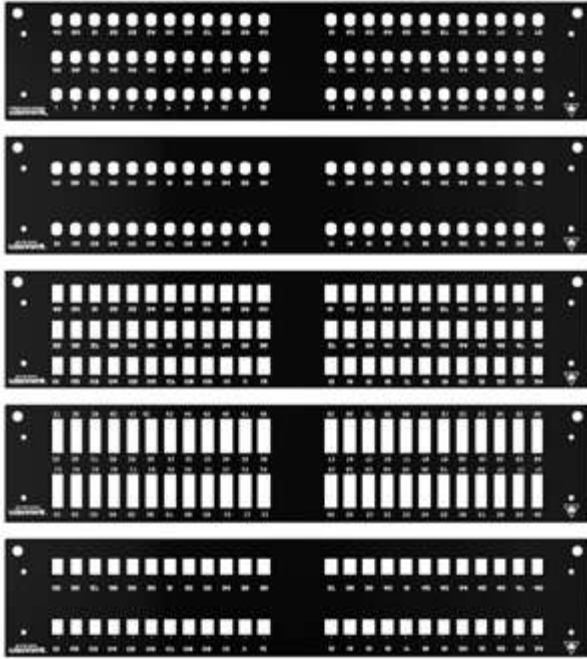
FIBRAIN 2U telescopic fiber optic Patch Panel with front plate

VARIANT	REFERENCE NO.
FIBRAIN 1U telescopic fiber optic Patch Panel, without front plate and accessories, grey	PST-A1-01
FIBRAIN 2U telescopic fiber optic Patch Panel, without front plate and accessories, grey	PST-A1-02
FIBRAIN 1U telescopic fiber optic Patch Panel, with 24 SC SX adapter front plate, grey	PST-A1-01070
FIBRAIN 2U telescopic fiber optic Patch Panel, with 72 SC SX adapter front plate, grey	PST-A1-02140

19" Patch Panels



PST-Ax Premium telescopic Patch Panel



PST-Ax front plates

VARIANT	REFERENCE NO.
FIBRAIN face plate 1U 12xSC simplex, MTRJ, E2000, LC RAL7035	FB2031
FIBRAIN face plate 1U 12xSC duplex RAL7035	FB2032
FIBRAIN face plate 1U 24xST, FC simplex RAL7035	FB2033
FIBRAIN face plate 1U 24xSC simplex, MTRJ, E2000, LC RAL7035	FB2034
FIBRAIN face plate 1U 24xSC duplex RAL7035	FB2035
FIBRAIN face plate 2U 48xST, FC simplex RAL 7035	FB2043
FIBRAIN face plate 2U 48xSC simplex, MTRJ, E2000, LC RAL7035	FB2044
FIBRAIN face plate 2U 48xSC duplex RAL 7035	FB2045
FIBRAIN face plate 2U 72xSC simplex, MTRJ, E2000, LC RAL7035	FB2046

19" Patch Panels



PSS-A Extendable standard Patch Panel



- Height 1U
- Full extension shelf with integrated front plate
- Simple construction
- Available for 12 or 24 adapters SC SX/ SC DX/ FC / ST
- Cable central member holder
- Available in equipped version with adapters and pigtails

TECHNICAL SPECIFICATION

Dimensions: Height [U] x Width [inch] x Depth [mm]	1U (U=44 mm) x 19" (482.6 mm) x 201
Max. splice cassette quantity	3
Material	Powder coated steel / Plastic guides



Internal view of Patch Panel

VARIANT	REFERENCE NO.
FIBRAIN extendable standard Patch Panel 1U 19" with front plate 12 x SC SX	PSS-A0-01050
FIBRAIN extendable standard Patch Panel 1U 19" with front plate 24 x SC DX	PSS-A0-01030
FIBRAIN extendable standard Patch Panel 1U 19" with front plate 24 x SC SX	PSS-A0-01020

19" Patch Panels



PSR-A Pivot swivel Patch Panel



- SCM-A splice cassettes
- Splice capacity: 48 fibers in 1U / 96 fibers in 2U / 144 fibers in 3U
- Patch Panel installation on back or front rack profile
- Panel available in rotating left or right side of Patch Panel (depends on version)
- Possibilities of termination cables on side or back of Patch Panel
- Hinged flap of Patch Panel protects patchcords from damages
- 2U and 3U Patch Panels can be combined with RT-01 tube divider

TECHNICAL SPECIFICATION	PSR-A0-01 / PSR-A0-B1	PSR-A0-02 / PSR-A0-B2	PSR-A0-03 / PSR-A0-B3
Dimensions: Height [U] x Width [inch] x Depth [mm]	1U x 19" x 315	2U x 19" x 315	3U x 19" x 315
Max. number of fibers	48	96	144
Max. number of splices	48	96	144
Max. number of splice trays	2	4	6
Max. line cable diameter [mm]	12	12	12
Casing material	powder painted steel		



View of 1U Patch Panel



View of 2U Patch Panel



View of 3U Patch Panel

VARIANT

REFERENCE NO.

FIBRAIN fiber pivot swivel Patch Panel 1U 19", right-sided, equipped in 4 x SCM-A-24H splice trays

PSR-A0-01-R-41-00000-0000000-000

FIBRAIN fiber pivot swivel Patch Panel 2U 19", right-sided, equipped in 8 x SCM-A-24H splice trays

PSR-A0-02-R-81-00000-0000000-000

FIBRAIN fiber pivot swivel Patch Panel 3U 19", right-sided, equipped in 12 x SCM-A-24H splice trays

PSR-A0-03-R-121-00000-0000000-000

19" Patch Panels



PSR-B Pivot swivel Patch Panel



- SCM-C-12H splice cassettes
- Capacity up to: 48 fibers in 1U / 96 fibers in 2U / 144 fibers in 3U
- Patch Panel installation on back or front rack profile
- Panel available in rotating left or right side of Patch Panel (depends on version)
- Possibilities of termination cables on side or back of Patch Panel
- Hinged flap of Patch Panel protects patchcords from damages
- 2U and 3U Patch Panels can be combined with RT-01 tube divider

TECHNICAL SPECIFICATION	PSR-B0-01 / PSR-B0-B1	PSR-B0-02 / PSR-B0-B2	PSR-B0-03 / PSR-B0-B3
Dimensions: Height [U] x Width [inch] x Depth [mm]	1U x 19" x 315	2U x 19" x 315	3U x 19" x 315
Max. number of fibers	48	96	144
Max. number of splices	48	96	144
Max. number of splice trays	4	8	12
Max. line cable diameter [mm]	12	12	12
Casing material	powder painted steel		



View of 1U Patch Panel



View of 2U Patch Panel



View of 3U Patch Panel

VARIANT

REFERENCE NO.

FIBRAIN fiber pivot swivel Patch Panel 1U 19", leftt-sided, equipped in 4 x SCM-C-12H splice trays

PSR-B0-01-L-041-00000-0000000-000

FIBRAIN fiber pivot swivel Patch Panel 2U 19", leftt-sided, equipped in 8 x SCM-C-12H splice trays

PSR-B0-02-L-081-00000-0000000-000

FIBRAIN fiber pivot swivel Patch Panel 3U 19", leftt-sided, equipped in 12 x SCM-C-12H splice trays

PSR-B0-03-L-121-00000-0000000-000

19" Patch Panels

Patchcord organiser for PST-A Patch Panel



- Mounting on the front panel of PST-A 1U Patch Panel
- Easy access and organisation of cables
- Optional velcro tapes

TECHNICAL SPECIFICATION

Dimensions: Height [mm] x Width [inch] x Depth [mm]	35 x 19" (482.6 mm) x 77
Material	Powder painted steel

VARIANT	REFERENCE NO.
FIBRAIN patchcords management shelf for 1U PST-A	FB2030G.V2
FIBRAIN patchcords management shelf for 1U PST-A with velcro tape	FB2030G.V2P

FIBRAIN PS-ORG-1-PP Horizontal cable organizer



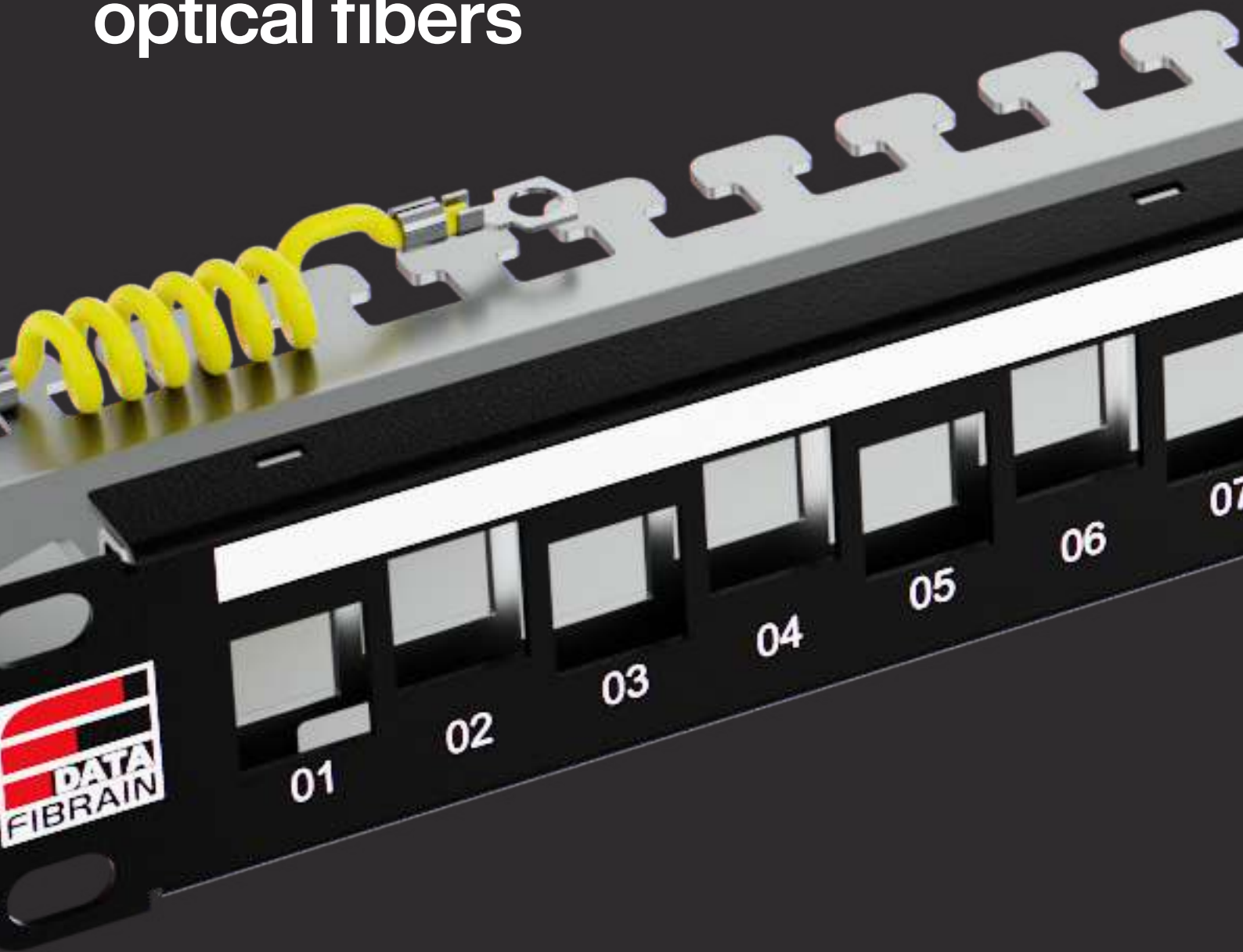
- Height 1U
- Width 19"
- Easy patchcord's organization
- Detachable handles facilitating cables placement

TECHNICAL SPECIFICATION

Dimensions: Height [U] x Width [inch] x Depth [mm]	1U (U=44 mm) x 19" (482.6 mm) x 65
Material	Powder painted steel + ABS

VARIANT	REFERENCE NO.
19" Horizontal fiber optic cable organizer	PS-ORG-1-PP

**The FibrainDATA®
system patch panels are
designed for both copper
cables as well as for
optical fibers**



19" Patch Panels

Modular Patch Panel 1U, 24 x RJ45/u/s unequipped



- 19" montage
- Modular configuration
- Up to 24 RJ45/u/s ports any category
- Integrated cable shelf for cable fixation
- Zig-zag ports layout for more efficient Alien crosstalk protection
- Large, visible port labeling

VARIANT

REFERENCE NO.

Modular Patch Panel 1U, 24xRJ45/u/s, unequipped, black RAL 9005

XB101.224.1

Modular Patch Panel 1U, 24 x RJ45/u/s unequipped



- 19" montage
- Modular configuration
- Up to 24 RJ45/u/s ports any Category
- Integrated cable shelf for cable fixation
- Zig-zag ports layout for more efficient Alien crosstalk protection
- Large, visible port labeling

VARIANT

REFERENCE NO.

Modular Patch Panel 1U, 24xRJ45/u/s, unequipped, grey RAL 7035

XB101.224

19" Patch Panels

CU

Patch Panel 1U, Cat.5e, 24 x RJ45/u, LSA
equipped

Express 5e



- 1U, 19"
- Depth: 110mm
- 8-pin IDC connectors
- Material: powder-coated sheet, black
- Facilitated cable arrangement (cable shelf)
- Exchangeable description field
- Clear numbering of ports and panels
- 19" standard - facilitates mounting
- Structured cabling comply with ISO/IEC 11801:2011, EN 50173:2011, TIA/EIA 568-C.2 standards
- Verification in accordance with the new standards by independent laboratory centres

VARIANT

Patch Panel 1U, Express 5e, 24 x RJ45/u, LSA, equipped

REFERENCE NO.

XE100.200

Patch Panel 0.5U, Cat.5e, 24 x RJ45/u, LSA,
equipped

Express 5e



- 1U, 19"
- Depth: 110mm
- 9-pin IDC connectors
- Shielded cover connected to grounding point
- Material: powder-coated sheet, black
- Facilitated cable arrangement (cable shelf)
- Exchangeable description field
- Clear numbering of ports and panels
- 19" standard - facilitates mounting
- Structured cabling comply with ISO/IEC 11801:2011, EN 50173:2011, TIA/EIA 568-C.2 standards
- Verification in accordance with the new standards by independent laboratory centres

VARIANT

Patch Panel 0.5U, Cat. 5e, 24 x RJ45/u, LSA, equipped

REFERENCE NO.

XE100.250

19" Patch Panels

Patch Panel 1U, Cat. 6, 24 x RJ45/u, LSA
equipped

Quick 6



- 1U, 19"
- Depth: 110mm
- 8-pin IDC connectors
- Material: powder-coated sheet,
- Facilitated cable arrangement (cable shelf)
- Exchangeable description field
- Clear numbering of ports and panels
- 19" standard - facilitates mounting
- Structured cabling comply with ISO/IEC 11801:2011, EN 50173:2011, TIA/EIA 568-C.2 certified by independent laboratory centres
- Verification in accordance with the new standards by independent laboratory centres

VARIANT

REFERENCE NO.

Patch Panel 1U, Cat.5, 24xRJ45/u, LSA, equipped, black RAL 9005

XQ100.200

Patch Panel 1U, Cat. 6, 24 x RJ45/u, LSA,
equipped

Quick 6



- 1U, 19"
- Depth: 110mm
- 9-pin IDC connectors
- Shielded cover connected to grounding point
- Material: powder-coated sheet, black
- Facilitated cable arrangement (cable shelf)
- Exchangeable description field
- Clear numbering of ports and panels
- 19" standard - facilitates mounting
- Structured cabling comply with ISO/IEC 11801:2011, EN 50173:2011, TIA/EIA 568-C.2 certified by independent laboratory centres
- Verification in accordance with the new standards by independent laboratory centres

VARIANT

REFERENCE NO.

Patch Panel 1U, Cat.6, 24 x RJ45/u, LSA, equipped

XQ100.250

19" Patch Panels

CU

Patch Panel 1U, Cat. 6A, 24 x RJ45/u, LSA equipped

Rapid 6a



- 1U, 19"
- Depth: 110mm
- 9-pin IDC connectors
- Material: powder-coated sheet, black
- Facilitated cable arrangement (cable shelf)
- Exchangeable description field
- Clear numbering of ports and panels
- 19" standard - facilitates mounting
- Structured cabling comply with ISO/IEC 11801:2011, EN 50173:2011, TIA/EIA 568-C.2 certified by independent laboratory centres
- Verification in accordance with the new standards by independent laboratory centres

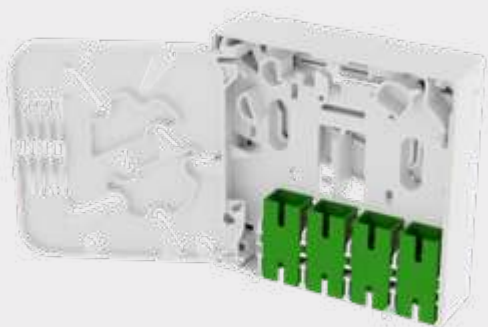
VARIANT

Patch Panel 1U, Cat. 6A, 24 x RJ45/u, LSA, equipped

REFERENCE NO.

XR100.250

09. Distribution Boxes



Wall mounted distribution indoor cabinets

**Solid. Thoroughly
tested. Made in
Poland.**

Topology of fiber network also provides the installation of fiber optic cable ends in wall cabinets that are solutions specifically designed for mounting directly indoor.

Quite often, these are low- fiber capacity solutions and used anywhere where there is no possibility or purpose of mounting rack cabinet. Therefore, this type of solutions are frequently used in FTTx networks.

Boxes and cabinets

FIBRAIN -E1 Customer outlet



- Up to 2 pieces of SC SX/ LC DX adapters
- Holder for 4 splices
- Description field for adapters on a top part of an outlet with a transparent flip cover
- Possibility to personalize the outlet (logo, website, helpdesk phone number)
- Optional adapter for DIN rail
- Optional wall support

TECHNICAL SPECIFICATION

Adapter type	Flangeless (SC simplex, LC duplex)
Material	ABS UL94-V0
Adapter material DIN	PA6 GF UL94-V0
Dimensions: Height x Width x Depth [mm]	72 x 160 x 29
Temperature range [C°]	-20 to +50
Protection level	IP40/IK06



Inside view of the outlet



A-E1 subscriber set with cable reel

VARIANT

REFERENCE NO.

FIBRAIN VFTO-E1 outlet without logo, not equipped

VFTO-E1-BL-0

FIBRAIN VFTO-E1 outlet with FIBRAIN logo, not equipped

VFTO-E1-FB-0

FIBRAIN VFTO-E1 outlet with FIBRAIN logo equipped in 2 x SC APC adapters

VFTO-E1-FB-0-212-000

FIBRAIN VFTO-E1 outlet with FIBRAIN logo equipped in 2 x SC APC adapters, 2x pigtails G657A1

VFTO-E1-FB-0-212-2DG

Boxes and cabinets

FIBRAIN VFTO-F1 Customer outlet



- Up to 4 adapters
- Holder for 8 splices
- Cable entrance from each side of the box
- Possibility to personalize the outlet (logo, website, helpdesk phone number)

TECHNICAL SPECIFICATION

Adapter type	SC simplex, LC duplex
Material	PC ABS
Dimensions (w)x(h)x(d) [mm]:	100 x 80 x 28
Protection level:	IP45
Mounting:	Wall mounting, accessory and splice protectors included



VARIANT

REFERENCE NO.

FIBRAIN VFTO-F1 customer outlet for 4 adapters, without logo, not equipped

VFTO-F1-BL-0

FIBRAIN VFTO-F1 customer outlet for 4 adapters, FIBRAIN logo, not equipped

VFTO-F1-FB-0

Boxes and cabinets

FIBRAIN DIN module FDM-S



- Capacity up to 24 splices
- Can be easily snapped on a DIN-Rail 35 mm
- Cable entries from the top and bottom
- Possibility to mount up to 24 x SC SX / LC DX / FC/ST and 2 x MTP fiber optic adapter

TECHNICAL SPECIFICATION	FDM-S19	FDM S11, S12, S15, S16	FDM S13, S14, S17, S18
Dimensions: Height x Width x Depth [mm]	35 x 135 x 130	35 x 200 x 130	66 x 200 x 130
Max. number of splices	12	12	24
Max. number of SC SX / LC DX adapter	08	12	24
Max. number of ST / FC adapter	0	12	24
Max. number of MTP adapter	0	1	2
Cable gland qty/type	2/PG13.5	2/PG13.5	4/PG13.5
Material	aluminium		



View of internal part of the FDM Module



View of FDM Module with 24 x SCA SX and 2 x MTP adapters

VARIANT

REFERENCE NO.

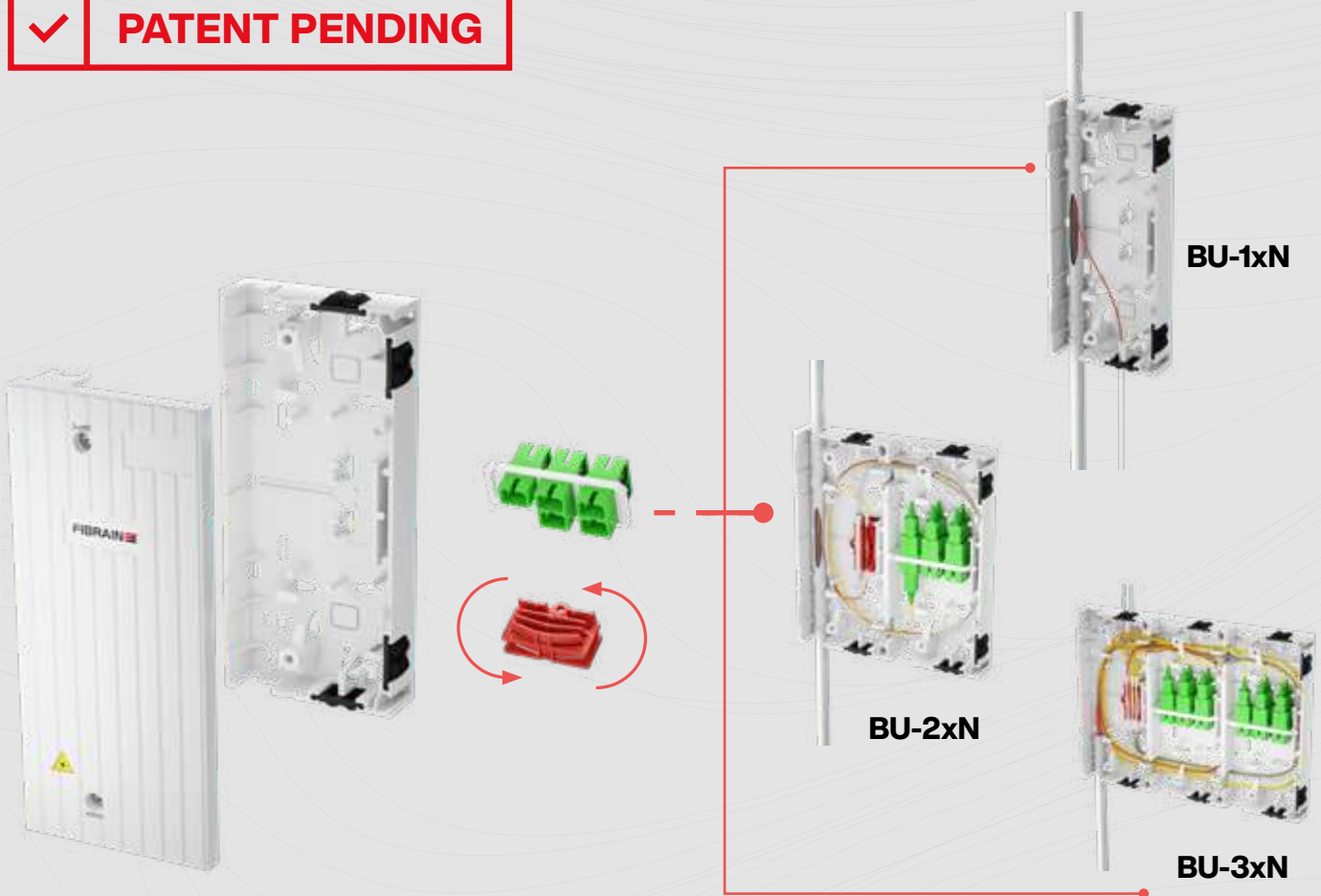
FIBRAIN DIN module with panel 12 SC SX + MTP, equipped with 2 cable gland 13.5	FDM-S11-000000-000000-000-11
FIBRAIN DIN module with panel 24 SC SX + 2 X MTP, equipped with 2 cable gland 13.5	FDM-S13-000000-000000-000-11
FIBRAIN DIN module equipped 12 panel type SC SX , 2 cable gland 13.5	FDM-S15-000000-000000-000-11
FIBRAIN DIN module with panel 24 SC SX	FDM-S17-000000-000000-000-00
FIBRAIN DIN module with panel 8 SC SX, equipped with 2 cable gland 13.5	FDM-S19-000000-000000-000-11

BU-XN

FIBRAIN wall-mounted fiber optic box



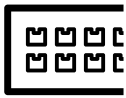
PATENT PENDING



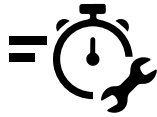
**One product –
many possibilities.**

Boxes and cabinets

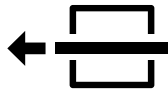
Distribution boxes provide in-line cable installation and fiber branching in various directions. Fiber optic transmission to end users is guaranteed by a spliced connection, patchcord or an optical fiber extracted from the EAC cable.



Adapter panel



Quick installation



In-line cable installation

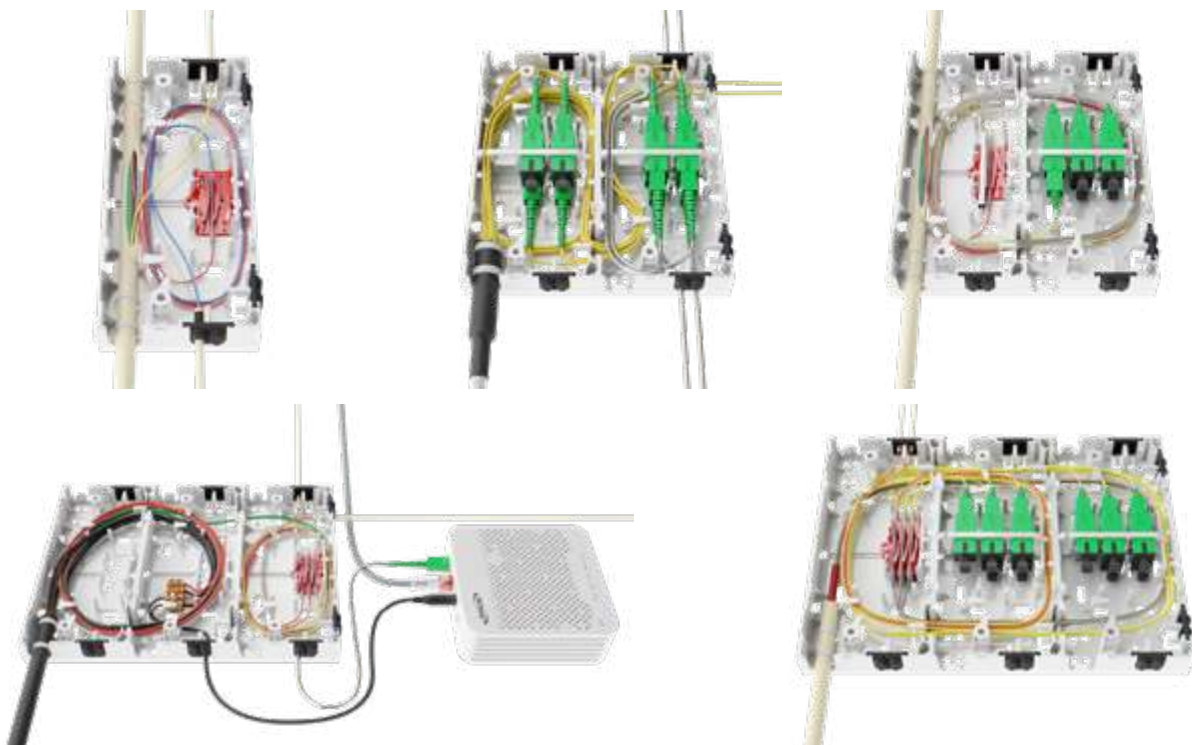


Light plastic housing

Can be used as:

- cable protection cover for protecting the window cut
- breakout unit for distribute the fiber from vertical EAC cable to a customer premise
- Wall mounted cabinet for spliced connection
- Wall mounted cabinet with adapter panel

BU-XN Examples of applications



Boxes and cabinets

BU-XN wall-mounted fiber optic box

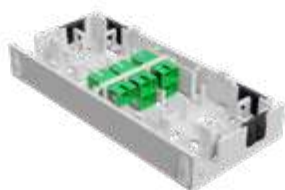


- Housing material PC+ABS – ensures high mechanical resistance
- Light and compact design
- Optional splice holders for 6 splices
- Optional panel for 5 adapters
- Possibility of mounting 3 Alubox 55 x 7 x 4mm PLC splitters in splice holder
- Dedicated mounting points for inline and drop cable
- Possibility of installation up to 8 drop cables
- Max. 2 splice holders per box

✓ **PATENT PENDING**

TECHNICAL SPECIFICATION:

Max. splices number	12
Max. adapters number	5
FO adapter type (flangeless only)	SC, LC
Max. cable diameter: - inline cable port - drop cable port	Ø 15 mm Ø 5 mm
Dimensions: Height x Width x Depth [mm]	72 x 160 x 29
Temperature range [C°]	-20 to +50
Housing material	PC + ABS
Splice holder material	PP
Adapter panel material	PC + ABS
Ingress protection	IP44



View of housing equipped in adapter panel and SCA adapters



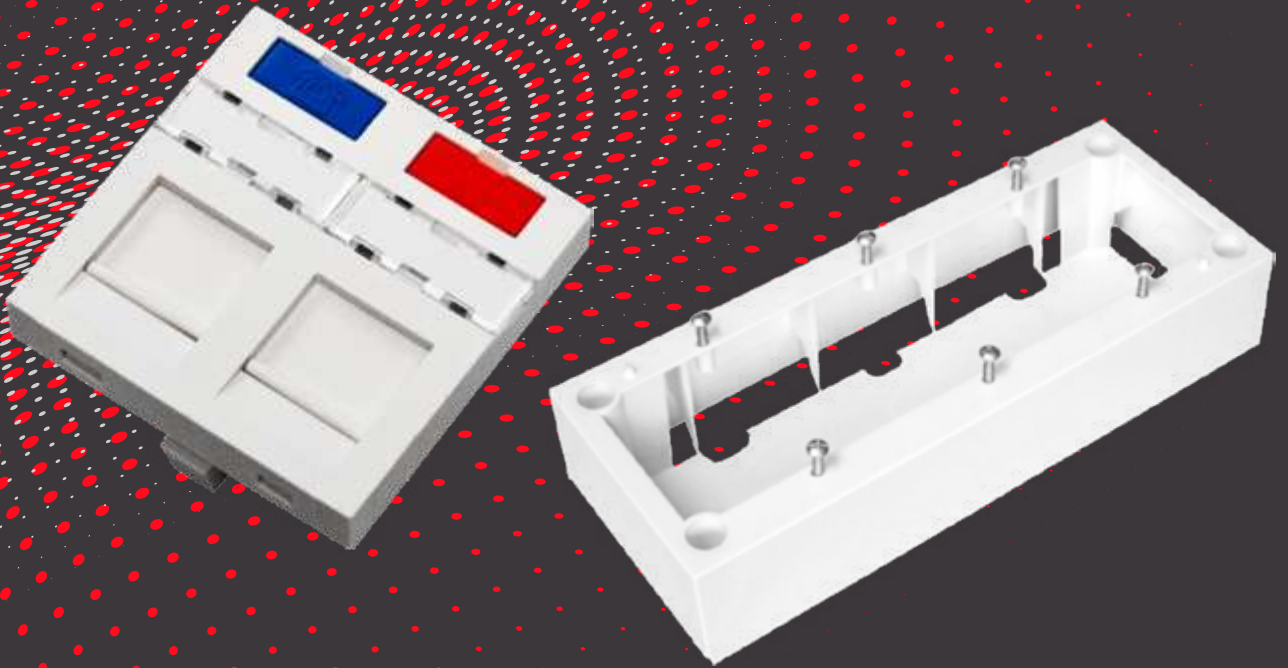
View of housing equipped in splice holder

VARIANT	REFERENCE NO.
FIBRAIN wall box BU-XN	BU-XN-0000-000-WH
FIBRAIN wall box BU-XN equipped 2 splice holder	BU-XN-0000-200-WH
FIBRAIN wall box BU-XN equipped adapter panel, 5 adapters SC APC standard	BU-XN-1512-000-WH

10. Electro- installation equipment



Electro-installation equipment



Group of electrical components is an additional supplement which is a solution for electrical - **logical transmission outlet points**. For the end- points we use 45 x 45mm and 50 x 50mm standard. Varied portfolio of adapters allows the user to join endpoint cooper, optical fiber and multimedia solutions in one point together with specified power supply.



Angle
construction



Coloured
identification icons

Electro-installation equipment

Flat faceplates

Keystone adapter – 45 x 45mm standard - flat



Angle construction



Coloured identification icons

- Flat construction
- Equipped with description field and identification icons concerning ports
- Automatic anti-dust protection
- Possibility of termination 1,2 modules in a keystone standard
- Possibility of termination any FibrainDATA® module

VARIANT	REFERENCE NO.
FIBRAIN 22.5 x 45mm, Flat adapter for 1 x keystone, identification icon	XB-45KA00S-01
FIBRAIN 45 x 45mm, Flat adapter for 1 x keystone, identification icon	XB-45KA00D-01
FIBRAIN 45 x 45mm, Flat adapter for 2 x keystone, identification icon	XB-45KA00D-02

Angled faceplates

Adapters to keystone jack modules - angular



Angle construction












Coloured identification icons









- Flat construction
- Equipped with description field and identification icons concerning ports
- Automatic anti-dust protection
- Possibility of termination 1,2 modules in a keystone standard
- Possibility of termination any FibrainDATA® module

VARIANT	REFERENCE NO.
Ebox adapter 22.5 x 45mm for 2 x RJ45 Keystone	XB-45KA45S-01
Ebox adapter 45 x 45mm for RJ45 Keystone	XB-45KA45D-01
Ebox adapter 45 x 45mm for 2 x RJ45 Keystone	XB-45KA45D-02








Electro-installation equipment

VARIANT		REFERENCE NO.
	Flush mount boxes, 2 - module	GIP-2
	Flush mount boxes, 4 - module	GIP-4
	Flush mount boxes, 2 - module	GIP-6
	Wall mount boxes, 2 - module	OBU-2
	Wall mount boxes, 4 - module	OBU-4
	Wall mount boxes, 6 - module	OBU-6
	45 x 45mm, 2 - module mounting support	SUP-2
	90x45mm, 4-module mounting support	SUP-4
	135 x 45mm, 6 - module mounting support	SUP-6

Electro-installation equipment

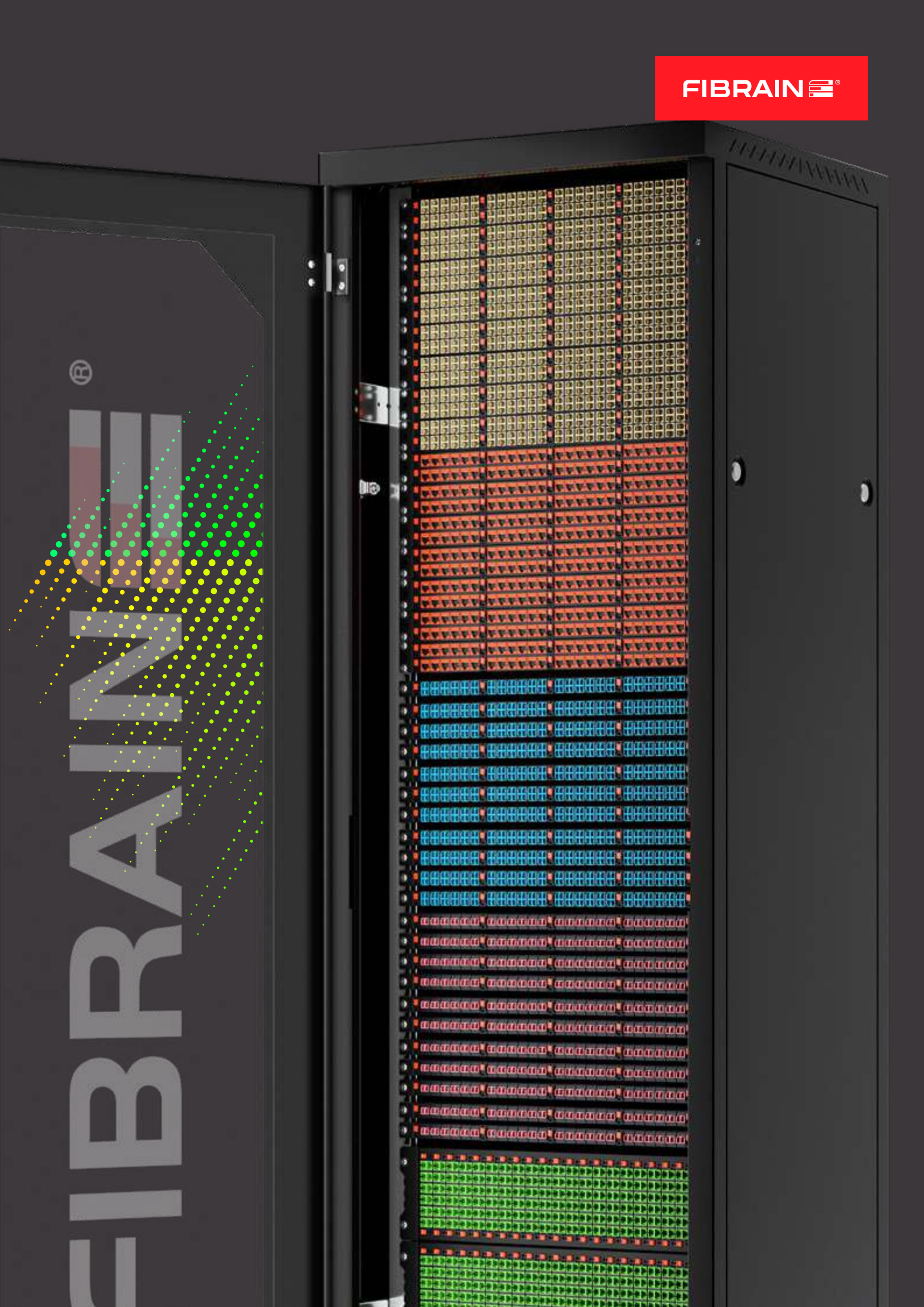
VARIANT		REFERENCE NO.
	Frame designed for 45 x 45mm, 2 - support module	RAM-2
	Frame designed for 90 x 45mm, 4 - support module	RAM-4
	Frame designed for 135 x 45mm, 6 - support module	RAM-6
	Blind adapter - 22.5 x 45 mm	XB-450000S-01
	Blind adapter - 45 x 45 mm	XB-450000D-02
	Surface mounted box, 86 x 86 x 27mm, 2 - modules	XB-50BBA-02
	Surface mounted box, 86 x 86 x 27mm, 2 - modules	XB-50BBB-02
	Surface mounted box, 86 x 86 x 37mm, 2 - modules	XB-S0BBC-04

Electro-installation equipment

VARIANT		REFERENCE NO.
	Mounting frames. Frame with support 2-module 50 x 50 mm, angled finish	XB-S0FPB-0002
	Mounting frames. Frame with support 2-module 90 x 50 mm, angled finish	XB-S0FPB-0004
	Mounting frames. Frame with support 2-module 50 x 50 mm, flat	XB-S0FPF-0002
	Mounting frames. Frame with support 2-module 90 x 50 mm, flat	XB-S0FPF-0004
	Adapters for keystone modules. Adapter 25 x 50mm for keystone module, angular	XB-50KA45I-01
	Adapters for keystone modules. Adapter 25 x 50mm for keystone module, flat	XB-50KA00L-01
	Adapters for keystone modules. Blind adapter 25 x 50mm	XB-50BL000-01

11. Networks and cabinets






FIBRAIN

Network cabinet

Floor standing cabinets 42/45U

Leveling feet 1350/1500 kg, RAL9005



- Expanded configuration system o
 - multiple door, panel, roof options for maximum flexibility
 - possibility to join cabinets in a row
 - possibility of optional cable entry
 - easy coding system enables quick configuration of the cabinet
- Possibility of controlling ventilating air flow by application of proper type of doors, side panels and fan units.
- Wide range of supplementary accessories: shelves, drawers, fan units, power strips, blanking plates etc.
- Non-standard cabinets are available on individual customer's request.
- Frame, side panels, solid steel door, mounting profiles, C-profiles - sheet steel
- Steel door with glass - sheet steel, mineral safety glass
- Outriggers - zamak casting

MATERIAL

Frame, side panels, doors, roof, mounting profiles, C-profiles - sheet steel
Outriggers - zamak casting

SURFACE FINISHING

Frame, roof, panels, doors - powder paint, light grey (RAL 7035) or black (RAL 9005)
All other color options on request
Mounting profiles, C-profiles - Al-Zn coated

Base type	Maximum weight of equipment mounted in cabinet
levelling feet	1500kg*
castors - type 300	500kg
plinth	1500kg

*) Declared carrying capacity is valid if maintaining the maximum distance between mounting profiles within the cabinet. If the cabinet is set on feet, for ensuring carrying capacity you must also tighten jam nuts to the bottom plate.

Height [U = 44.45mm]	Width [mm]	Depth [mm]	REFERENCE NO
24U	600	1000	SSRS-42-6/10-S04-B
	800	1000	SSRS-42-8/10-S04-B
	800	1200	SSRS-42-8/12-S04-B
33U	600	1000	SSRS-45-6/10-S04-B
	800	1000	SSRS-45-8/10-S04-B
	800	1200	SSRS-45-8/12-S04-B

Network cabinet

Floor standing cabinets 18/45U

Leveling feet 1000/1360 kg, RAL9005



- Designed for indoor applications
- Cable openings in the top and bottom plates, 71 mm wide, what allows to put through the power cable with three-phase plug
- All openings in the top and bottom plates blanked with knock-out blanking plates
- U-marking on the mounting profiles
- Maximum opening angle for front door – 180°
- Possibility to change door opening's direction
- Possibility to put the cabinet directly on the floor (no protruding elements under the cabinet)
- Adaptation for combining the cabinets into the rows and Data Box creation Frame
- Cabinet based on levelling feet IP 20 in accordance with EN 60529 (does not apply to brush cable entries)
- Front Glass door with metal sides with three-point rod-latch lock with swing handle
- Rear Solid steel, shortened door with single-point locks +1 piece of 3 U module panel with brush strip, mounted under the shortened door
- Solid steel side panels with single-point locks
- 2 pairs of 19" mounting profiles
- Earthing bar and cables

MATERIAL

Frame, side panels, solid steel door, mounting profiles, C-profiles - sheet steel
Steel door with glass - sheet steel, mineral safety glass
Outriggers - zamak casting

SURFACE FINISHING:

Frame, roof, panels, doors, plinth - powder paint, light grey (RAL 7035) All other colour options on request.
Mounting profiles, C-profiles - Al-Zn coated.

Base type	Maximum weight of equipment mounted in cabinet
leveling feet	1000 kg/1360 kg*
castor type 150	150 kg
castor type 300	500 kg
plinth	1000 kg/1360 kg*

Network cabinet

Floor standing cabinets 18/45U

Leveling feet 1000/1360 kg, RAL9005

VARIANT

REFERENCE NO.

Usable dimensions

Height [U = 44.45mm]	Width [mm]	Depth [mm]	
18U	600	600	SRS-18-6/6-S04-B
	600	600	SRS-24-6/6-S04-B
24U	600	800	SRS-24-6/8-S04-B
	800	800	SRS-24-8/8-S04-B
33U	600	600	SRS-33-6/6-S04-B
	600	800	SRS-33-6/8-S04-B
	800	800	SRS-33-8/8-S04-B
42U	600	600	SRS-42-6/6-S04-B
	600	800	SRS-42-6/8-S04-B
	800	800	SRS-42-8/8-S04-B
	600	1000	SRS-42-6/10-S04-B
	800	1000	SRS-42-8/10-S04-B
45U	800	800	SRS-45-8/8-S04-B
	800	1000	SRS-45-8/10-S04-B

* 1000kg for cabinet depth ≤800mm/ 1360kg for cabinet depth ≥1000mm

Network cabinet

Wall-mounted cabinets

Single or double section wall mounted cabinets with removable side panels



- Designed for indoor applications.
- Available in two depths (450 and 600mm) and six usable heights (from 6 to 21U)
- The cabinet 450 mm deep can be equipped with an additional body, fixed to its rear wall with two or three hinges and a lock
- This creates a double-section cabinet 600mm deep
- The design of the cabinet is based on a welded body, glazed front door and two removable side panels
- The cabinet is equipped with two adjustable 19° mounting angles with depth regulation
- Top and bottom plates have cable openings covered with knock-out blanking plates and venting grids with holes for fan assembling
- Door and side panels can be installed without tools
- It is possible to change door opening direction and opening of the additional rear body direction
- Bodies, door and side panels are equipped with earthing pins
- The cabinet is without a rear panel
- Body, side panels, side elements of glazed door – powder paint, light grey (RAL 7035) or black (RAL 9005).
- Other colors on demand. equipment – Zinc plated steel sheet

MATERIAL

Frame, sheet steel

VARIANT

REFERENCE NO.

Usable dimensions

Height [U = 44.45mm]	Width [mm]	Depth [mm]	Reference number Wall mounted cabinet 450 or 600
6 U	600	450	SWC-06-450-S04-B
	600	600	SWC-06-600-S04-B
12 U	600	450	SWC-10-450-S04-B
	600	600	SWC-10-600-S04-B
18 U	600	450	SWC-12-450-S04-B
	600	600	SWC-12-600-S04-B
33U	600	450	SWC-15-450-S04-B
	600	600	SWC-15-600-S04-B
33U	600	450	SWC-18-450-S04-B
	600	600	SWC-18-600-S04-B
33U	600	450	SWC-21-450-S04-B
	600	600	SWC-21-600-S04-B

Height [U = 44.45mm]	Width [mm]	Depth [mm]	Reference number Rear body
6 U	600	150	KTC-06-150-S04-B
10 U	600	150	KTC-10-150-S04-B
12 U	600	150	KTC-12-150-S04-B
15 U	600	150	KTC-15-150-S04-B
18 U	600	150	KTC-18-150-S04-B
21 U	600	150	KTC-21-150-S04-B

Network cabinet

1 section wall-mounted cabinets



- Designed for indoor applications
- Available in 2 depths (400/600 mm) and 5 usable heights (from 6 to 18U)
- The cabinet is made of bolted framework (composed of 3 frames), top plate, bottom plate, side panels, rear panel and front door
- Cabinet is equipped with two adjustable 19" mounting profiles
- Top and bottom plates have cable openings covered with knock-out blanking plates, and 3 venting holes for each plate
- Door, side panels and mounting profiles can be installed without tools
- The entire weight of the devices installed inside the cabinet is transferred onto its framework. Top and bottom plates, side panels and cabinet door can be removed or installed also with a fully equipped cabinet that is mounted to the wall
- Side panels can be removed after opening the door
- Material: Sheet steel, safety glass
- Protection degree: IP 20 in accordance with EN 60529
- frame, doors, panels – powder paint, light grey (RAL 7035)
- Mounting profiles – Al-Zn coated

VARIANT

REFERENCE NO.

Usable dimensions				Catalogue number of cabinet in basic version	
Height [U = 44.45mm]	Width [mm]	Depth [mm]	Usable height HU [U = 44,45 mm]		
600	400	365	6 U	SWJ-06-400-S04-B	
		543	10 U	SWJ-10-400-S04-B	
		632	12 U	SWJ-12-400-S04-B	
		765	15 U	SWJ-15-400-S04-B	
		899	18 U	SWJ-18-400-S04-B	
	600	600	365	6 U	SWJ-06-600-S04-B
			543	10 U	SWJ-10-600-S04-B
			632	12 U	SWJ-12-600-S04-B
			765	15 U	SWJ-15-600-S04-B
			899	18 U	SWJ-18-600-S04-B

Network cabinet

2-section wall-mounted cabinet SWD



- Designed for indoor applications
- Available in 5 heights (see table below)
- The cabinet is made of 2 main parts:
 - 19" unit with safety glass door
 - Wall mounted part with changeable rear panel
- Cabinet is equipped with two adjustable 19" mounting profiles
- Steel door and back cover are equipped with bonding cables
- Wall mounted part contains 2 cable openings with knock-out blanking plates and brush passover
- Direction of door openings and position of cable openings can be easily adjustable
- Wide range of additional accessories: shelves, drawers, ventilation unit, PS panels, blind covers, bonding stripe etc.
- Can be equipped in additional mounting profiles

DESCRIPTION

Fibrain wall mounted SWD cabinets were designed to guarantee the highest flexibility during installation and operation. The quality of materials used for the construction make much easier installation and operation. Wide range of accessories open the possibilities to fit the particular requirements of the customer.

APPLICATIONS

For indoor applications

VARIANT

REFERENCE NO.

Total Width L [mm]	Total Depth G [mm]	19" Interior Depth G1 [mm]	Total Depth G [mm]	Total Height H [mm]	Usable height HU [U = 44.45 mm]	Maximum load [kg]	Reference number
600	501	600	501	871	18U	30	SWD-18-500-S04-B
				737	15U	30	SWD-15-500-S04-B
				604	12U	30	SWD-12-500-S04-B
				515	10U	20	SWD-10-500-S04-B
				337	6U	20	SWD-06-500-S04-B

Network cabinet

Simple plinth 100mm



- For floor-standing cabinets
- Possibility of fixing into the room's floor
- Possibility of adding rubber vibro-shock absorbers
- It consists of the following elements ordered separately:
 - Plinth 100mm high
 - 4 simple corners 100mm high, 4 side panels (each may be solid, perforated or with brush opening), 4 vibro-shock absorbers (option).

MATERIAL

Sheet steel, powder painted in black (RAL 9005)

REFERENCE NO.

Height [mm]	Width [mm]	Depth [mm]	Load capacity [kg]	Reference number
100	600	600	600	CKS-6/6-S04-B
	600	800	800	CKS-6/8-S04-B
	800	600	600	CKS-8/6-S04-B
	800	800	800	CKS-8/8-S04-B
	600	1000	1000	CKS-6/10-S04-B
	800	1000	1000	CKS-8/10-S04-B
	800	1200	1200	CKS-8/12-S04-B

Network cabinet

Plinth with pull out stabiliser



- For floor-standing cabinets
- Equipped with a stabilizer that protects the cabinet from tipping during the ejection of servers or other heavy devices installed on moving guides.
- Used where the cabinet cannot be attached to the floor.
- It consists of the following elements ordered separately:
 - Plinth 100mm high: 4 simple corners 100mm high, 3 side panels (each may be solid, perforated or with brush opening), 1 assembly consisting of pull out stabilizer.

VARIANT				REFERENCE NO.
Height [mm]	Width [mm]	Depth [mm]	Load capacity [kg]	Reference number
600		600		CKP-6/10-S04-B
600	100	800	100	CKP-8/10-S04-B
800		600		CKP-8/12-S04-B

Simple plinth 100mm

For indoor applications



- For floor-standing cabinets.
- Levelling by means of feet.
- It consists of the following elements ordered separately:
- Plinth 100 mm high:
 - 4 corners 100 mm high with levelling option (with feet), 4 side panels (each may be solid, perforated or with brush opening).

				REFERENCE NO.
Height [mm]	Width [mm]	Depth [mm]	Load capacity [kg]	Reference number
100	600	600		CKR-6/6-S04-B
	600	800		CKR-6/8-S04-B
	800	600		CKR-8/6-S04-B
	800	800	100	CKR-8/8-S04-B
	600	1000		CKR-6/10-S04-B
	800	1000		CKR-8/10-S04-B
	800	1200		CKR-8/12-S04-B

Network cabinet

Shelf fixed on two 19" mounting profiles 19" assembly



- Shelf fixed on two 19" mounting profiles - 19" assembly
- Sheet steel powder painted in black (RAL 9005)
- Parameters:
 - Height 1U (44 mm)
 - Width 446 mm
 - Depth 250 mm
 - Load capacity 10 kg

REFERENCE NO.

Height [U = 44 mm]	Width [mm]	Depth [mm]	Load capacity [kg]	Reference number
1U	446	250	10	PSM-25-1U-S04-B

Shelves fixed on four 19" mounting profiles fixing to the side openings



- Shelves fixed on four 19" mounting profiles - fixing to the side openings
- Material: Sheet steel powder painted in black (RAL 9005)
- Fixed shelf with fixing accessories

REFERENCE NO.

Height [mm]	Width [mm]	Depth [mm]	Load capacity [kg]	Reference number
22	483	650	100	PSM-65-1U-S04-B
		550		PSM-55-1U-S04-B
		450		PSM-45-1U-S04-B
		350		PSM-35-1U-S04-B

Network cabinet

19" fixed shelf, 1U/2U



- Mounted in 19" frames
- Height 1U or 2U
- Depth from 250mm to 650mm
- 2 or 4 point fixation
- Material: Steel sheet 2.0mm
- Powder painted in black (RAL 9005)

Depth [mm]	Width [mm]	Heigh HU [U=44,45 mm]	Load capacity [kg]	Catalog number [kg]
150	2	1U	15	PSM-15-1U-S06-B
200				PSM-20-1U-S06-B
250				PSM-25-1U-S06-B
300				PSM-30-1U-S06-B
350				PSM-35-1U-S06-B
400	4		20	PSM-40-1U-S06-B
450				PSM-45-1U-S06-B
500				PSM-50-1U-S06-B
550				PSM-55-1U-S06-B
600				PSM-60-1U-S06-B
650	4	25	PSM-65-1U-S06-B	
750			PSM-75-1U-S06-B	

19" adjustable shelf, 1U



- Mounted in 19" frames
- Height 1U
- Depth 400mm ÷ 600mm, 600mm ÷ 800mm or 800mm ÷ 1000mm
- 4 point fixation
- Material: Steel sheet 2.0mm
- Powder painted in black (RAL 9005)

Depth [mm]	Fixation points number	Height [U = 44.45 mm]	Load capacity [kg]	REFERENCE NO.
400 ÷ 600	4	1U	85	PSZ-40-1U-S06-B
600 ÷ 800				PSZ-60-1U-S06-B
800 ÷ 1000				PSZ-80-1U-S06-B

Network cabinet

Shelves fixed on four 19" mounting profiles

adjustable depth, 19" assembly



- Mounted in 19" frames
- Height 1U
- Depth 400mm ÷ 600mm, 600mm ÷ 800mm or 800mm ÷ 1000mm
- 4 point fixation
- Material: Steel sheet 2,0mm
- Powder painted in black (RAL 9005)

Depth [mm]	Fixation points number	Height [U = 44.45 mm]	Load capacity [kg]	REFERENCE NO.
400 ÷ 600	4	1U	85	PSZ-40-1U-S06-B
600 ÷ 800				PSZ-60-1U-S06-B
800 ÷ 1000				PSZ-80-1U-S06-B

Voltage distribution panel 19", 3U

RAL 9005, black



- Universal 19" enclosure for modular devices. In the standard version equipped with DIN rail and housing with 402.5 x 45.5mm opening.
- Maximum number of built-in S-type modules (width of module 17.5 mm): 22 pcs
- Steel sheet powder painted in RAL 9005

Depth [mm]	Height [U = 44.45 mm]	Width [mm]	REFERENCE NO.
60	3U (133mm)	19" (internal width: 446mm)	PDN-3U-S04-B

Network cabinet

Solid blanking plates



- Solid blanking plates for bottom plate, top plate and roof
- Sheet steel powder painted in black (RAL 9005)
- Solid blanking plates with fixing accessories

Product name	For opening	REFERENCE NO.
Solid blanking plates	A	PWD-P-38/38-S04-B
	B	PWD-P-38/21-S04-B
	C	PWD-P-38/04-S04-B

Cable entry plates with a brush strip



- Cable entry plates for bottom plate, top plate and roof
- Sheet steel powder painted in black (RAL 9005)
- Solid blanking plates with fixing accessories

Product name	For opening	REFERENCE NO.
Cable entry plates with a brush strip	A	PWD-S-38/38-S04-B
	B	PWD-S-38/21-S04-B
	C	PWD-S-38/04-S04-B

Network cabinet

Perforated blanking plate



- Perforated blanking plate for bottom plate, top plate and roof
- Sheet steel powder painted in black (RAL 9005)
- Solid blanking plates with fixing accessories

Product name	For opening	REFERENCE NO.
Perforated blanking plate	A	PWD-PP-38/38-S04-B
	B	PWD-PP-38/21-S04-B

Blanking plates with a fabric filter



- Blanking plates with a fabric filter for top plate, bottom plate and roof.
- Sheet steel powder painted in black (RAL 9005)
- Blanking plates with a fabric filter and fixing accessories

Product name	For opening	REFERENCE NO.
Blanking plates with a fabric filter	A	PWD-W-38/38-S04-B
	B	PWD-W-38/21-S04-B

Network cabinet

19" blanking plates



- For covering empty 19" space
- Sheet steel or sheet aluminium powder painted in black (RAL 9005)

Product name	For opening	REFERENCE NO.
19" blanking plates	1U	PWM-1U-S04-B
	2U	PWM-2U-S04-B
	3U	PWM-3U-S04-B
	4U	PWM-4U-S04-B
	5U	PWM-5U-S04-B
	6U	PWM-6U-S04-B

19" mounting profile



- Material: Al-Zn coated sheet steel

Height [U=44,45mm]	REFERENCE NO.
47U	PM-47U-S04
45U	PM-45U-S04
42U	PM-42U-S04

19" mounting profile



- For installing 19" equipment in cabinets. In cabinets 600 mm wide, mounting profiles bars are fixed directly to the C-profiles
- in cabinets 800mm wide, in order to achieve 19" spacing, it is necessary to use outriggers
- Material: Al-Zn coated sheet steel

Height [U=44,45mm]	REFERENCE NO.
47U	PMS-47U-S04
45U	PMS-45U-S04
42U	PMS-42U-S04

Network cabinet

Power distribution units



- Anodized aluminium housing
- Panels adjusted to 1U 19" mounting
- Panels can be mounted vertically
- Equipped with M6 rack bolts
- Socket with pin have protection against accidental placement of other items
- HO5W-F.3G 1.5mm supply cable, width: 3m
- IP20 protection
- In accordance with CE Standards
- Tailor-made construction

VARIANT	REFERENCE NO.
19" PDU 5 sockets with the pin, UNISCHUCO plug, LED switch	PDU-5BL
19" PDU 8 sockets with the pin, UNISCHUCO plug, LED switch	PDU-8BL
19" PDU 8 sockets with the pin, C14 plug, LED switch	PDU-8AL
19" PDU 9 sockets with the pin, UNISCHUCO plug	PDU-9BB
19" PDU 9 sockets with the pin, IEC320C14 plug	PDU-9AB
19" PDU 8 sockets with the pin, UNISCHUCO plug, surge protection	PDU-8BP
19" PDU 8 sockets with the pin, UNISCHUCO plug, LED switch	PDU-8SL
19" PDU 6 sockets with the pin, UNISCHUCO plug, LED switch	PDU-6SL
19" PDU 5 sockets with the pin, UNISCHUCO plug, LED switch, surge protection	PDU-5SD
19" PDU 5 sockets with the pin, UNISCHUCO plug, LED switch, surge protection, interference eliminator	PDU-5BC
19" PDU 8 C13 sockets with the pin, C14 plug, LED switch	PDU-8FL
19" PDU 9 sockets with the pin, UPS plug, alloy housing, status LED	PDU-9CB
19" PDU 9 SHUCO sockets with the pin, UNISCHUCO plug	PDU-9SB

Network cabinet

Thermostat KTS 1141 normally open

Thermostats are used for controlling fan units, heaters and heat exchangers; they can also be used as signal generators for monitoring the internal temperature of the enclosure



- Sensor element: thermal bimetal
- Temperature range: 0-60°C, hysteresis ca. 7°C
- Contact types: snap action contact
- Power carrying capacity: 6A (I) 250V AC
- Radio frequency interference: „N“ (according to VDE 0875)

VARIANT

Typ: Thermostat KTS 1141

REFERENCE NO.

WTA-TER-S04

Fan kit

Mounted it the top or bottom plate of SU, SD2, SJ2, SJB



- Power supply: 230 V
- Power: 22 W
- Capacity: 165 m3/h
- Noise level ok. 40 dB
- Set: 1 fan with protection grid, power lead 1.0 m long, fixing accessories

VARIANT

Fan kit

REFERENCE NO.

WTA-1W-S04

Outrigger 19"



- For fixing mounting profiles or mounting angles in cabinets 800 mm wide, in order to achieve 19" spacing
- Depending on the cabinet design, two or three outriggers are required for assembling one mounting profile.

VARIANT

Outrigger 19"

REFERENCE NO.

WS-19-S04

Network cabinet

Roof fan units with integrated thermostat

Fan units are intended for assembly to 380 x 380mm openings which are located in the top plates of cabinets



- Power supply: 230 V, 50 Hz
- Rated current [A]: 0.28
- Number of fans: 2
- Power rating [W]: 44
- Capacity [m3/h]: 330
- Ambient temperature [°C]: from -10 to + 70
- Relative humidity [%]: from 20 to 80
- Protection degree: IP 20
- Electric shock protection: neutralization

VARIANT

REFERENCE NO.

Roof fan unit

WTD-2T-S04-B

Roof fan units with integrated thermostat

Fan units are intended for assembly to 380 x 380mm openings which are located in the top plates of cabinets



- Power supply 230 V, 50 Hz
- Rated current [A] 0.56
- Number of fans 4
- Power rating [W] 88
- Capacity [m3/h] 660
- Ambient temperature [°C] from -10 to + 70
- Relative humidity [%] from 20 to 80
- Protection degree IP 20
- Electric shock protection neutralization

VARIANT

REFERENCE NO.

Roof fan unit

WTD-4T-S04-B

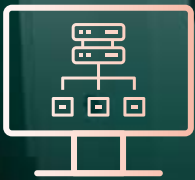
12. FibrAIM

**Automatic infrastructure management
for monitoring both copper and
fiber optic connections.**



FibrAIM

FibrAIM is a DCIM solution that provides comprehensive management of all IT resources. It enables the visualisation of connections and monitor them in real time.



Comprehensive mapping
and record of equipment



Dynamic link
management



Full integration with
IT infrastructure

FibrAIM



FibrAIM is a DCIM solution that provides comprehensive management of all IT resources. It enables the visualisation of connections and monitor them in real time. The solution enables detailed recording and mapping of devices from any manufacturer. The special feature is the dynamic management of relations to logical objects, i.e.: systems, services, clusters, virtual machines, assemblies and contracts.

The software integrates itself with the IT environment, as it has a built-in bi-directional integration interface. The connector enables integration with any ServiceDesk/CMDB. It also has a built-in mobile client for Android and IOS platforms. The mobile client allows instant access and data from the smartphone level.

Key benefits of FibrAIM

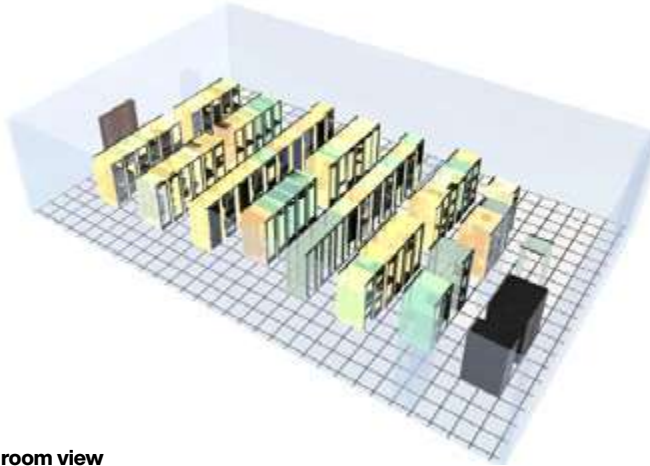
- Centralised database for the entire physical infrastructure
- Instant access to data on the IT infrastructure, also from a smartphone
- Time savings for service staff
- optimisation of Data Centre space utilisation
- reduction of costs of maintaining the Data Centre and devices equipment stored in it
- acceleration of actions while removing failures and assessment of the impact of failures on systems and application
- Reduction in downtime
- Complete intuitive network overview
- Provision of information on resource allocation to systems and applications across the organisation
- Automatic update of connection status for the physical layer
- simplified network and resource administration through an advanced work order system
- Efficient MAC (Moves, Add & Changes) operations in the Data Centre



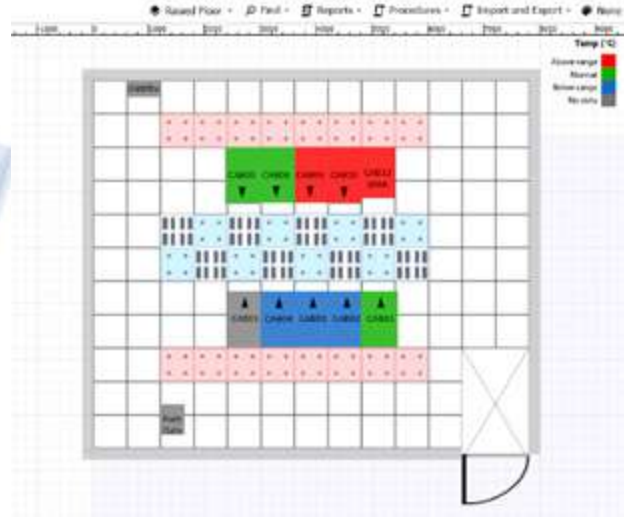
- Monitoring of physical connections in real time
- Automatic database update - 100% up-to-date
- Alerts for unauthorised changes
- Tracking of all MACs

FibrAIM

Intelligent management of IT resources in the Data Centre



Server room view



A typical data centre consists of a large amount of IT infrastructure (servers, arrays, switches, routers, firewalls, PDUs, patch panels, racks) managed by a number of people and teams, FibrAIM provides a central repository for all staff involved in the management of the data centre.

Most organisations use a distributed model for storing information about their data centre assets.

As a result, there is no single place from which the complete picture of what is managed in the Data Centre is visible. There is no logical link of the entire infrastructure. These challenges can be overcome quickly and efficiently with our solution



FibrAIM



Fibrain AIM analyzer, LCD display, 1U



- Analyzer 19" with LC-Display (2 x 40 characters, scrollable)
- External power supply
- Front: USB, LAN, 3 LEDs, function and reset buttons, bus
- Rear: Power input, console port (Sub-D), USB, rack lamp

- **Powers and connects multiple BPDs to management software over an IP-network**
- **Shows status and alerts.**

TECHNICAL SPECIFICATION

Dimensions: H x W x D [mm]	44.5 x 485 x 171 mm. Rack unit 1U
Net weight	2.5 kg (5.5 lbs) including power supply
Shipping dimensions H x W x D [mm]	80 x 565 x 215 mm
Colour	black, similar to RAL 9005 other colours are available on request
Units per pallet	120

ENVIRONMENTAL PARAMETERS

Operating environment	0°C - +40°C (+32°F - +104 °F)
Operating relative humidity	0 - 95%, non-condensing
Operating elevation	0 - 3000 meters (0 - 10000 feet)
Storage temperature	-20°C - +85 °C (-4 °F - +185 °F)
Storage relative humidity	0 - 95%, non-condensing
Storage elevation	0 - 15000 meters (0 - 50000 feet)

VARIANT

Fibrain AIM analyzer, LCD display, 1U

REFERENCE NO.

X-AIM-ANR10

FibrAIM



RFID sensor bar for Fibrain HD Patch Panel, 24/48 port



- Sensor bar featuring 48 RFID readers
- o Holder left / right
- o Bus cable clip

- **Sensor bar contains 48 RFID readers on both sides of the bar (up and down). Compatible to Fibrain HD Panel equipped with RJ45 connection modules or FO adapters (LCdx, SC).**
- **It enables simultaneous combination of copper and fiber optic ports.**

RFID readers once closed up to RFID tags located on patch cords read the data contained there and pass through bus cable to analyzer.

VARIANT

RFID sensorbar AIM

REFERENCE NO.

X-AIM-LS0

Bus cable

30m, reel



- 127 mm flat ribbon cable, 6 X AWG26/7 0.14 mm
- black with red stripe
- Tinned copper, PVC isolation, proof voltage: 2000 Veff

6-wire bus cable for make a connection between analyzer and sensor bar (SB). Length 30m.

- max. 15 SBs with max. 25m bus cable
- max. 18 SBs with max. 20m bus cable
- max. 25 SBs with max. 15m bus cable
- max. 30 SBs with max. 10m bus cable
- max. 35 SBs with max. 5m bus cable
- max. 42 SBs with max. 2.5m bus cable

VARIANT

RFID sensorbar AIM

REFERENCE NO.

X-AIM-KB0

FibrAIM



Bus cable termination connector

For line/cable termination



- Bus Connector, male with resistor

VARIANT

RFID sensorbar AIM

REFERENCE NO.

X-AIM-TK0

Bus cable connector

For connection between Sensorbars and Bus cable



- IDC female connector
- Orientation: Right angle
- Pins / Pitch: 6 / 1.27 mm
- Features: Up to 500 mating cycles

VARIANT

RFID sensorbar AIM

REFERENCE NO.

X-AIM-ZB0

Bus cable connector

For connection between Sensorbars and Bus cable



- IDC female connector
- Orientation: Right angle
- Pins / Pitch: 6 / 1.27 mm
- Features: Up to 500 mating cycles

VARIANT

RFID sensorbar AIM

REFERENCE NO.

X-AIM-ZB0

13. Tools, measuring instruments & equipment

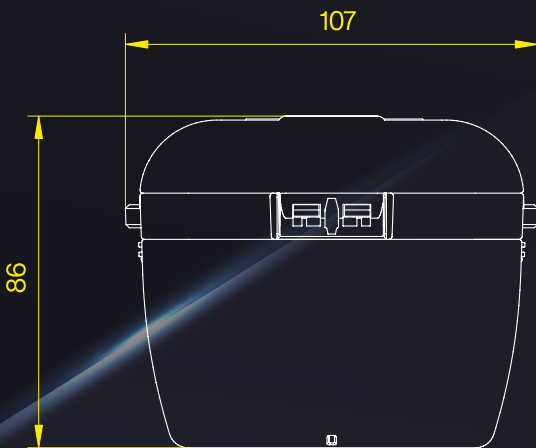




OTDR Starter Cube

The FIBRAIN OTDR Starter Cube is a portable, user-friendly tool for fiber optic measurements. Its color-coded ports, shoulder strap, and magnet make it easy to use. It's small and lightweight, perfect for on-site testing.

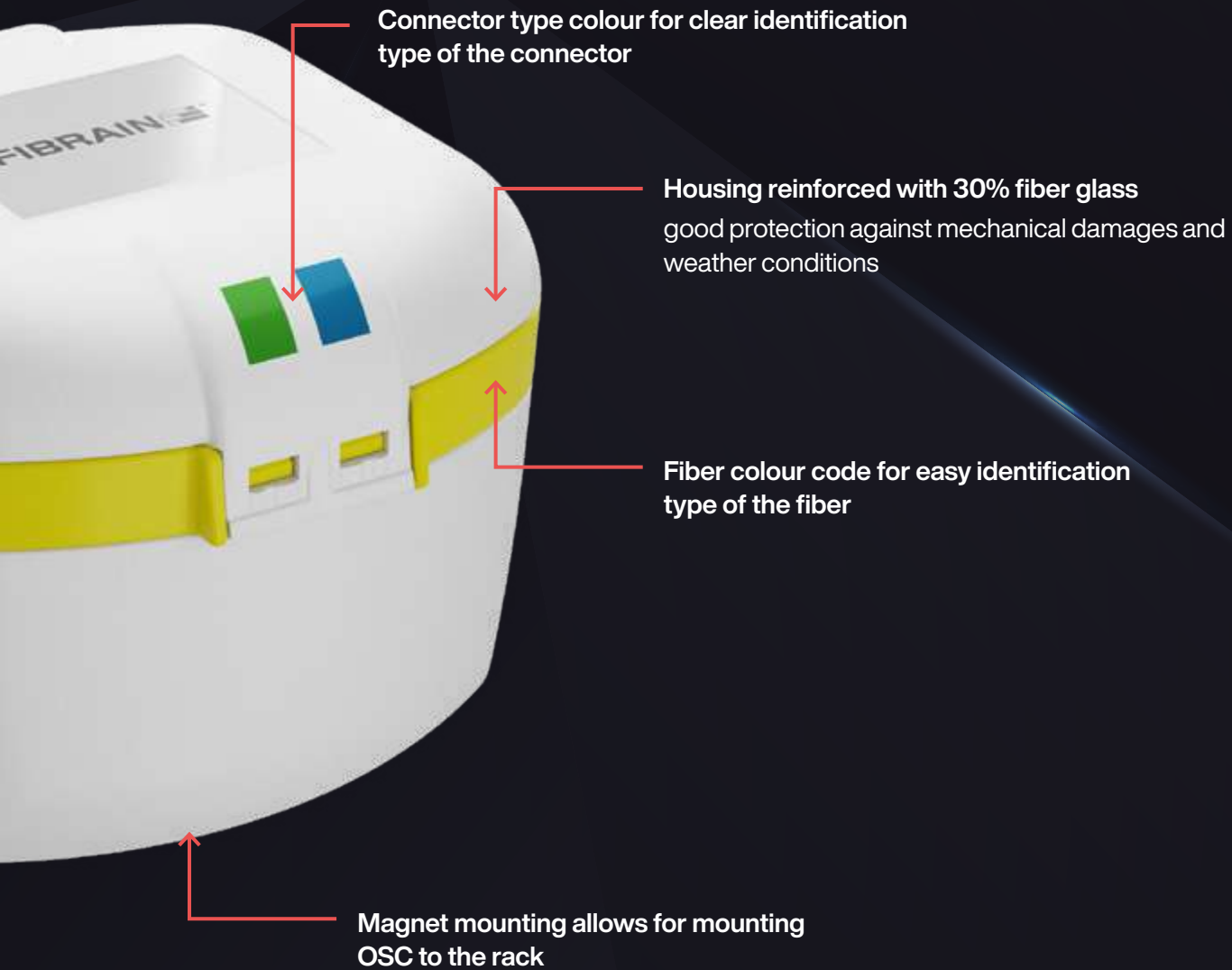
Compact housing and small weight
(86 x 107mm / 0.4kg)



Shoulder strap for easy measurement and transport

Launch fiber

A correct measurement by a reflectometry method requires the use of the same type of a launch fiber as the one which was used in the measured network. Thus, by measuring a singlemode network, you can't be limited to order only one type of an OTDR starter cube with singlemode fiber, because as you know, there are various types of singlemode fibers according to ITU-T standard.



Tools, measuring instruments & equipment

OSC – OTDR Starter Cube Launch Fiber



- facilitate reflectometric test with the use of OTDR
- eliminates dead zone in reflectometer and guarantees accurate and reliable measurements
- housing equipped with a magnet - can be easily mounted on a rack
- shoulder strap for easy transport, moving and measurement
- terminated with master class connectors available in a wide range of types
- capacity up to 1000m of the fiber in SM and MM type
- color identification of the fiber type and ferrule polishing type
- anti-vibes protection
- possibility to protect the input and output fiber with the tube reinforced internally with metal spiral wrap or with aramid yarns

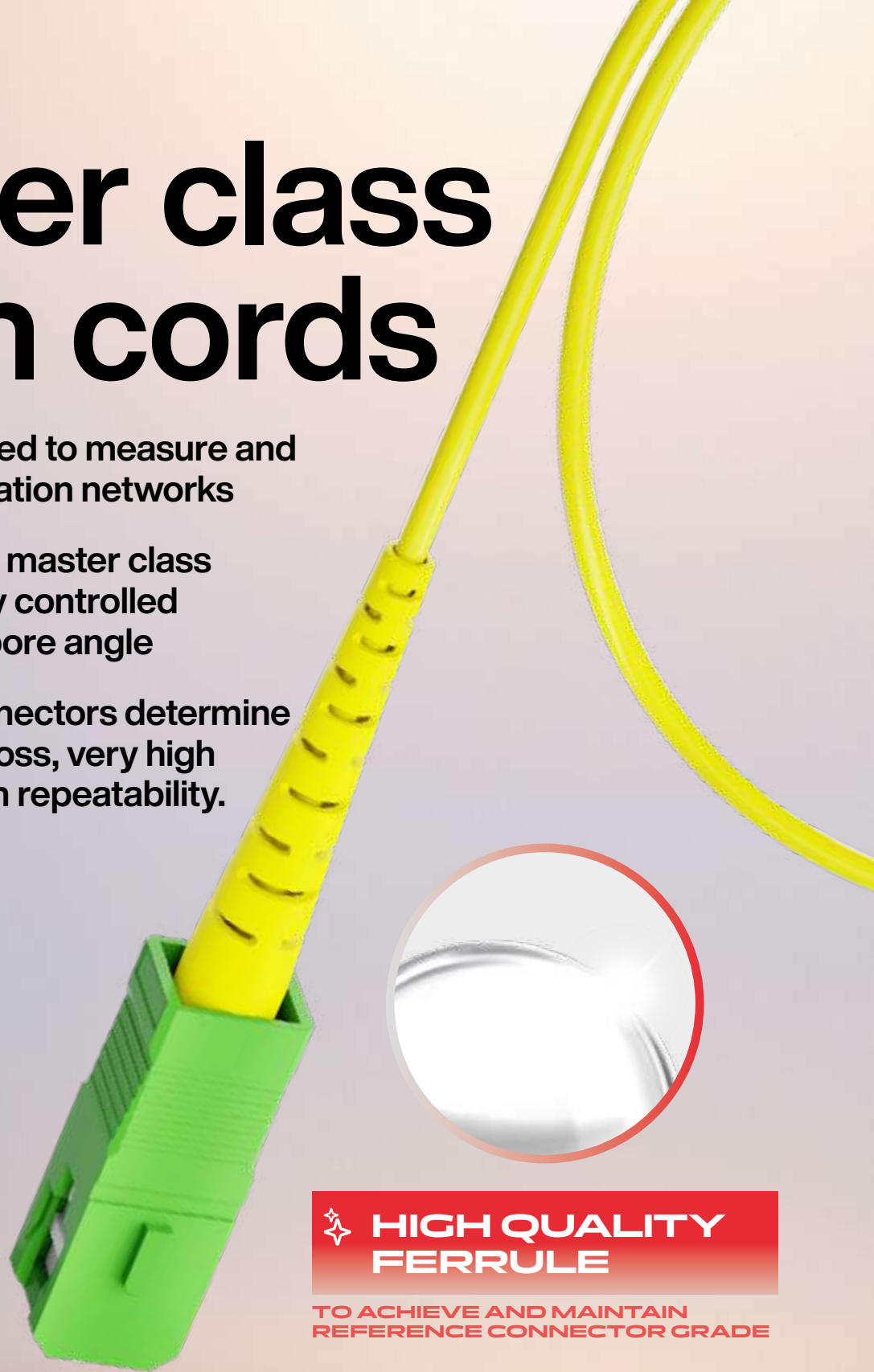
VARIANT	REFERENCE NO.
OSC LAUNCH FIBER 1000M G652D SC/APC - E2000/APC	OSC-A-1-82-1000
OSC LAUNCH FIBER 1000M G652D SC/APC - LC/APC	OSC-A-1-86-1000
OSC LAUNCH FIBER 1000M G652D SC/UPC - LC/APC	OSC-A-1-76-1000
OSC LAUNCH FIBER 1000M G652D SC/APC - LC/UPC	OSC-A-1-85-1000
OSC LAUNCH FIBER 1000M G657A1 SC/APC - E2000/APC	OSC-D-1-82-1000
OSC LAUNCH FIBER 1000M G657A1 SC/APC - LC/APC	OSC-D-1-86-1000
OSC LAUNCH FIBER 1000M G657A1 SC/UPC - LC/APC	OSC-D-1-76-1000
OSC LAUNCH FIBER 1000M G657A1 SC/APC - LC/UPC	OSC-D-1-85-1000
OSC LAUNCH FIBER 200M OM4 SC/UPC - SC/UPC	OSC-L-1-77-0200
OSC LAUNCH FIBER 150M OM4 LC/UPC - LC/UPC	OSC-L-1-55-0150
OSC LAUNCH FIBER 500M OM4 SC/UPC - SC/UPC	OSC-L-1-77-0500
OSC LAUNCH FIBER 100M OM4 LC/UPC - LC/UPC	OSC-L-1-55-0100
OSC LAUNCH FIBER 200M OM3 SC/UPC - SC/UPC	OSC-K-1-77-0200
OSC LAUNCH FIBER 150M OM3 LC/UPC - LC/UPC	OSC-K-1-55-0150
OSC LAUNCH FIBER 500M OM3 SC/UPC - SC/UPC	OSC-K-1-77-0500
OSC LAUNCH FIBER 100M OM3 LC/UPC - LC/UPC	OSC-K-1-55-0100

Master class patch cords

Specifically designed to measure and test telecommunication networks

The highest quality master class connector of tightly controlled concentricity and bore angle

High precision connectors determine very low insertion loss, very high return loss and high repeatability.



 **HIGH QUALITY FERRULE**

TO ACHIEVE AND MAINTAIN REFERENCE CONNECTOR GRADE



SCA-SCA single-mode



SC-SC single-mode



SC-SC multimode OM3



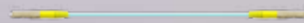
SC-SC multimode OM4



LCA-LCA single-mode



LC-LC single-mode



LC-LC multimode OM3



LC-LC multimode OM4

Tools, measuring instruments & equipment

Master Patch cords



- Master Class fiber optic patchcords are specifically designed to measure and test telecommunication networks and optical elements
- Terminated with the highest quality master connector of tightly controlled concentricity and bore angle
- Patch cords can be terminated both side with a master class connectors or in a mixed option: master class connector on one-side and a standard connector, polished in the Gold Grade on the second side
- Master side coded by yellow boot
- LSOH cable jacket with 2.0mm diameter, simplex round type
- Wide range of available connectors: SC/LC/E2000/FC/ST with PC or APC polishing type

VARIANT	REFERENCE NO.
MASTER PATCHCORD 2M SC/PC-SC/APC G652D 1,8 SIMPLEX	MP-MSC-MSCA-002.0-SX-A-18-Y
MASTER PATCHCORD 2M SC/PC-SC/APC G657A1 1,8 SIMPLEX	MP-MSC-MSCA-002.0-SX-D-18-Y
MASTER PATCHCORD 2M SC/APC-SC/APC G652D 1,8 SIMPLEX	MP-MSCA-MSCA-002.0-SX-A-18-Y
MASTER PATCHCORD 2M SC/APC-SC/APC G657A1 1,8 SIMPLEX	MP-MSCA-MSCA-002.0-SX-D-18-Y
MASTER PATCHCORD 2M SC/PC-SC/PC G652D 1,8 SIMPLEX	MP-MSC-MSC-002.0-SX-A-18-Y
MASTER PATCHCORD 2M SC/PC-SC/PC G657A1 1,8 SIMPLEX	MP-MSC-MSC-002.0-SX-D-18-Y
MASTER PATCHCORD 2M LC/PC-LC/PC G657A1 1,8 SIMPLEX	MP-MLC-MLC-002.0-SX-D-18-Y
MASTER PATCHCORD 2M LC/PC-LC/PC G657A2 1,8 SIMPLEX	MP-MLC-MLC-002.0-SX-E-18-Y
MASTER PATCHCORD 2M SC/PC-SC/PC MM OM3 1,8 SIMPLEX	MP-MSC-MSC-002.0-SX-K-18-AQ
MASTER PATCHCORD 2M LC/PC-LC/PC MM OM3 1,8 SIMPLEX	MP-MLC-MLC-002.0-SX-K-18-AQ
MASTER PATCHCORD 2M LC/PC-SC/PC MM OM3 1,8 SIMPLEX	MP-MLC-MSC-002.0-SX-K-18-AQ

Tools, measuring instruments & equipment



Mechanical connectors - Rapid Connector

Series RC02-214



- Rapid Connectors are specifically designed to terminate optical fibers in installation place
- SC APC pre-polished, pre-assembled connectors compatible with 3.0mm cable
- Total assembly time together with fiber preparation do not exceeds 120 seconds, and requires no extra tools
- The clamp system in the V-grooves, where immersion gel is placed, eliminates the necessity to use other adhesives or epoxy gel and improves the transmission parameters
- High quality index matching gel, whose refractive index is close to refractive index of the core of optical fiber, significantly improves Return Loss
- Product Size:52x9x8.1mm

RC02 Rapid Connectors

Parameter	SM PC	SM APC
Insertion Loss ILTYP	0.20 dB	0.30 dB
Insertion Loss ILMAX	0.50 dB	
Return Loss RL	55 dB	60 dB
Operating temperature	-20 to +60°C	
Connector type	SC, SCA, LC, LCA	

VARIANT

FIBRAIN Rapid Connector SC APC for 3.0mm cables

REFERENCE NO.

RC02-214-SET10P

Tools, measuring instruments & equipment

Mechanical connectors - Rapid Connector

Series RC02 – LC type



- Rapid Connectors are specifically designed to terminate optical fibers in installation place
- LC PC/APC pre-polished, pre-assembled connectors compatible with 3.0mm cable
- total assembly time together with fiber preparation do not exceeds 120 seconds, and requires no extra tools
- the clamp system in the V-grooves, where immersion gel is placed, eliminates the necessity to use other adhesives or epoxy gel and improves the transmission parameters
- high quality index matching gel, whose refractive index is close to refractive index of the core of optical fiber, significantly improves Return Loss
- product length: 45mm

RC02 Rapid Connectors

Parameter	SM PC	SM APC
Insertion Loss ILTYP	0.20 dB	0.30 dB
Insertion Loss ILMAX	0.50 dB	
Return Loss RL	55 dB	60 dB
Operating temperature	-20 to +60°C	
Connector type	SC, SCA, LC, LCA	

VARIANT

REFERENCE NO.

FIBRAIN Rapid Connector LC PC for 3.0mm cables

RC02-214-SET10P

FIBRAIN Rapid Connector LC APC for 3.0mm cables

RC02-414-SET10P

Tools, measuring instruments & equipment

Fiber optic rapid splice technician tool case

FB7197P



- Specifically selected tools to work with fiber optic cables in RAPID SPLICE technology
- Three points of grip and positioning the fiber
- Centering the fibers in V-grooves



**Compact
and spacious**



**Solid
construction**

TOOL CASE CONTENT:

1. Tool case
2. Weld mount tool
3. Diamond knife
4. Fiber waste bin
5. Alcohol dispenser
6. Tube stripper
7. Fiber connection plate 900 µm covering
8. Fiber connection plate 250 µm covering
9. Visual fault locator, 2.5 mm universal output power, 1mW optical power, 650 nm laser
10. Cleaning set for fibers, connectors and adapters
11. Insulation tape
12. Striper 250 µm, 2-3mm
13. Cable coating removal tool 6-29 mm
14. Insulation removal tool 2.8-3.0mm & 1.8-2.0mm
15. Marker
16. Kevlar scissors
17. Cable cutter
18. Knife

VARIANT

FIBRAIN tool case for RAPID SPLICE fiber optic technician

REFERENCE NO.

FB7197P

Tools, measuring instruments & equipment

Fiber optic technician tool case

FB7187P



- Specifically selected tools to work with fiber optic cables and fibers
- General purpose tools with visual fault locator
- Cleaning accessories for connectors and adapters



**Compact
and spacious**



**Solid
construction**

TOOL CASE CONTENT:

1. Tool case
2. Fiber waste bin
3. Kevlar scissors
4. Striper 250 µm, 2-3 mm
5. Cable coating removal tool 6-29 mm
6. Insulation removal tool 2.8-3.0 & 1.8-2.0mm
7. Marker
8. Cable cutter
9. Visual fault locator, 2.5 mm universal output power, 5mW optical power, 650 nm laser
10. Knife
11. Tube striper
12. Cleaning set for fibers, connectors and adapters
13. Insulation tape
14. 45 mm splice protection sleeves
15. Tweezers
16. 3" brush
17. Cross head screwdriver
18. Flat head screwdriver
19. Alcohol dispenser
20. Cleaning tissues
21. 100*2.5 cable ties
22. 100*4.8 cable ties

VARIANT







FIBRAIN tool case for fiber optic technician

REFERENCE NO.





FB7187P

Tools, measuring instruments & equipment









	PRODUCT NO.	DESCRIPTION	FEATURES
	JIC-375	Fiber optic stripper, three hole	Strip diameter: 250µm, 600-900µm 1.6 mm - 3.0mm
	FB9213G	Fiber cable and tube slit & ring tool	Maximum cable/tube diameter: 3mm
	JT-CST-900	Round cable strip & ring tool	Strip Diameter mm
	JT-CST-1900	Round cable strip & ring tool	Cable diameter: 4.5 – 29 mm
	JT-FCT-100	Fiber connector tool for LC, SC connectors	For removing simplex or duplex connectors: LCsx/SCsx/LCdx/SCdx/MU/MTRJ connectors
	JT-FCT-200	Fiber connector tool for LC, SC connectors	For removing simplex connectors: LCsx/SCsx/MU/MTRJ connectors



Tools, measuring instruments & equipment

	PRODUCT NO.	DESCRIPTION	FEATURES
	JT-JIC-186	Kevlar cutting shears	Designed to cut Kevlar, cabling insulation, tape, cable ties and other materials
	FB9110	Fiber optic duty wipes	Wipes suitable for cleaning ferrule end-faces, fiber (for termination) or optical instruments
	JT-FC-220	Fiber leaf cleaver	Designed to cleave either 900 µm buffered or 250 µm coated fiber
	EAC-TLS-RT-A0	EAC jacket window cutting tool	Tool designed to cut window in EAC cable sheath; 8-15mm cable diameter

Cleaning accessories

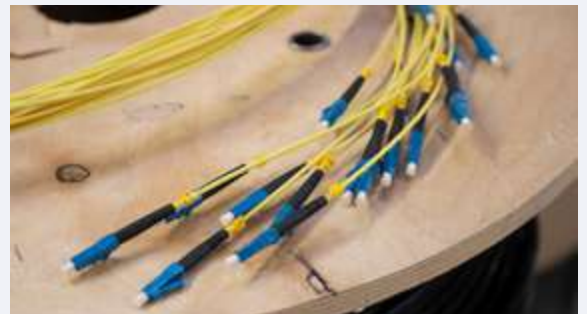
	PRODUCT NO.	DESCRIPTION	FEATURES
	PC-01-250M-800	One-click PRO-Cleaner for fiber optic connectors with ferrule 2.5 mm – mini housing	Dedicated for connector with ferrule 2.5mm: SC, ST, FC, E2000
	PC-01-150M-800	One-click PRO-Cleaner for fiber optic connectors with ferrule 1.25 mm – mini housing	Dedicated for con-ector with ferrule 1.25 mm: LC, MU
	PC-01-150-800	One-click PRO-Cleaner for fiber optic connectors with ferrule 1.25 mm	Dedicated for con-ector with ferrule 1.25mm: LC, MU
	PC-01-250-800	One-click PRO-Cleaner for fiber optic connectors with ferrule 2.5 mm	Dedicated for connector with ferrule 2.5mm: SC, ST, FC, E2000
	PC-02-UNV-500	Cleaner cassette PRO-Cleaners 500	Can be used for different types of fiber optic connect-ors, regardless of the diameter of the fer-rule
	PC-02-UNV-500.R	Refill for the PRO-Cleaner 500 cleaning cassette	Can be used for different types of fiber optic connectors, regardless of the diameter of the ferruleconnectors

Cleaning accessories

	PRODUCT NO.	DESCRIPTION	FEATURES
	PC-02-UNV-700	Cleaner cassette PRO-Cleaners 700	Can be used for different types of fiber optic connectors, regardless of the diameter of the ferrule
	PC-02-UNV-700.R	Refill for the PRO-Cleaner 700 cleaning cassette	Can be used for different types of fiber optic connectors, regardless of the diameter of the ferrule



Polish independent
producer of integrated
and value-added
solutions



Contact

FIBRAIN POLAND
36-062 Zaczernie 190F

phone (+48) 17 866 08 00

(+48) 17 866 08 13

fax (+48) 17 866 08 11

e-mail info@fibrain.com

www.fibrain.com

FIBRAIN 