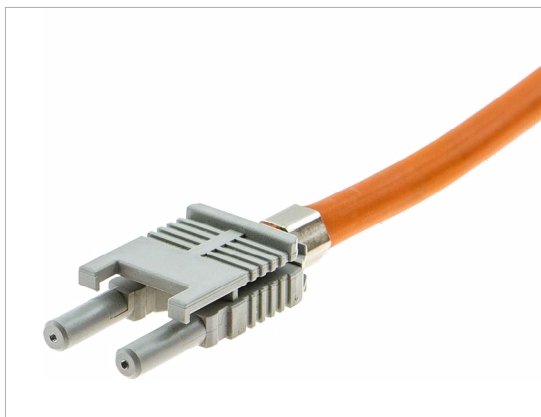


## Accessories



### Plastic Fiber Optic Cables POF-/PMMA Fibers up to 40 m Distance

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

- Minimum signal delay
- Cable length: Plastic Optical Fiber (POF or PMMA) max. 40 m

#### Assembled plastic fiber optic cables

Item	Item no.	Description
K-LWLP1 0,5m	00009624-02	POF Cable 0.5m duplex Plastic Optical Fiber; Fx21x Fastbus
K-LWLP1 1,0m	00009624-00	POF Cable 1.0m duplex Plastic Optical Fiber; Fx21x Fastbus
K-LWLP1 2,0m	00009624-01	POF Cable 2.0m duplex Plastic Optical Fiber; Fx21x Fastbus
K-LWLP1 3,0m	00009624-06	POF Cable 3.0m duplex Plastic Optical Fiber; Fx21x Fastbus
K-LWLP1 5,0m	00009624-04	POF Cable 5.0m duplex Plastic Optical Fiber; Fx21x Fastbus
K-LWLP1 7,0m	00009624-11	POF Cable 7.0m duplex Plastic Optical Fiber; Fx21x Fastbus
K-LWLP1 10,0m	00009624-03	POF Cable 10.0m duplex Plastic Optical Fiber; Fx21x Fastbus
K-LWLP1 15,0m	00009624-07	POF Cable 15.0m duplex Plastic Optical Fiber; Fx21x Fastbus
K-LWLP1 20,0m	00009624-05	POF Cable 20.0m duplex Plastic Optical Fiber; Fx21x Fastbus
K-LWLP1 30,0m	00009624-12	POF Cable 30.0m duplex Plastic Optical Fiber; Fx21x Fastbus
K-LWLP1 40,0m	00009624-15	POF Cable 40.0m duplex Plastic Optical Fiber; Fx21x Fastbus

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

#### LWLP1

##### Ambient conditions

Operating temperature	-30 to +70 °C
Storage temperature	-40 to +85 °C

##### Others

Bend radius	> 30 mm
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## Self-assembled plastic fiber optic cables

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

When using the cables of other manufacturers, ensure that they do not have any different specifications, e.g. attenuation or minimum bend radius.

Required material and equipment for assembling cables		
Item	Item no.	Description
LWLP1 connector	00009502-00	Connector for plastic fiber optic cable. 2-line
LWLP1 bush	00009514-00	Bush LWL Plastic per piece
LWLP polishing set	00009696-00	Polishing set for LWL Plastic (HFBR-4593/Hewlett Packard)
LWLP-WKZ1	00010126-00	Skinning tool for LWL Plastic Type RS
LWLP gripper	00009695-00	BNC-Crimpgripper (Pressmaster DCC 1113)

## Assembling cables

The following steps are required for cables for self assembly:

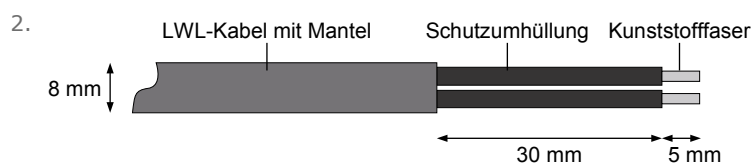
- Prepare cables
- Fit connectors
- Check connectors
- Polish plastic fiber

## Preparing the cable

### Procedure:

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

1. Strip jacket using a stripping knife.



Strip the synthetic fibers.

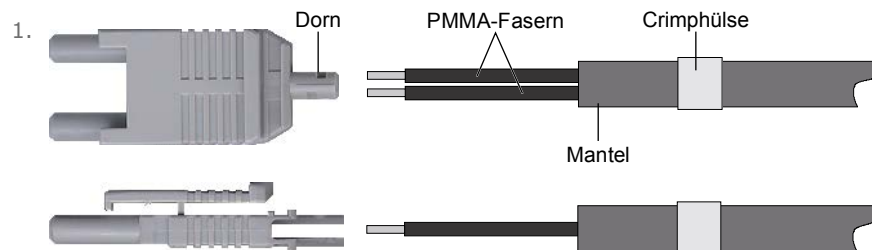
3. Slide a crimp sleeve over the jacket on both sides.

→ Cable is ready for the connector assembly.

# Accessories

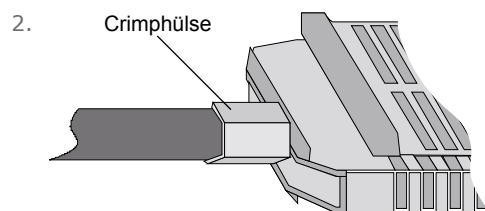
## Assemble connector

### Procedure:

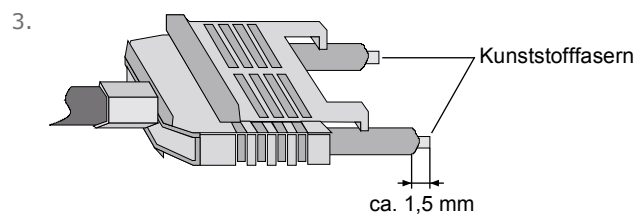


Insert individual wires into the connector socket.  
In so doing, slide cable jacket over the connector pin.

In order to ease plugging/unplugging on the module, two opposite surfaces of the hexagonal crimp ought to be parallel with the broad side of the connector socket.



Slide crimp sleeve over the pin and clamp with crimping pliers.



Trim protruding plastic fibers to approx. 1.5 mm.

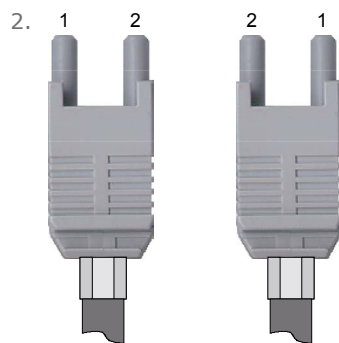
→ 1. Connector is assembled.

## Check connector

### Procedure:

- ▶ Check whether the fibers are chipped.

1. Cover a fiber end on the fully assembled connector.



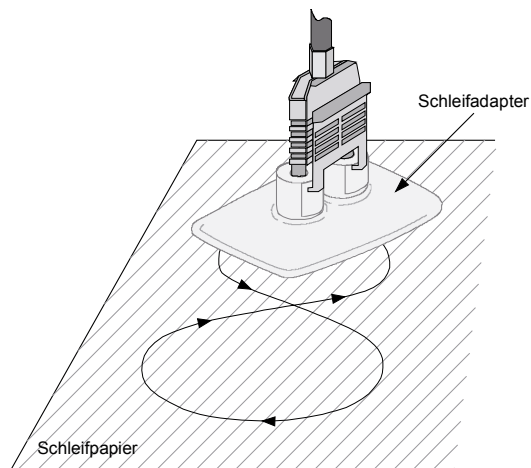
On the other end of the cable check which fiber is light or dark.

## Polish synthetic fibers

### Procedure:

1. Place the duplex connector on the polishing adapter.

- 2.



Surface-grind protruding fibers using the sandpaper (600 grain) in 8 movements.

3. Polish fibers using the lap film (3  $\mu\text{m}$ ) in figure-8 movements.

→ Synthetic fiber cable is fully patched.