

Plastic Fiber Optic Cables

POF-/PMMA fibers up to 40 m distance

The fiber optic cables are used to connect the FASTBUS modules FM211, FM212, FS211, FS211/N, FS212 and FS212/N, enabling the connection of remote SubDevices over large distances with a minimum signal delay.

Features

- Minimal signal delay
- Cable length: plastic optical fiber (POF or PMMA) max. 40 m

Assembled plastic fiber optic cables

Part type designation	Part number	Description
K-LWLP1 0.5 m	00009624-02	POF Cable 0.5 m duplex plastic optical fiber; Fx21x Fastbus
K-LWLP1 1.0 m	00009624-00	POF Cable 1.0 m duplex plastic optical fiber; Fx21x Fastbus
K-LWLP1 2.0 m	00009624-01	POF Cable 2.0 m duplex plastic optical fiber; Fx21x Fastbus
K-LWLP1 3.0 m	00009624-06	POF Cable 3.0 m duplex plastic optical fiber; Fx21x Fastbus
K-LWLP1 5.0 m	00009624-04	POF Cable 5.0 m duplex plastic optical fiber; Fx21x Fastbus
K-LWLP1 7.0 m	00009624-11	POF Cable 7.0 m duplex plastic optical fiber; Fx21x Fastbus
K-LWLP1 10.0 m	00009624-03	POF Cable 10.0 m duplex plastic optical fiber; Fx21x Fastbus
K-LWLP1 15.0 m	00009624-07	POF Cable 15.0 m duplex plastic optical fiber; Fx21x Fastbus
K-LWLP1 20.0 m	00009624-05	POF Cable 20.0 m duplex plastic optical fiber; Fx21x Fastbus
K-LWLP1 30.0 m	00009624-12	POF Cable 30.0 m duplex plastic optical fiber; Fx21x Fastbus
K-LWLP1 40.0 m	00009624-15	POF Cable 40.0 m duplex plastic optical fiber; Fx21x Fastbus

When utilizing cable from other manufacturers be aware of possibly divergent specifications, e.g. attenuation or minimum bending radius.

LWLP1

Environmental conditions	
Operating temperature	-30 °C to +70 °C
Storage temperature	-40 °C to +85 °C
Miscellaneous	
Bending radius	> 30 mm

Own assembly of plastic fiber optic cables

The following table lists the individual components required for the own assembly of plastic fiber optic cables.

When utilizing cable from other manufacturers be aware of possibly divergent specifications, e.g. attenuation or minimum bending radius.

Order data

Part type designation	Part number	Description
LWLP1 connector	00009502-00	Connector for plastic fiber optic cable 2-line
LWLP1 sleeve	00009514-00	Sleeve for plastic fiber optic cable per piece
LWLP polishing set	00009696-00	Polishing set for plastic fiber optic cable (HFBR-4593/Hewlett Packard)
LWLP-WKZ1	00010126-00	Skinning tool for plastic fiber optic cable Type RS
Fiber optic cable pliers ¹	00009695-00	BNC crimping pliers (Pressmaster DCC 1113)

Assembling cables

The following steps are required for individual cable assembly:

- Preparing the cable
- Assembling connector
- Checking connector
- Polishing synthetic fibers

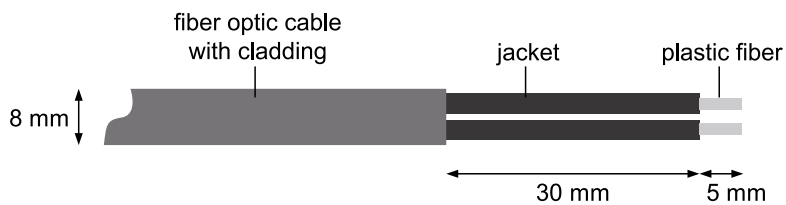
Preparing the cable

Procedure:

1. Strip cladding using a stripping knife.

Note: The synthetic fiber must not be damaged when stripping, otherwise optical reflections could result, which would seriously reduce the transmission quality.

2. Strip the synthetic fibers.



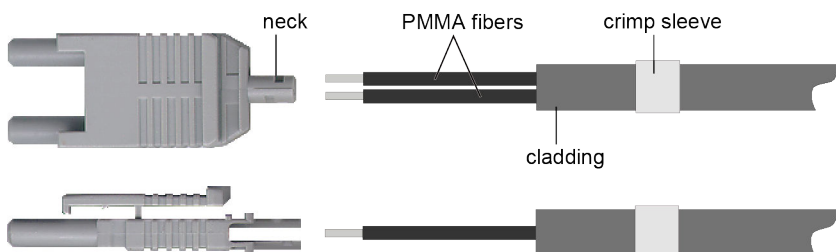
3. Slide a crimp sleeve over the cladding on both sides.

➔ Cable is ready for the connector assembly.

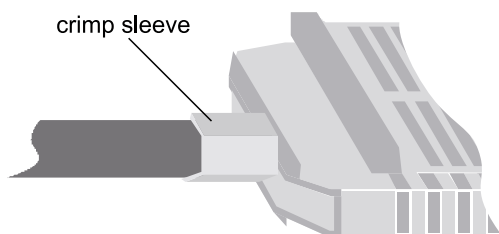
Assembling connector

Procedure:

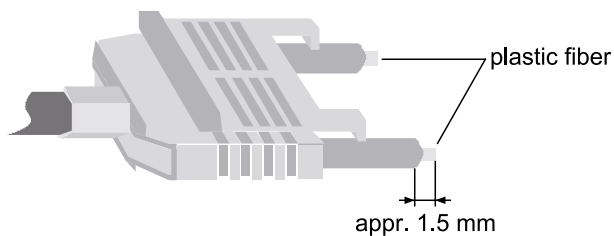
1. Insert single conductors into the connector housing. In doing so, slide cable cladding over the connector neck. In order to ease plugging/unplugging on the module, 2 opposite surfaces of the hexagonal crimp ought to be parallel with the broad side of the connector housing.



2. Slide crimp sleeve over the neck and clamp with crimping pliers.



3. Trim protruding synthetic fibers to approx. 1.5 mm.

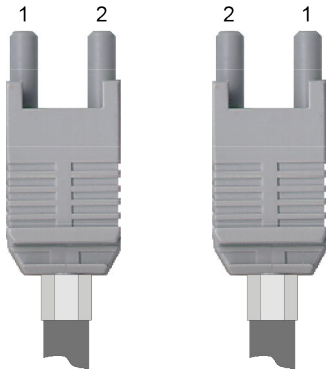


➔ First connector is assembled.

Checking connector

Procedure:

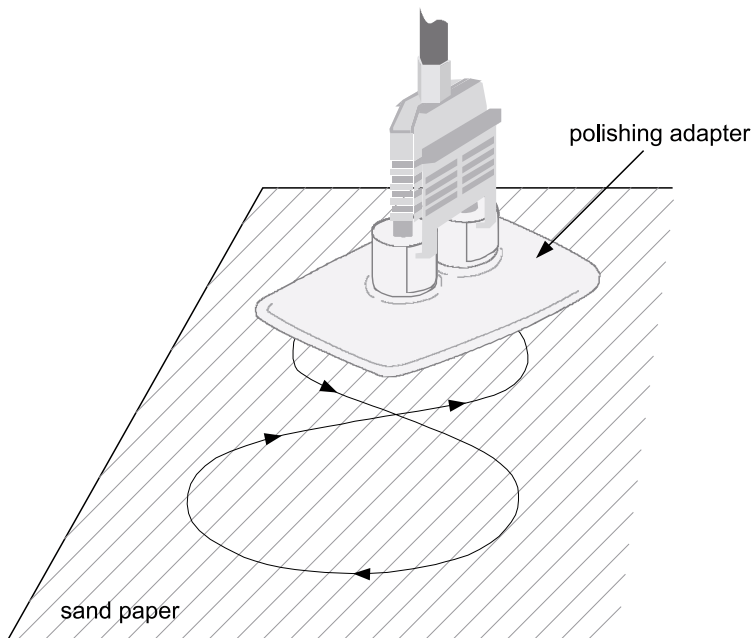
- ➔ Check whether the fibers are chipped.
 - Cover one fiber end on the fully assembled connector.
 - On the other end of the cable check which fiber is light or dark.



Polishing synthetic fibers

Procedure:

1. ➔ Place the duplex connector on the polishing adapter.
2. ➔ Surface-grind protruding fibers in 8-shaped movements using the sandpaper (600 grain).



3. ➔ Polish fibers in 8-shaped movements using the lap film (3 µm).
 - ➔ Synthetic fiber cable is fully patched.