





### **⇒Fiber**Technic<sup>®</sup>

# LanTechnic

Cyberteam® is located in Zamość, in Mielec Special Economic Subzone. This is where the design, manufacturing and prototype testing takes place. In headquarters in Zamość, on Strefowa 8 street are also our Sales Department and Warehouse – where all orders are proceeded.

Cyberteam<sup>®</sup> is part of Nowak Technologie. It has started by manufacturing microwave antennas co-designed with ZUT Department of Computer Science. Growing demand for wireless internet access gave the opportunity to introduce new, unique products. That was the reason to create patented, anti-noise shields for MikroTik and Ubiquiti devices.

Constant strive for improvements lead to setting up department that focuses on designing and manufacturing electronics. Cyberteam introduced to the market wide range of surge protectors, PoE adapters and backup power supplies.

FiberTechnic<sup>®</sup> was established in 2016. New brand responded to the increasing needs for high quality fiber optic solution. It covered full range of passive and active components used in optical networks i.e. fiber optic cables made in Europe, ODFs, accessories, all-aluminium, rust-free outdoor cabinets in variety of sizes and IP rating configurations, SFP modules, media converters, GPON OLTs and ONUs. Cabinet manufacturing quickly gave Cyberteam<sup>®</sup> one of the leading positions on the market. Thanks to cooperation with universities such as ZUT and UMCS, products with FiberTechnic<sup>®</sup> logo are constantly improved to meet the highest standards. Outdoor cabinet with electric switchboard – codesigned with Lublin Technical University – have been named worldwide innovation.



### FiberTechnic<sup>®</sup> mini ADSS Z-XOTKtcdDb 2-12F 0,8 kN SPAN50m 3,7 mm



### C€ **EUR**

#### Application

Multipurpose, self-supporting aerial, outdoor cable for installation on poles or in ducts, with reduced diameter.

#### Features

- UV resistant
- small diameter
- lightweight
- flexible
- small bending radius
- high performance

### Mechanical and usage characteristics

Crush resistance: 1000 [N/10 cm] Bending radius:

• static: 15 x cable diameter

• dynamic: 20 x cable diameter Compliance: EN 187101, IEC 60794-1-2-E11



optical fibers
gel filling
central tube
FRP rods
HDPE coating
fiberglass yarn

High quality polyethylene HDPE outer jacket. ITU-T G.652D / G.657A1 **Fujikura** fibers. Fiberglass yarn strengthening.

1-12	1	2	3 4	4 5	6	7	8	9	10	11	12
tubes   fibers	•		•		•		•			$\bullet$	
color	red	green	blue wh	e white purple		orange grey		brown	pink	black	turquoise
Fibers	Cable diameter [mm]	r Weight [kg/km]	-	Strengthening elements [mm]		th-installation \]	Ten	sile strength- c [N]	operation	<u> </u>	emperature nge
2F	3,7	11	FRP (	FRP (2X0,4)		800		500		-40°C t	o +70°C
4F	3,7	12	FRP (	(2X0,4)	80	800		500		-40°C t	o +70°C
8F	4,0	13	FRP (2X0,4)		80	00		500		-40°C t	o +70°C
12F	4,0	14	FRP (2X0,4)		80	00		500		-40°C t	o +70°C

### FiberTechnic® ADSS Z-XOTKtcdDb 2-24F 1,2 kN SPAN80m



### C€ **EUR**

### Application

Multipurpose, outdoor cable for aerial, duct and pole installation.

#### Features

- UV resistant
- small diameter
- lightweight
- flexible
- small bending radius
- high performance

### Mechanical and usage characteristics

Crush resistance: 1500 [N/10 cm] Bending radius:

- static: 15 x cable diameter
- dynamic: 20 x cable diameter

Compliance: EN 187101, IEC 60794-1-2-E11



optical fibers
gel filling
central tube
FRP rods
HDPE coating
fiberglass yarn

High quality polyethylene HDPE outer jacket. ITU-T G.652D **Corning / Fujikura** fibers.. **BASF** fiber tubes. Fiberglass yarn strengthening.

1-12	1	2	3	4	5	6	7	8	9	10	11	12
tubes   fibers				$\bigcirc$		•		•			$\bullet$	
color	red	green	blue	white	purple	orange	grey	yellow	brown	pink	black	turquoise
Fibers	Cable diamete [mm]	er Weight [kg/km]		Strengthening elements [mm]		-	gth-installation N]	Ter	sile strength- c [N]	operation	-	emperature nge
2F	4,5	18		FRP (2X0,5)		12	1200		600		-40°C t	o +70°C
4F	5,0	22		FRP (2X0,9)		1200			600		-40°C t	o +70°C
8F	5,5	28		FRP (2X0,9)		1200			600		-40°C t	o +70°C
12F	5,5	28		FRP (2X0,9)		1200			600		-40°C t	o +70°C
24F	6,0	30		FRP (2X0,9)		12	1200		600		-40°C t	ro +70°C

### FiberTechnic® AERO FLAT Z-XOTKtcdp 2-24F G.652D 1,7 kN SPAN 70m



### C€ **EUR**

### Application

Multipurpose, outdoor cable for aerial and duct installation.

#### Features

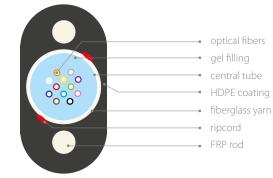
- UV resistant
- small diameter
- lightweight
- flexible
- small bending radius
- high performance

### Mechanical and usage characteristics

Crush resistance: 1500 [N/10 cm] Bending radius:

• static: 15 x cable diameter

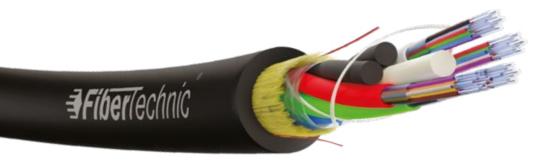
• dynamic: 20 x cable diameter Compliance: EN 187101, IEC 60794-1-2-E11



High quality polyethylene HDPE outer jacket. ITU-T G.652D **Corning** fibers. **BASF** fiber tubes. Fiberglass yarn strengthening.

1-12	1	2	3	4	5	6	7	8	9	10	11	12
tubes   fibers				$\bigcirc$		•		•			$\bullet$	
color	red	green	blue	white	purple	orange	grey	yellow	brown	pink	black	turquoise
Fibers	Cable diameter [mm]	Weight [kg/km]	Stre	ngthening eler [mm]	ments	2	th-installation N]	Ter	nsile strength- c [N]	operation		emperature nge
2F	2,6x5,6	15,4		FRP (2x0,5)		12	.00		500		-40°C 1	to +70°C
4F	2,6x5,7	15,4		FRP (2x0,9)		1200			500		-40°C 1	to +70°C
8F	3,3x6,0	19,8		FRP (2x0,9)		1200			500		-40°C 1	to +70°C
12F	3,3x6,0	19,9		FRP (2x0,9)		12	.00		500		-40°C 1	to +70°C
24F	4,2x6,6	25,1		FRP (2x0,9)		12	.00		500		-40°C to +70°C	

### FiberTechnic® ADSS Z-XOTKtsdD 12-144F G.652D Corning 3,0 kN (SPAN 100 m)



### C€ **EUR**

### Application

Self-supporting aerial cable designed for mounting on poles with SPAN up to 100m. Cables can be also used in ducts. Available with 12 to 144 fibers.

#### Features

- self-supporting cable with aramid strengthening
- high performance
- fully dielectric
- UV resistant

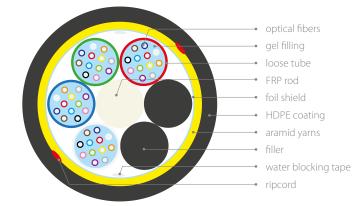
### Mechanical and usage characteristics

Crush resistance: 2000 [N/10 cm] Bending radius:

- static: 15 x cable diameter
- dynamic: 20 x cable diameter

Compliance: EN 187101, IEC 60794-1-2-E11

#### Identification of fibers and tubes



High quality polyethylene PE outer jacket.

ITU-T G.652D Corning fibers.

BASF fiber tubes.

Aramid yarn strengthening.

1-12		1 2	3	4	5	6	7	8	9	10	11	12
tubes   fik	bers	•		$\bigcirc$		•		•			$\bullet$	
color		red gre	en blue	white	purple	orange	grey	yellow	brown	pink	black	turquoise
Fibe	ers	Cable diameter [mm]	Weight [kg/km]	Strengthening [mm]	rengthening elements [mm]		Tensile strength-installation [N]		Tensile strengt [N]		0	) temperature range
12F 1T:	x12F	8,5	49,2	FRP (1,8	3)		3000		150	0	-40°C	C to +70℃
12F 2T:	хбF	8,5	49,2	FRP (1,8	3)		3000		1500		-40°C	C to +70°C
24F 2T:	x12F	9,0	54,1	FRP (1,8	3)		3000		150	0	-40°C	C to +70℃
24F 4T:	хбF	9,0	57,6	FRP (1,8	3)		3000		150	0	-40°C	C to +70℃
36F 3T:	x12F	9,0	57,6	FRP (1,8	3)		3000		1500		-40°C	C to +70℃
48F 4T:	x12F	9,0	61,1	FRP (2,0	))		3000		150	0	-40°C	C to +70℃
72F 6T:	x12F	9,0	69,5	FRP (2,0	))	3000			150	0	-40°C	C to +70℃
96F 8T:	x12F	10,4	90,1	FRP (2,0	))	3000			1500		-40°C to +70°C	
144F 12	Tx12F	12,8	134,5	FRP (2,0	))		3000		150	0	-40°C	C to +70°C

### UNDERGROUND CABLES

### FiberTechnic® DAC Z-XOTKtcdD 2-24F 9/125 ITU-T G.652D 4 kN



### C€ **EUR**

#### Application

Cable designed for laying directly in the ground and in protective pipes. Used in FTTX and point-to-point solutions. Ideal for installation in distribution cabinets and customer boxes.

#### Features

- 4kN crush resistant
- fully dielectric
- orange HDPE outer jacket

### Mechanical and usage characteristics

Crush resistance: 4000 [N/10 cm] Bending radius:

- static: 15 x cable diameter
- dynamic: 20 x cable diameter
- Compliance: EN 187101, IEC 60794-1-2-E11



optical fibers
gel filling
central tube
FRP rods
HDPE outer jacket

• fiberglass yarns

High quality polyethylene HDPE outer jacket. ITU-T G.652D / G.657A1 **Corning** fibers. **BASF** fiber tubes.

1-12	1	2	3	4	5	6	7	8	9	10	11	12
tubes   fibers				$\bigcirc$		•		•			ightarrow	
color	red	green	blue	white	purple	orange	grey	yellow	brown	pink	black	turquoise
Fibers	Cable diamete [mm]	er Weight [kg/km]		Strengthening elements [mm]		-	gth-installation N]	Ter	sile strength- c [N]	operation	0	emperature nge
2F	6,0	30		FRP (2X0,9)		12	200		600		-40°C t	to +70°C
4F	6,0	30		FRP (2X0,9)		1200			600		-40°C t	to +70°C
8F	6,0	30		FRP (2X0,9)		1200			600		-40°C t	to +70°C
12F	6,0	32		FRP (2X0,9)		12	200		600		-40°C t	to +70°C
24F	6,0	34		FRP (2X0,9)		12	200		600		-40°C t	to +70°C

### FiberTechnic® Micro 12-144F G.652D Corning 0,65 kN



### C€ **EUR**

#### Application

Microduct cabling for air-blowing in 14/10 mm and 12/8 mm ducts. Additionally cable can be installed in trays, ducts, pipes and wherever there is no risk of damage by rodents.

#### Features

- small diameter
- air-blowing application
- fully dielectric
- UV resistance

#### Mechanical and usage characteristics

Crush resistance: 300 [N/10 cm] Bending radius:

• static: 15 x cable diameter

Identification of fibers and tubes

• dynamic: 20 x cable diameter

Compliance: EN 187101, IEC 60794-1-2-E11

### ripcord optical fibers gel filling loose tube FRP rods HDPE outer jacket filler water blocking tape

High quality polyethylene PE outer jacket. ITU-T G.652D **Corning** fibers. **BASF** fiber tubes.

1	-12	1	2	3 4	5	6	7	8	9	10	11	12				
tube	s   fibers		•	0		•		•			$\bullet$					
C	olor	red	green bl	ue white	purple	orange grey		yellow	brown	pink	black	turquoise				
F	ibers	Cable diameter [mm]	Weight [kg/km]	Strengthening ele [mm]	ments		igth-installation [N]	ı 1	ensile strength- [N]	operation	-	emperature Inge				
12F	1Tx12F	5,5	19,8	FRP (1,2)			650		500		-40°C	to +70°C				
12F	2Tx6F	5,5	19,8	FRP (1,2)			650		500			to +70°C				
24F	2Tx12F	5,5	22,2	FRP (1,6)			650		500		-40°C	to +70°C				
24F	4Tx6F	5,5	22,2	FRP (1,6)		650			500		-40°C	to +70°C				
36F	3Tx12F	5,5	24,5	FRP (1,6)		650			500		-40°C	to +70°C				
48F	4Tx12F	5,5	26,8	FRP (1,6)		650			500		-40°C	to +70°C				
72F	6Tx12F	5,5	29,2	FRP (1,6)		650		650			500		500		-40°C	to +70°C
96F	8Tx12F	6,5	50,3	FRP (1,6)			650		500		-40°C	to +70°C				
144F	12Tx12F	7,9	68,0	FRP (1,6)			650		500		-40°C	to +70°C				



### FiberTechnic<sup>®</sup> Lite Z-XOTKtsd 12-144F G.652D 1,5 kN



### C€ **EUR**

#### Application

Cable with reduced diameter, designed to be used in outdoor installations, telecommunication ducts and trays. Available with 12 to 144 fibers.

#### Features

- small diameter
- lightweight
- high performance
- flexible, easy to strip
- UV resistance

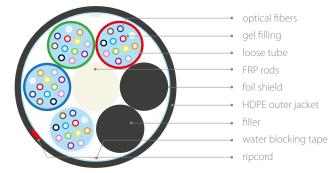
### Mechanical and usage characteristics

Crush resistance: 2000 [N/10 cm] Bending radius:

- static: 15 x cable diameter
- dynamic: 20 x cable diameter

Compliance: EN 187101, IEC 60794-1-2-E11

#### Identification of fibers and tubes



High quality polyethylene PE outer jacket. ITU-T G.652D fibers. BASF fiber tubes.

1-12	1	2 3	4 5	6 7	8 9 10	11 12
tubes   fibers		• •			• • •	
color	red	green blue	e white purple	orange grey	yellow brown pink	k black turquoise
Fibers	Cable diameter [mm]	Weight [kg/km]	Strengthening elements [mm]	Tensile strength-installation [N]	Tensile strength- operatio [N]	on Working temperature range
12J 1Tx12F	7,5	39,5	FRP (1,5)	1500	600	-40°C to +70°C
12J 2Tx6F	7,5	41,8	FRP (1,5)	1500	600	-40°C to +70°C
24J 2Tx12F	7,5	39,9	FRP (1,5)	1500	600	-40°C to +70°C
24J 4Tx6F	7,5	41,3	FRP (1,5)	1500	600	-40°C to +70°C
36J 3Tx12F	7,5	41,3	FRP (1,5)	1500	600	-40°C to +70°C
48J 4Tx12F	7,5	42,6	FRP (1,5)	1500	600	-40°C to +70°C
72J 6Tx12F	7,5	45,3	FRP (1,5)	1500	600	-40°C to +70°C
96J 8Tx12F	8,6	58,0	FRP (1,8)	1500	800	-40°C to +70°C
144J 12Tx12F	10,4	77,1	FRP (1,8)	1500	1000	-40°C to +70°C

### FiberTechnic<sup>®</sup> Z-XOTKtsdDb 12-144F G.652D Corning 1,5 kN



### C€ **EUR**

#### Application

Reinforced cable designed to be used in outdoor installations, telecommunication ducts and trays. Available with 12 to 144 fibers.

#### Features

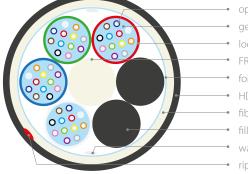
- small diameter
- lightweight
- high performance
- flexible, easy to strip
- UV resistance

### Mechanical and usage characteristics

Crush resistance: 2500 [N/10 cm] Bending radius:

- static: 15 x cable diameter
- dynamic: 20 x cable diameter

Compliance: EN 187101, IEC 60794-1-2-E11



- optical fibers
- gel filling
- loose tube FRP rods
- foil shield
- HDPE outer jacket
- fiberglass strengthening
- filler
- water blocking tape

ripcord

High quality polyethylene HDPE outer jacket. ITU-T G.652D **Corning** fibers. **BASF** fiber tubes.

Fiberglass yarn strengthening.

1-12	1	2 3	4	5	6	7	8	9	10	11	12
tubes   fibers			0				•			$\bullet$	
color	red	green blu	e white	purple	orange	grey	yellow	brown	pink	black	turquoise
Fibers	Cable diamet [mm]	er Weight [kg/km]	Strengthening elements [mm]		Tensile strength-installation [N]		Te	Tensile strength- op [N]		-	emperature nge
12F 1Tx12	F 8,0	49,0	FRP (1,8)		1	500		1000			o +70°C
12F 2Tx6F	8,0	49,0	FRP (1,8)		1500			1000		-40°C t	o +70°C
24F 2Tx12	F 8,3	50,7	FRP (1,8)		1500			1000		-40°C t	o +70°C
24F 4Tx6F	8,3	50,9	FRP (1,8)		1500			1000		-40°C t	o +70°C
36F 3Tx12	F 8,3	52,0	FRP (1,8)		1	500		1000			o +70°C
48F 4Tx12	F 8,5	53,0	FRP (1,8)		1	500		1000		-40°C t	o +70°C
72F 6Tx12	F 8,5	54,2	FRP (1,8)		1500			1000		-40°C to +70	
96F 8Tx12	F 10,4	89,2	FRP (3,0)		1500			1000		-40°C to +70°C	
144F 12Tx1	2F 12,5	118,3	FRP (5,4)		1	500		1000		-40°C to +70°C	

### FiberTechnic® 1F G657A2 DROP LSZH 3 mm white - 1000m



### C€ **∎EUR**

#### Application

Round cable with aramid yarns for indoor use in FTTx systems. Construction is designed to secure optical fiber and allow easy installation. G.657A2 fiber provides small bending radius.

#### Features

- LSZH jacket
- flexible, small bending radius
- small diameter and lightweight
- aramid yarn strengthening

#### Mechanical and usage characteristics

Tensile strength: 120 N Fire-resistant 1000 m spools



Fiber	Cable diameter [mm]	Weight [kg/km]	Packing	Jacket thickness	Tensile strength – installation [N]
G657A2	3	10	1000 m spool	LSZH (0.45)	120

### FiberTechnic<sup>®</sup> Aero DROP 2-12F 9/125 G.657A2 **Corning** 3 mm



### C€ **EUR**

#### Application

Multipurpose, outdoor cable for aerial  $\ensuremath{\mathsf{FTTx}}$  installation.

#### Features

- UV resistance
- small diameter
- lightweight
- flexible, small bending radius
- high performance

### Mechanical and usage characteristics

Crush resistance: 200 [N/10 cm] Tensile strength : 800 N



High quality polyethylene PE outer jacket. ITU-T G.652D **Corning** fibers.

1-12	1	2	3	4	5	6	7	8	9	10	11	12
tubes   fibers				$\bigcirc$		•		•		•	$\bullet$	
color	red	green	blue	white	purple	orange	grey	yellow	brown	pink	black	turquoise
Fiber		Cable diameter [r	nm]	Weight [kg/km]	Jacke	t thickness [mm]		Tensile streng	gth – installatio	n [N]		temperature ange
2		3		8,5		0,52			120		-40° C to +	60° C
4		3		8,5		0,52		120			-40° C to +	60° C
8		3		9,2		0,52			120		-40° C to +	60° C
12		3,2		9,5		0,52		120			-40° C to +	60° C

### SPARE CABLE FRAME

Made from aluminium. Frame ensures proper bending radius of cable and safe storage of spare cable. Designed to be installed on square and round telecommunication poles. Special brackets and holes in frame allow mounting it with steel strips or mounting pins. Fiber optic enclosures can be mounted to the frame with special adapters.



Туре	Usage	Construction	Diameter [mm]	Material
Spare DROP cable frame with mounting screw	to install on square and round telecommunication poles	-	160	aluminium
Spare DROP cable frame with spacer	to install on square and round telecommunication poles	-	160	aluminium
ALU 500 spare cable frame	to install on square and round telecommunication poles	four arms	500	aluminium
ALU 600 spare cable frame	to install on square and round telecommunication poles	four arms	600	aluminium
SZD-5 spare aerial cable frame with 20 cm spacer	to install on square and round telecommunication poles	three arms	550	aluminium
SZD-6 spare aerial cable frame with 20 cm spacer	to install on square and round telecommunication poles	four arms	640	aluminium
ALU 600 spare cable frame with additional grip and lock	to install on square and round telecommunication poles	four arms	605	aluminium

# FiberTechnic<sup>®</sup> FTECH GPON OLT/ONU

FiberTechnic® OLT is main device of OLT GPON broadband used in GPON networks. It is ITU G.984.x G.988 and FSAN complaint. FiberTechnic<sup>®</sup> OLT is 1U rack-mounted device with 8 or 16 SFP GPON ports. Each GPON port supports splitting ratio of 1:128, providing downstream bandwidth of 2,5 Gb/s and upstream bandwidth of 1,25 Gb/s.

Single OLT can support up to 2048 GPON terminals. Unit comes with two AC power supplies to provide redundancy in case of failure.



C E FiberTechnic® OLT GPON FD1608S-B0 8/16xSFP C++ 2x10GBIT 4/8x1G UPLINK COMBO +2xAC ID: 7746 / 7946

- 1U height, RACK 19"
- supports up to 1024/2048 GPON terminals (1:128)
- built in UPLINK 2x10GE card
- max. transmission distance 20 km
- management interfaces: CLI, WEB, SNMP, TELNET, SSH, OMCI standard
- QoS compatibility
- layer 2 protocol functions: TRUNK, VLAN, IGMP, LACP, flow control technology, ACL

FiberTechnic<sup>®</sup> Ftech Optical Network Terminals (ONT) allow high data transmission rates for VolP, Internet, HD video, IPTV. FiberTechnic<sup>®</sup> Ftech devices are compatible with OLT's of brands such as Huawei, ZTE, Fiberhome, Alcatel-Lucent, Dasan. IEEE 802.11 a/b/g/n/ac complaint with transfer rates up to 300 Mbps for 2.4 GHz and 876 Mbps for 5 GHz.







FiberTechnic® Ftech G-01 GPON / EPON ONU ONT 1GE + 1GPON SC/APC router/bridge **C €** FiberTechnic® Ftech G-04 GPON / EPON SFU ONU 4GE SC/APC ID: 8432 **C E** FiberTechnic® Ftech GW-04-DF GPON / EPON ONU 4GE+2POTS+Dual-Band WIFI AC SC/APC ID: 7873

# VERTICAL FIBER OPTIC PATCH PANEL

Patch panel fits up to 12 modules and is used to organize fiber optic cables, by using pigtails or splitters. Solution allows to organize up to 144 optic fibers with SC SIMPLEX adapters or up to 288 optic fibers with LC DUPLEX adapters. Smart design allows easy and time-saving way of organizing fiber optic cables used in EPON/ GPON setups. Fibers are easily organized in slide-out cassettes, which are available separately. The variety of options allow to implement any needed solution. Modular 3U patch panels are dedicated for multitube fiber optic cables, where organization in standard patch panel is very difficult.

To make installation even easier RT-12P tube organizer is used. Thanks to Richco transport tube, fibers are neatly lead out from modules. This way fibers are can be securely installed inside the cabinet.



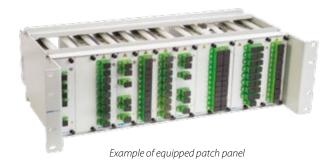
3U vertical chassis ID: 3371



3U vertical recessed chassis ID: 3781

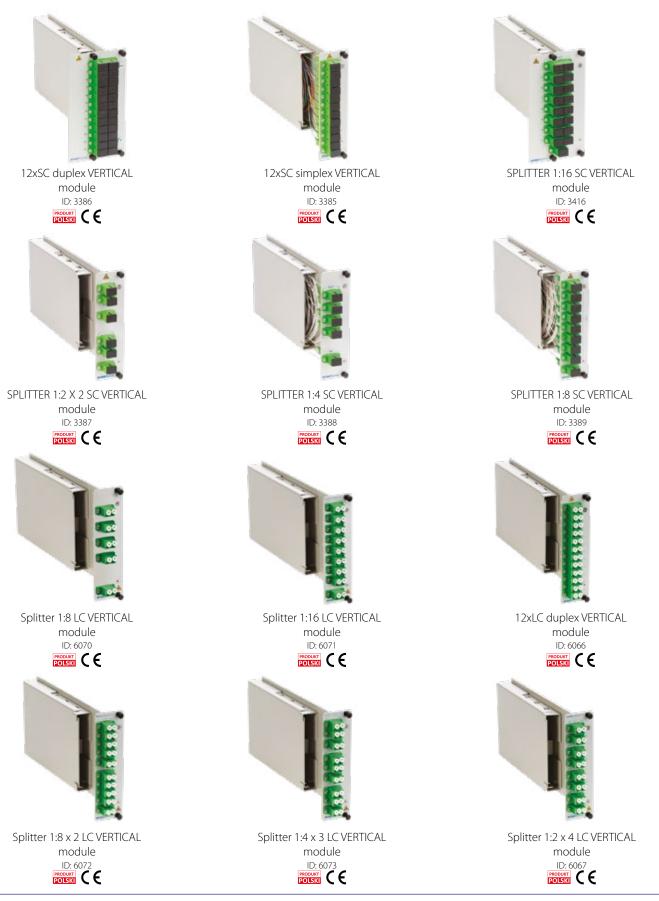


Example of equipped patch panel



# VERTICAL FIBER OPTIC PATCH PANEL MODULES

Examples of equipped modules



# LGX PATCH PANELS

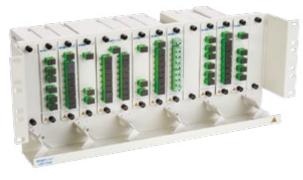
Patch panel is used for organization of fiber optic cables using splitters.

Smart design allows easy and time-saving way of mounting and access to fiber optic splitters.

Fibers are easily organized in slide-out cassettes, which can be bought separately. The variety of configurations allow to implement any needed solution.

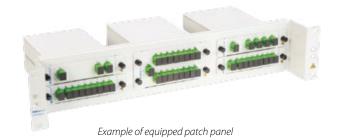


with organizer for PLC cassette splitter ID: 3782



Example of equipped patch panel





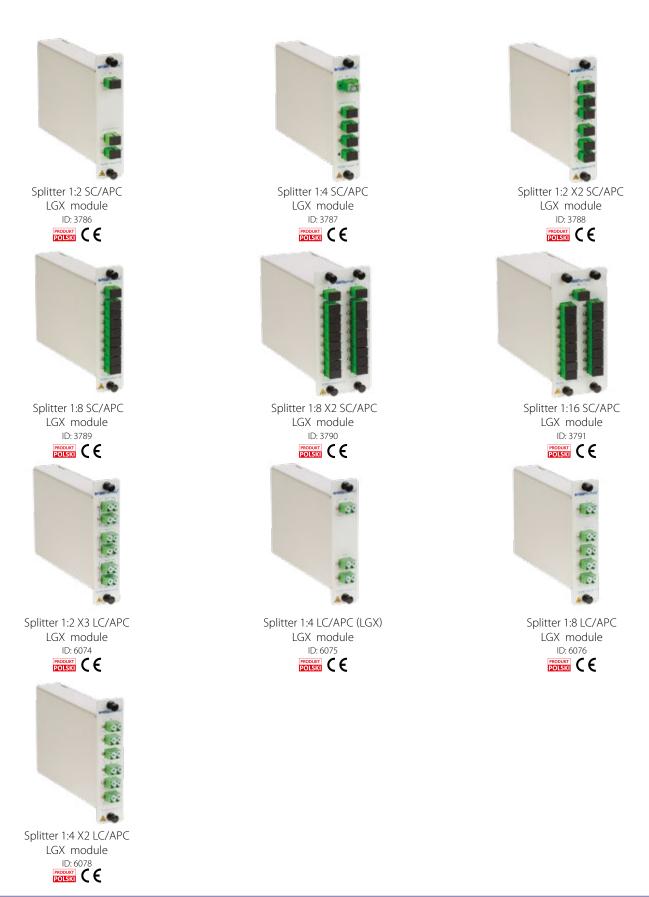




Example of equipped patch panel

# MODULES FOR LGX CHASSIS

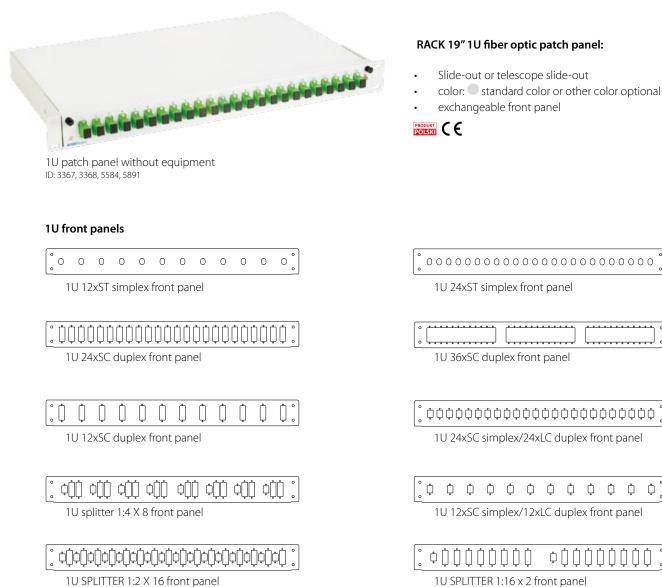
Modules are sold as ready to use sets with mounted adapters and splitters



# RACK 19" fiber optic patch panels 12-144F | 1U | 2U | 3U

Front panels are exchangeable and available in many variations for different adapters and splitters. Inside the drawer there is special mounting screw for securing splices trays. 1U patch panel has space for max. 2 splice trays whereas 3U patch panels have space for max. 6 splice trays.

Fiber optic patch panel is used for organizing fiber optic cables with pigtails. It is equipped with a slide-out drawer with telescope rails that provide a full access for easy cable mounting.



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1U SPLITTER 1:32 front panel

1U 36xSC duplex front panel

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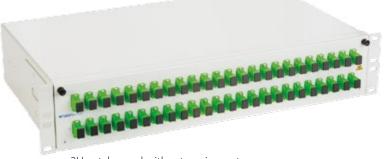
1U 24xSC simplex/24xLC duplex front panel

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1U 12xSC simplex/12xLC duplex front panel







2U patch panel without equipment ID: 4271

### 2U front panels

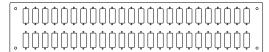
### 

2U 48xSC simplex front panel

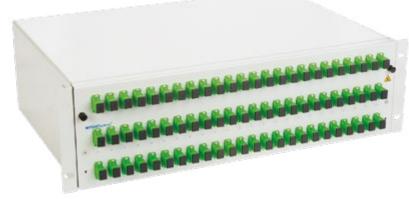
#### RACK 19" 2U fiber optic patch panel:

- Slide-out or telescope slide-out
- color: standard color or other color optional
- exchangeable front panel





2U 48xSC duplex front panel



#### RACK 19" 3U fiber optic patch panel:

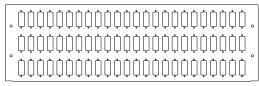
- Slide-out or telescope slide-out
- color: 🔍 standard color or other color optional
- exchangeable front panel



3U patch panel without equipment ID: 3370

#### **3U front panels**

3U 72xSC simplex front panel



3U 72xSC duplex front panel



1U RACK 19" cable reserve shelf ID: 4686





# SFP, SFP+ MODULES

Designed to work with switches, routers and media converters widely used in telecommunication networks, offices and industrial networks (Industry series with wider range of operating temperature)

All modules come with snap – lock system which prevents accidental disconnection.

Complaint with SFP MSA and SFF-8472 standards.

Modules are compatible with most brands available on the market.

FiberTechnic® SFP 1,25 G SM TX1310 10 km LC duplex DDM ID: 4135



FiberTechnic® SFP WDM 1,25 G SM TX1310 RX1550 3 km SC DDM ID: 4152



FiberTechnic® SFP+ 10 G MM 850 nm 300 m LC duplex DDM ID: 4142



FiberTechnic® SFP+ 10 G 10G RJ45 SFP-10G-T01 G10G BASE-T Z RJ45 ID: 6798



Туре	Construction	Fiber	Bidi	Duplex	Transmission speed [Gbit/s]	Connector	Transmission distance [km]	TX [nm]	RX [nm]
FS-1324-FL10	SFP	SM	no	yes	1,25	LC	10	1310	1310
FS-1324-FL20	SFP	SM	no	yes	1,25	LC	20	1310	1310
FS-1324-FL40	SFP	SM	no	yes	1,25	LC	40	1310	1310
FS-1524-FL40	SFP	SM	no	yes	1,25	LC	40	1550	1550
FS-0824-VL05	SFP	MM	no	yes	1,25	LC	0,55	850	850
FS-1303-FL02	SFP	MM	no	yes	1,25	LC	2	1310	1310
FS-AND-T01	SFP	_	no	yes	1	RJ45	0,1	_	_
FS-1G-T01	SFP	-	no	yes	1	RJ45	0,1	-	-
FS-B3524-FS03	SFP	SM	yes	no	1,25	SC	3	1310	1550
FS-B5324-FS03	SFP	SM	yes	no	1,25	SC	3	1550	1310
FS-B3524-FL03	SFP	SM	yes	no	1,25	LC	3	1310	1550
FS-B5324-FL03	SFP	SM	yes	no	1,25	LC	3	1550	1310
FS-B3524-FS20	SFP	SM	yes	no	1,25	SC	20	1310	1550
FS-B5324-FS20	SFP	SM	yes	no	1,25	SC	20	1550	1310
FS-B3524-FL20	SFP	SM	yes	no	1,25	LC	20	1310	1550
FS-B5324-FL20	SFP	SM	yes	no	1,25	LC	20	1550	1310
FS-B3524-FS40	SFP	SM	yes	no	1,25	SC	40	1310	1550
FS-B5324-FS40	SFP	SM	yes	no	1,25	SC	40	1550	1310
FS-B3524-FL40	SFP	SM	yes	no	1,25	LC	40	1310	1550
FS-B5324-FL40	SFP	SM	yes	no	1,25	LC	40	1550	1310
FSP-08192-VL03	SFP+	MM	no	yes	10	LC	0,3	850	850
FSP-13192-DL10	SFP+	SM	no	yes	10	LC	10	1310	1310
FSP-B32192-DL20	SFP+	SM	yes	no	10	LC	20	1270	1330
FSP-B23192-DL20	SFP+	SM	yes	no	10	LC	20	1330	1270

# SM, MM, SM/MM MEDIA CONVERTERS

Media converters are used to convert optical signal (100/1000Base-Fx) to copper transmitted one (10/100/1000Base-Tx).

All media converters are IEEE802.3X compliant.

Depending on the model, converters may have SC optical connector and UTP RJ45 connector or empty slot for SFP module.

Auto-detection of transmission mode (half or full duplex for TX port).

Auto-negotiation 10/100/1000 Mbps and automatic MDI/MDIX detection.



WDM SM TX1550 RX1310 nm SC 20 km media converter ID: 8075



WDM SM TX1550 RX1310 nm SC 20 km media converter ID: 4156



WDM SM TX1310 RX1550 nm SC 20 km media converter ID: 4157



10/100/1000 MB MM 850 nm SC duplex 550 m media converter

ID: 4155



10/100/1000 MB SM 1310 nm SC duplex 20 km media converter

ID: 4161

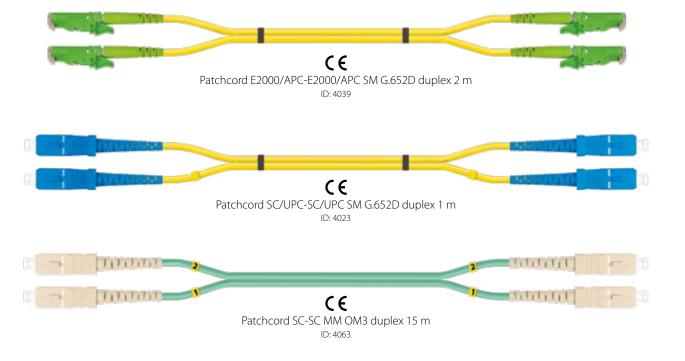


media converter ID: 4160

Туре	Fiber	Bidi	Duplex	Transmission speed Co [Mb/s]		lector	Transmission distance [km]	TX [nm]	RX [nm]
FCM-110-B20	SM	yes	no	10/100	1xSC/PC	1xRJ45	20	1310	1310
FCM-110-A20	SM	yes	no	10/100	1xSC/PC	1xRJ45	20	1310	1550
FCM-3100-F	SM/MM	-	no	10/100/1000	1xSFP	1xRJ45	40	1310	1550
FCM-3100-S20	SM	no	no	10/100/1000	2xSC/PC	1xRJ45	20	1310	1310
FCM101-08S05	MM	no	no	10/100/1000	2xSC/PC	1xRJ45	0,55	850	850

# Patchcords and pigtails

High quality and repeatability of transmission parameters. Compliance with standards EN-50173-1, EIA/TIA568, EN 50377. Available with many types of connectors, cables and fibers.



### Available fiber optics:

#### Single mode SM

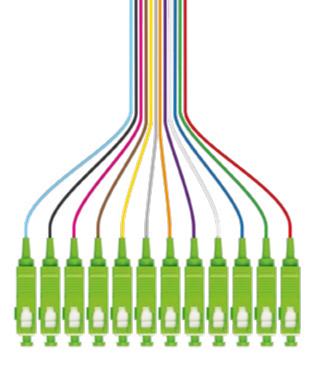
5	
G652D	fiber with reduced water peak
G655	NZDS fiber for CWDM and DWDM transmission
G656	NZDS fiber for CWDM and DWDM transmission
G657A	fiber with reduced bending radius for FTTH usage,
	compatible with G.652
G657B	fiber with reduced bending radius for FTTH usage

### Multimode

50/125 OM2, 50/125 OM3, 50/125 OM3+/OM4, Giga optimized for 1310 nm, 1000Base-LX to 2000 m transmission 62,5/125 OM1.

Attenuation of random connections average dB Acc. IEC 61300-3-34	Attenuation realtive to a reference plug dB Acc. IEC 61300-3-34	Reflectance return loss dB IEC 61300-3-34
Plugs SM: ST, SC, FC, LC, E2000, MU, DIN		
IL plug-plug 97% ≤0,45 dB average ≤0,20 dB	IL max. ≤0,35 dB	RL PC >45 RL UPC >50
Plugs SM: MTRJ		
IL plug-plug 95% ≤0,6 dB average ≤0,30 dB	IL max. ≤0,75 dB	RL PC >35
Plugs SM MT: MTP, MPO		
IL plug-plug 97% ≤0,70 dB average ≤0,35 dB		RL >55
Plugs SM APC: SC/APC, FC/APC, LC/APC, E2000/APC, MU/APC, DIN/APC		
IL plug-plug 97% ≤0,45 dB average ≤0,20 dB	IL max. ≤0,35 dB	RL APC >65
Plugs MM: ST, SC, FC, LC, E2000, MU		
IL plug-plug 97% ≤0,70 dB		RL PC >30
Plugs MM: MTRJ average ≤0,35 dB		
IL plug-plug 97% ≤0,75 dB average ≤0,50 dB		RL PC >26
Plugs MM MT: MTP, MPO		
IL plug-plug 97% ≤1 dB average ≤0,50 dB		RL PC >26

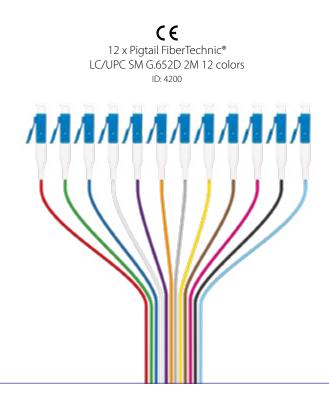
**⇒Fiber**Technic<sup>®</sup>

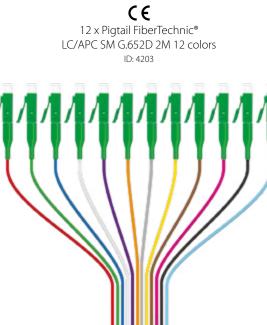


CE 12 x Pigtail FiberTechnic® SC/APC SM G.652D 2M 12 colors ID: 3164









# **FIBER OPTIC ADAPTERS**

FiberTechnic<sup>®</sup> offer includes high quality fiber optic adapters. Each adapter has ceramic ferrule inside.

FiberTechnic<sup>®</sup> adapters are equipped with steel clips. Key features include low insertion loss and low attenuation what translates to stable and reliable connection.

Adapters are GOLD quality with high repeatability of transmission parameters.

All FiberTechnic® adapters are EN-50173-1, EIA/ TIA 568, EN 50377 compliant.



CE SC/APC SM simplex adapter ID: 1195



CE LC/APC SM duplex adapter ID: 1193



CE SC/APC SM simplex adapter, no flange ID: 4452



CE LC MM OM4 duplex adapter ID: 5091





CE SC/SC SM duplex adapter ID: 1198

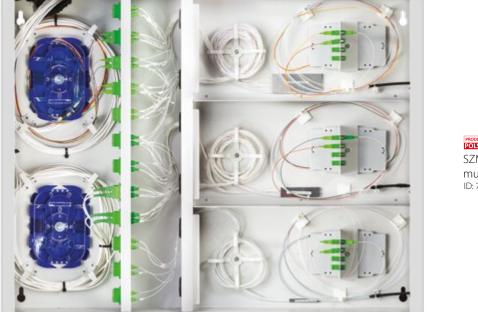


CE LC/UPC SM quad adapter ID: 3938

		Adapters										
	SC	SC/APC	LC	LC/APC	ST	FC	FC/APC	E2000	E2000/APC			
Insertion loss IL [dB]					<0,2							
Life span [cycle]	500	500	500	500	500	500	500	500	500			
Compliant		754-4 , TIA 604-3	IEC 617 TIA 604		IEC 60874-10 TIA 604-2	IEC 60874-7, JIS C5970 TIA 604-4		IEC 61754-15 DIN EN186270				
Working temperature range					-40 +85							
Colors												

# **MULTI-OPERATOR FIBER OPTIC CABINET**

Design of the cabinet enables the cables to be routed from the telecommunication terminal to the building and distributed directly up to 128 subscribers. The cabinet has 4 chambers, one distribution and 3 for internet service providers. It allows 3 different ISP to use one cabinet to distribute network to final subscribers. It also protects passive network elements such as adapters, pigtails, splitters and splice trays. Distribution and ISP sections are separated from each other and secured with different access locks.







Туре	Height [mm]	Width [mm]	Depth [mm]	Material	Weight [kg]	Space for splice tray	Space for adapters	Usage
SZM-85/64/15 128HP multi-operator cabinet	635	850	150	steel	28	max. 8x 12-24J	64xSC duplex, 3x4xSC duplex	indoor

# WALL-MOUNTED OPTICAL DISTRIBUTION CABINETS

Optical distribution cabinet for wall mounting. The cabinet protects passive elements of fiber optic networks. Designed to be used in FTTH networks. Option to mount adapters, splitters and splice tray.

Double section cabinets have distribution and client section, each opened with a separate key.





Dual chamber fiber optic cabinet with space for spare cable PSND-37/26/18 48HP ID: 3473





PRODUCT CE Dual chamber fiber optic cabinet 37/26/11 48HP ID: 3498

Туре	Height [mm]	Width [mm]	Depth [mm]	Material	Space for spare cable	Space for splice tray	Space for adapters	Usage
Dual chamber fiber optic cabinet with spare cable frame PSND-37/26/18 48HP	260	370	180	aluminium	yes	yes, 12-24F	24xSC duplex, 3xSC simplex	indoor
Dual chamber fiber optic cabinet 37/26/11 48HP	260	370	110	aluminium	no	yes, 12-24F	24xSC duplex, 3xSC simplex	indoor





# Dual chamber fiber optic cabinet with spare cable frame PSND-43/34/18 84HP ID: 4964





### Reinforced fiber optic cabinet 510/540/110 60HP ID: 3519

Туре	Height [mm]	Width [mm]	Depth [mm]	Material	Space for spare cable	Space for splice tray	Space for adapters	Usage
Dual chamber fiber optic cabinet with spare cable frame PSND-43/34/18 84HP	340	423	180	aluminium	yes	yes, 12-24F	42xSC duplex, 4xSC simplex	indoor
Reinforced fiber optic cabinet 510/540/110 60HP	510	540	110	steel, aluminium	yes	yes, 12-24F	30xSC duplex	indoor

# WALL - MOUNTED OPTICAL CABINET (SSN)

Cabinet designed for wall mounting with space inside for spare cable, splice trays (12-24 splices) and switch panel for adapters.

Embossing on the back wall allow arranging fibers with cable ties.





 PRODUCT
 C E

 12xSC simplex SSN-200/200/55 wall cabinet

 ID: 5287





 PRODUKT
 C E

 6xSC duplex SSN-290/290/100 wall cabinet

 ID: 4531

Туре	Height [mm]	Width [mm]	Depth [mm]	Material	Space for splice tray	Space for adapters	Usage
12xSC simplex SSN-200/200/55 wall cabinet	200	200	55	aluminium	yes, 12-24F	12xSC simplex	indoor
6xSC duplex SSN-290/290/100 wall cabinet	290	290	100	aluminium	yes, 12-24F	6xSC duplex	indoor











 PRODUKT
 C E

 18xSC duplex SSN-300/300/100 wall cabinet

 ID: 7781

Туре	Height [mm]	Width [mm]	Depth [mm]	Material	Space for splice tray	Space for adapters	Usage
24HP 12xSC duplex SSN-250/250/100 wall cabinet	250	250	100	aluminium	yes, 12-24F	12xSC duplex	indoor
18xSC duplex SSN-300/300/100 wall cabinet	300	300	100	aluminium	yes, 12-24F	18xSC duplex	indoor

# WALL - MOUNTED CABINETS FOR EASY ACCESS CABLES

Wall-mounted box designed for organizing easy-access spare cable in multi-level buildings. On the back wall of the cabinet are special brackets to adjust the cable easily.





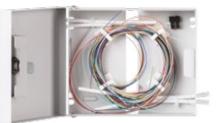
Easy access cable distribution cabinet 200/200/55 ID: 5176





### Easy access cable distribution cabinet 250/250/100 ID: 3462





### Easy access cable distribution cabinet 16/18/5 ID: 4212

Туре	Height [mm]	Width [mm]	Depth [mm]	Material	Usage
Easy access cable distribution cabinet 200/200/55	200	200	55	steel	indoor
Easy access cable distribution cabinet 250/250/100	250	250	100	steel	indoor
Easy access cable distribution cabinet 16/18/5	160	180	50	steel	indoor

# **DISTRIBUTION CABINET**

Cabinet designed for outdoor use for building point-point and FTTx fiber optic networks.

Cabinet consists of two parts – bottom and top. Bottom part is the base which is intended to be buried in the ground. Top part has space where fiber optics are organized by using splice trays, adapters and splitters.



72HP SSF-1400/460/210 outdoor distribution cabinet ID: 3474





144J/216J magistral SSF-1360/620/445 outdoor distribution cabinet ID: 3833 / 5351





432J magistral SSF-1790/620/445 outdoor distribution cabinet ID: 5495



Туре	Height [mm]	Width [mm]	Depth [mm]	Material	Panel capacity [HP]	Space for splice tray	Space for adapters	Usage
72 HP SSF-1400/460/210 outdoor distribution cabinet	1400	460	210	aluminium	72	yes, 3x24F	36xSC duplex, 3xSC simplex	outdoor
144J magistral SSF 1360/620/445 outdoor distribution cabinet	1360	620	445	aluminium	144	yes, 6x24F	72xSC duplex, 10xSC simplex	outdoor
216J magistral SSF 1360/620/445 outdoor distribution cabinet	1360	620	445	aluminium	216	yes, 9x24F	108xSC duplex, 10xSC simplex	outdoor
432J magistral SSF-1790/620/445 outdoor distribution cabinet	1790	620	445	aluminium	432	yes, 18x24F	2x108xSC duplex, 2x10xSC simplex	outdoor

### **OUTDOOR DISTRIBUTION CABINET 24/36HP**

Cabinet designed as a distribution point for PON FTTH networks.

Distribution cabinet has two switch panels. One for magistral cable and second for subscriber cable. Each switch panel has space for adapters, ABS BOX splitters and splice trays.



Cabinet designed as a distribution point for PON FTTH networks.

The distribution cabinet has a 3in1 adapter (AD3, AD4, AD6) for 12-48F enclosure and special adjustment panel for microducts and spare cable.



Outdoor distribution cabinet FTTH SSF-1351/394/209 ID: 7112



Outdoor distribution cabinet FTTH SSF-1355/295/208 ID: 6330

Туре	Height [mm]	Width [mm]	Depth [mm]	Material	Usage
Outdoor distribution cabinet FTTH SSF-1351/394/209	1351	394	209	aluminium	outdoor
Outdoor distribution cabinet FTTH SSF-1355/295/208	1355	295	208	aluminium	outdoor

# **IP44 SINGLE SHELL OUTDOOR CABINETS**

Aluminium PA11 outdoor cabinets are powder coated RAL7035. Key features include: good tensile strength, high fatigue resistance and rust resistance in offshore and industrial conditions. The cabinets are almost three times lighter than the same steel S235 cabinets.

### Single access



Outdoor cabinet 19" 18U SK-1 STZ 1196/625/625 IP44 ID: 7663

Available options						
U Height	Height [mm]	Width [mm]	Depth [mm]	Weight [kg]	Material	IP rating
18	1196	600	600	27,5	aluminium	44
18	1196	800	600	29	aluminium	44
24	1464	600	600	30,5	aluminium	44
24	1464	800	600	32	aluminium	44
30	1729	600	600	33,5	aluminium	44
30	1729	800	600	35	aluminium	44

Standard equipment:

- doors secured with 3-point bolt and closed by handle with key lock
- special profile lip allows water to be drained out which is especially important during temperatures below 0C
- polymer seal
- adjustable RACK rails
- removable floor panel
- gravity ventilation system

Features :

- Ingress protection rating IP56
- Impact protection rating IK10

### **Dual access**



### Outdoor cabinet 18U dual access STZD 1196/625/625 IP44 ID: 7676

Available options						
U Height	Height [mm]	Width [mm]	Depth [mm]	Weight [kg]	Material	IP rating
18	1196	600	600	38,5	aluminium	44
18	1196	800	600	40	aluminium	44
24	1464	600	600	42,5	aluminium	44
24	1464	800	600	44	aluminium	44
30	1729	600	600	46,5	aluminium	44
30	1729	800	600	48	aluminium	44

# **IP56 OUTDOOR CABINETS**

IP56 rated FiberTechnic® cabinets come as standard with IP66 Morek cable gland for leading cables and pipes inside the cabinet.

Thanks to innovative, patented filtering casette design (Patent No. P.422067), FiberTechnic® cabinets are IP56 rated, which makes the inside of the cabinet secured against dust and water.

Key features:

- Ingress protection rating IP56
- Impact protection rating IK10

### Single access outdoor cabinets





Outdoor cabinet 19" 18U IP56 STZ 1196/625/625 ID: 8627

Available of	ptions					
U Height	Height [mm]	Width [mm]	Depth [mm]	Weight [kg]	Material	IP rating
18	1196	600	600	29,5	aluminium	56
18	1196	800	600	31	aluminium	56
24	1464	600	600	32,5	aluminium	56
24	1464	800	600	34	aluminium	56
30	1729	600	600	35,5	aluminium	56
30	1729	800	600	37	aluminium	56

Standard equipment:

- doors secured with 3-point bolt and closed by handle with key lock
- special profile lip allows water to be drained out, what is especially important during temperatures below 0 C
- polymer seal
- adjustable RACK rails
- removable floor panel
- IP66 MOREK MC 3/7 for leading cables and pipes inside the cabinet
- gravity ventilation system in shape of side wall embossings, protected with patented cat. M-5 filtering cassettes (Patent No. P.422067, other options on demand).

#### **Dual access outdoor cabinets**





Dual access outdoor cabinet 19"18U STZD 1196/625/625 z IP56 ID: 8628

Available op	otions					
U Height	Height [mm]	Width [mm]	Depth [mm]	Weight [kg]	Material	IP rating
18	1196	600	600	40,5	aluminium	56
18	1196	800	600	42	aluminium	56
24	1464	600	600	44,5	aluminium	56
24	1464	800	600	46	aluminium	56
30	1729	600	600	48,5	aluminium	56
30	1729	800	600	50	aluminium	56

### DOUBLE SHELL THERMO-INSULATED CABINETS

Double shell thermo-insulated cabinets are made using 2mm thick aluminium sheets joined by welds and rivets. Between the sheets there is a 30mm thick insulation.

The door hole has a special profile lip, which allows water to be squeezed out and provides additional sealing.

Insulation of double shell doors is 24mm thick. It seamlessly joins with the cabinet giving proper insulation of the internal chamber. Seals, closing mechanism and hinges are hiden in the external wall.

Features:

- Ingress protection rating IP56
- Impact protection rating IK10





Outdoor, double shell cabinet 22U STZ 1230/830/830 IP56 ID: 6944

Available op	ptions					
U Height	Height [mm]	Width [mm]	Depth [mm]	Weight [kg]	Material	IP rating
18	1196	600	600	42,5	aluminium	56
18	1196	800	600	45	aluminium	56
22	1230	800	800	48,5	aluminium	56
24	1464	600	600	52,5	aluminium	56
24	1464	800	600	56	aluminium	56
30	1729	600	600	58,5	aluminium	56
30	1729	800	600	61	aluminium	56





Outdoor, double shell, insulated cabinet with three doors 26U STZD 1467/1381/830 IP56 ID: 7633

#### Standard equipment:

- doors are secured with 3-point bolt and closed by handle with key lock •
- special profile lip allows water to be squeezed out which is especially important during temperatures below 0 •
- polymer seal •
- adjustable RACK rails •
- removable floor panel
- IP66 MOREK MC 3/7 for leading cables and pipes inside the cabinet
- gravity ventilation system in shape of side wall cutouts, protected with patented cat. M-5 filtering cassettes (Patent No. P.422067, other options • on demand).





#### 

Outdoor, double shell, insulated cabinet, double door 22U STZD 1239/1330/830 IP56

ID: 5721

Available of	ptions					
U Height	Height [mm]	Width [mm]	Depth [mm]	Weight [kg]	Material	IP rating
22	1239	1330	830	82	aluminium	56
26	1467	1381	830	98	aluminium	56

# OUTDOOR CABINETS WITH AIR CONDITIONING

#### Air conditioning unit CV011002208000 550W-2000W (I35/35)

- input voltage 230V AC 50-60Hz (380V AC as option)
- temperature inside the cabinet set to +35°C
- refrigerant used: R134a (tetrafluoroethene), environmentally friendly. Cooling circuit closed and sealed
- airflow inside the cabinet separated from outside airflow

**Removable floor panel** – thanks to special seal, floor panel can be removed to mount cabinet to the base. In addition it makes leading cables into the cabinet easier.

#### TKTS-011 thermostate; bimetallic; automatically starts the AC unit when temperature exceedes given value

- max. input voltage: 250 V AC
- max. current consumption: 10A
- user-defined temperature range: 0°C 60°C
- operating temperature: -20°C 80°C
- IP rating: IP20

#### Doors:

- full, single leaf doors
- left hinges (right hinges optional), opening to 180 degrees
- secured with 3-point bolt system and closed by handle with key lock

**Condensation drainage system:** drydecompression element placed in floor panel assures compliance with IP66 rating.

**Internal ceiling** – insulated panel located under the roof creates air pocket, which in tandem with insulated cabinet protects against water condensation at the top part of the cabinet

#### RACK rails and frames for rail mounting

Internal chamber is isolated by 20mm thick insulation



#### FiberTechnic® cabinets are compliant with following norms

PN-EN 50581:2013 PN-EN 60825-2:2009 PN-EN 62208:2011 PN-EN 60529:2003/A2:2014-07 PN-EN 62262:2003

### OUTDOOR CABINET PLINTHS

Series of underground plinths designed to be a stable base for FiberTechnic® outdoor cabinets.

Each series of FiberTechnic<sup>®</sup> cabinets has its own unique plinth design that corresponds to type and size. Avialable as single unit or self-assembly two part set. Cabinets are secured to the plinths with dedicated bolts.

Fully aluminium single unit design.

Steel, two-part plinth with Magnelis coating. Elements are joined together by six M6 bolts.







# **CABINET ACCESSORIES**



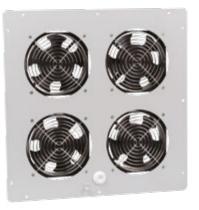
Fiber tube splitter



Cabinet heating set with thermostat



Panel with radial fan for STZ FiberTechnic® cabinets ID: 8107



120mm panel with 4 ventilators to STZ FiberTechnic® cabinets ID: 6183



CE Fan heater CCSL 028 250W 230V mounted to DIN rail ID: 6836/6818



CE KTO-011 thermostat for heater ID: 4488



CE KTS-011 thermostat for fan ID: 3809

OUTDOOR CABINETS



18U 19" RACK Vertical cable manager ID: 3460/3459



# **RACK INDOOR CABINETS**

Hanging, one section cabinets for self-assembly, designed for installing 19" devices. The cabinets are ideal for building networks, installing cables, monitoring or alarm systems, as well as in server rooms

All cabinets have ventilation holes to ensure optimal airflow. It is possible to mount a fan in roof of the cabinets. Devices which are not 19" can be placed in the cabinets on special shelves.



RACK 19 6U 600x600 mm hanging cabinet, black



RACK 19 9U 600x600 mm hanging cabinet, black ID: 8478





Туре	Height [mm]	Width [mm]	Depth [mm]	Material	RACK rails	Maximum capacity [kg]	Weight [kg]	Usage
RACK 196U cabinet	378	600	600	stool	yes	60	19,4	indoor
RACK 19 00 Cabinet	378	600	450	steel		60		
RACK 19 9U cabinet	512	600	600	at a al	yes	60	22 5	:
RACK 19 90 Cabinet	512	600	450	steel		00	22,5	indoor

### LanTechnic®



RACK 19 12U 600x600 mm hanging cabinet, black ID: 8480





RACK 19 18U 600x600 mm hanging cabinet, black ID: 8623



Туре	Height [mm]	Width [mm]	Depth [mm]	Material	RACK rails	Maximum capacity [kg]	Weight [kg]	Usage
	645	600	600	et e el	yes	60	32	indoor
RACK 19 12U cabinet	645	600	450	steel		60		
RACK 19 18U cabinet	900	600	600	stool	yes	60	34,5	in da ar
RACK 19 180 Cadinel	900	600	450	steel		60		indoor



# **OUTDOOR HERMETIC CABINETS IP55**

Cabinets for outdoor use, designed for mounting on poles and masts.

Fully hermetic cabinet, door protected against dust and water ingress with rubber seal and hermetic IP66 lock.





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Outdoor hermetic cabinet 5U SH-567/426/369 IP55 ID: 4429





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Outdoor hermetic cabinet 5U SH-750/595/322 IP55 ID: 4427

Туре	Height [mm]	Width [mm]	Depth [mm]	Weight [kg]	IP rating	Mast mounting	Pole mounting
Outdoor hermetic cabinet 5U SH-567/426/369 IP55	426	567	369	6	55	yes	yes
Outdoor hermetic cabinet 5U SH-750/595/322 IP55	750	595	322	10	55	yes	yes







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Outdoor hermetic cabinet 9U SH-603/567/369 IP55  $\ensuremath{\text{ID:}}\xspace{7}$  7210





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Outdoor hermetic cabinet 12U SH-737/567/367 IP55 ID: 7227

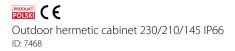
Туре	Height [mm]	Width [mm]	Depth [mm]	Weight [kg]	IP rating	Mast mounting	Pole mounting
Outdoor hermetic cabinet 9U SH-603/567/369 IP55	603	567	369	11	55	yes	yes
Outdoor hermetic cabinet 12U SH-737/567/367 IP55	737	567	367	12	55	yes	yes



# OUTDOOR HERMETIC CABINET IP66











Cutdoor hermetic cabinet 250/310/145 IP66 ID: 7467

Туре	Height [mm]	Width [mm]	Depth [mm]	Weight [kg]	IP rating	Mast mounting	Wall mounting
Outdoor hermetic cabinet 230/210/145 IP66	230	210	145	1,4	66	yes	yes
Outdoor hermetic cabinet 250/310/145 IP66	250	310	145	1,7	66	yes	yes







Cutdoor hermetic cabinet 410/310/145 IP66 ID: 7627





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Outdoor hermetic cabinet 540/310/145 IP66 ID: 7529

Туре	Height [mm]	Width [mm]	Depth [mm]	Weight [kg]	IP rating	Mast mounting	Wall mounting
Outdoor hermetic cabinet 410/310/145 IP66	410	310	145	2,4	66	yes	yes
Outdoor hermetic cabinet 540/310/145 IP66	540	310	145	2,9	66	yes	yes



# ANTI-NOISE SHIELDS FOR MikroTik

#### Cyberteam Sp. z o. o. is one of the largest manufactures of anti-noise shields for Ubiquiti and Mikrotik devices

All of our shields are patented industrial designs

Anti-noise shields minimize interference and block electronic noise from nearby operating devices. Less noise equals better signal quality. Shields are made of aluminium, what makes them rust free and light. Thanks to CNC technology, the shields are produced with high precision and repeatability. Each shield is powder coated in the same color as the devices which it dedicated to.

Anti-noise shield	Compatibility
Anti-noise shield SXT-SAR2	SXTG-5HPND-SAR2
Anti-noise shield Omnitik Sector	Omnitik U-5HND Omnitik UPA-5HND
Anti-noise shield Sextant	Sextant SextantG
Anti-noise shield QRT-5	RouterBoard QRT-5 RouterBoard QRT-5 AC
Anti-noise shield AC SECTOR	Omnitik 5 POE AC RBOMNITIKPG-5HACD Omnitik 5 AC RBOMINITIKG-5HACD
Anti-noise shield SXT-LTE	MikroTik RouterBoard SXT LTE KIT (RBSXTR R11E-LTE)
Anti-noise shield RouterBoard WAP	MikroTik RouterBoard WIRELESS WIRE WAP-60AD KIT MikroTik RouterBoard WAP 2ND BE LEVEL4 MikroTik RouterBoard WAP AC RBWAPG-5HACT2HND MikroTik RouterBoard WAP LTE KIT RBWAPR-2NDR11E-LTE MikroTik WAP 60G AP, 1X GB IT LAN, 802.11AD (60 GH Z), L4 (RBWAPG-60AD-A) MikroTik RouterBoard WAP 60GX3 AP Punkt dostępowy 60 GHZ
Anti-noise shield RouterBoard SXTSQ	MikroTik RouterBoard SXTSQ LITE5 RBSXTSQ5ND 5GHZ 16DBI PTP CPE
Anti-noise shield SLANT 45 MikroTik RouterBoard SXTSQ	MikroTik RouterBoard SXTSQ 5 AC RBSXTSQG-5ACD LEVEL 3 CPE, PTP MikroTik RouterBoard SXTSQ 5 HIGH POWER RBSXTSQ5HPND LEVEL 4 CPE, PTP, PTMP MikroTik RouterBoard SXTSQ LITE2 RBSXTSQ2ND 2,4GHZ CPE, PTP, LEVEL 3 MikroTik RouterBoard SXTSQ LITE5 RBSXTSQ5ND LEVEL 3 16DBI PTP CPE MikroTik RouterBoard SXTSQ LITE60 60GHZ CPE, PTP, LEVEL 3





Anti-noise shield MikroTik RouterBoard SXT-SAr2 ID: 2381



Anti-noise shield MikroTik RouterBoard OmniTIK Sector ID: 2704



Anti-noise shield MikroTik RouterBoard Sextant ID: 2657



Anti-noise shield MikroTik RouterBoard QRT-5 ID: 2542



Anti-noise shield MikroTik RouterBoard OmniTIK 5 ac RBOmniTikG-5HacD ID:5740



Anti-noise shield MikroTik RouterBoard SXT LTE (RBSXTR R11e-LTE) ID: 5739



Anti-noise shield MikroTik RouterBOARD wAP ID: 5410



Anti-noise shield MikroTik RouterBoard SXTsq Lite5 RBSXTsq5nD 5GHz 16dBi PtP CPE ID: 4870



Anti-noise shield MikroTik slant 45 RouterBoard SXTsq Lite5 RBSXTsq5nD 5GHz 16dBi PtP CPE ID: 6015



# ANTI-NOISE SHIELDS FOR UBIQUITI

#### Cyberteam Sp. z o. o. is one of the largest manufactures of anti-noise shields for Ubiquiti

All of our shields are patented industrial designs



Anti-noise shield Ubiquiti NanoStation NS-Loco M2/M5 ID: 3603



Anti-noise shield Ubiquiti NanoBeam M5 19dBi NBE-M5-19 ID: 3328



Anti-noise shield Ubiquiti PowerBeam PBE-M5-300 ID: 2522

Anti-noise shield	Compatibility
Anti-noise shield M2/M5	Ubiquiti NanoStation Loco M2 Ubiquiti NanoStation Loco M5
Anti-noise shield NS-M2/M5	Ubiquiti NanoStation M2 Ubiquiti NanoStation M5
Anti-noise shield LiteBeam LBE-5AC-16-120 PRO	Ubiquiti LiteBeam Sector 16/120 LBE-5AC-16-120 / GPS
Anti-noise shield NanoBeam M5 16DBI NBE-M5-16	Ubiquiti NanoBeam M5 16DBI NBE-M5-16 Ubiquiti NanoBeam M5 16DBI NBE-5AC-16
Anti-noise shield NanoBeam M5 19DBI NBE-M5-19	Ubiquiti NanoBeam M5 19DBI NBE-M5-19 Ubiquiti NanoBeam M5 AC 19DBI NBE-5AC-19
Anti-noise shield PowerBeam PBE-M5-300	Ubiquiti PowerBeam M5-300 22DBI Ubiquiti PowerBeam 5AC-300 22DBI
Anti-noise shield PowerBeam PBE-M5-400	Ubiquiti PowerBeam M5-400 25DBI Ubiquiti PowerBeam 5AC-400 25DBI Ubiquiti PowerBeam M2-400 18DBI
Anti-noise shield AM-20/90	Ubiquiti AirMAX Sector 20/90 (5GHZ) Ubiquiti AirMAX Sector 16/90 (2,4GHZ)
Anti-noise shield AM-19/120	Ubiquiti AirMAX Sector 19/120 (5GHZ) Ubiquiti AirMAX Sector 15/120 (2,4GHZ)
Anti-noise shield AM-17/90	Ubiquiti AirMAX Sector 17/90
Anti-noise shield AM-16/120	Ubiquiti AirMAX Sector 16/120
Anti-noise shield NS 5AC	Ubiquiti NanoStation 5AC
Anti-noise shield NS 5AC Loco	Ubiquiti NanoStation 5AC Loco CPE NS 5AC





Anti-noise shield Ubiquiti NanoStation NS-M2/M5 ID: 2232



Anti-noise shield Ubiquiti LiteBeam LBE-5AC-16-120 PRO ID: 3627



Anti-noise shield Ubiquiti NanoBeam M5 16dBi NBE-M5-16 ID: 3327



Anti-noise shield Ubiquiti PowerBeam PBE-M5-400 ID: 2521



Anti-noise shield Ubiquiti airMAX Sector AM-20/90 ID: 2229



Anti-noise shield Ubiquiti airMAX Sector AM-19/120 ID: 2228



Anti-noise shield Ubiquiti airMAX Sector AM-17/90 ID: 2227



Anti-noise shield Ubiquiti airMAX Sector AM-16/120 ID: 2226



Anti-noise shield Ubiquiti NanoStation 5AC Loco CPE NS-5AC ID: 5409



## NETPROTECTORS | SURGE PROTECTORS

Ethernet Surge protector effectively protects Ethernet network against surges as a result of inducing high voltage charges. Atmospheric discharges generate charges which damage Ethernet ports and also whole network devices. Manufacturers do not give guarantee for such damages, that is why the devices must be repaired on the cost of the owners.

Ethernet surge protector collects loads induced in the network and safely transfers them to the grounding, preventing devices from damages.





Ethernet Surge Protector SPG-8P-1U ID: 3433 Ethernet Surge Protector SPG-8P-D ID: 3437

		FAST ETHERNET 100 Mb/s		
Netprotector model	Ports	Application	Max. voltage [V]	Max. amperage per port [A]
SP-8P-1U	8x10/100 Mbps	stand-alone RACK device	48	1
SP-8P	8x10/100 Mbps	module for SP-8P-1U	48	1
SP-8P-D	8x10/100 Mbps	stand-alone DESKTOP device	48	1
Netprotector 4p w obudowie	4x10/100 Mbps	stand-alone DESKTOP device	48	1
Netprotector model	Ports	GIGABIT ETHERNET 1Gb/s	Max. voltage [V]	Max. amperage per port [A]
SPG-8P-1U	8x10/100/1000 Mbps	stand-alone BACK device	Max. voltage [v]	Max. amperage per port [A
SPG-8P	8x10/100/1000 Mbps	module for SPG-8P-1U	48	1
SPG-8P-D	8x10/100/1000 Mbps	stand-alone DESKTOP device	48	1
NPG-4P-D	4x10/100/1000 Mbps	stand-alone DESKTOP device	48	1
MNG-8P	8x10/100/1000 Mbps	module for MNG-8P-1U	48	1
MNG-8P-1U	8x10/100/1000 Mbps	stand-alone RACK device	48	1
MNG-8P-D	8x10/100/1000 Mbps	stand-alone DESKTOP device	48	1
SPG-8P-1U 802.3af/at	8x10/100/1000 Mbps	stand-alone RACK device	54	1
SPG-8P 802.3af/at	8x10/100/1000 Mbps	module for SPG-8P-1U 802.3af/at	54	1



### **ADAPTERS**

PoE adapters transmit power via Ethernet cables. The adapter can be powered by any 12 to 54V power supply, but also with a buffer power supply. It has a DC power socket and LED diode.

Usage of the PoE adapter gives more space, as less power supplies must be used.

Each port is protected with a securing diode, which isolates it from other ports in case of short circuit.





PoE adapter 8p RACK 19 Gigabit ADAG-8P-1U v.2 ID: 3196 POE adapter 8p Gigabit ADAG-8P-D ID: 2520

		FAST ETHERNET 100 Mb/s		
Netprotector model	Ports	Application	Max. voltage [V]	Max. amperage per port [A]
ADA-8P-1U	8x10/100 Mbps	stand-alone RACK device	48	1
ADA-8P	8x10/100 Mbps	module ADA-8P-1U	48	1
ADA-8P-D	8x10/100 Mbps	stand-alone DESKTOP device	48	1
4P PoE adapter in case	4x10/100 Mbps	stand-alone DESKTOP device	48	1
Netprotector model	Ports	Application	Max. voltage [V]	Max. amperage per port [A]
	Ports 8x10/100/1000 Mbps	Application stand-alone RACK device	Max. voltage [V] 48	Max. amperage per port [A] 1
ADAG-8P-1U			<u> </u>	Max. amperage per port [A] 1 1
ADAG-8P-1U ADAG-8P	8x10/100/1000 Mbps	stand-alone RACK device	48	Max. amperage per port [A] 1 1 1
Netprotector model ADAG-8P-1U ADAG-8P ADAG-8P-D ADAG-M-4P-D	8x10/100/1000 Mbps 8x10/100/1000 Mbps	stand-alone RACK device module for ADAG-8P-1U	48 48	Max. amperage per port [A] 1 1 1 1 1



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