Ratioplast
Electronics | OptoElectronics

Data sheet Fiber optic connector
HFBR connector

HFBR4501 connector for 1/2.2 mm POF

1 General

The FO connector style HFBR connector is optimized in particular for applications using standard 1 mm polymer optical fiber acc. IEC 60793-2-40 demanding a fast and easy cable assambly with high reliability, very good optical and mechanical characteristics. The connector is compatible with HFBR Versatile Link products.

2 Application

Due to the good optical features and the easy cable assembly, the HFBR connector is useable in several applications:

- optical networking
- industrial electronics
- power electronics

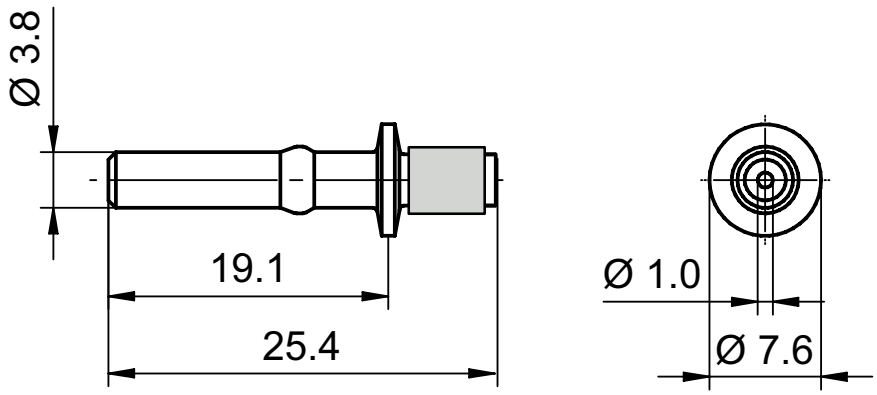
902SS001H4501 *902SS001H4511*

Pic. 1 *HFBR connector POF*

3 Ordering information

Type	Order number
HFBR POF connector blue	902SS001H4501
HFBR POF connector gray	902SS001H4511
Crimp sleeve for HFBR POF connector simplex	902SS001H4525

4 Drawing



Pic. 2 Drawing *HFBR connector*

HFBR connector for 1/2.2 mm POF

5. Cable assembly

Required tools for FO cable assembly of HFBR POF connector with 1/2.2mm POF cable:

Type	Order number
Crimping tool hexagonal	910CZ00100008
Fiber stripper	910AB00100001
Fiber stripper	910AZ00100PA1
Polishing disc	910PSH4501001
Polishing film, grain size 1000	910PB00100001
Polishing film, grain size 4000	910PB00140250

5.1 Fiber optic cable

- Remove app. 10 mm of outer jacket 2.2 mm by
- using the fiber stripper (Pic. 3)

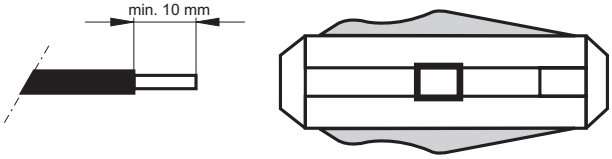


Bild 3 Fiber stripper

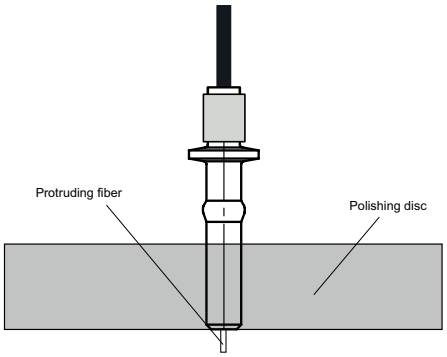
5.2 Crimping of 2.2mm jacket:

- Align the connector anchor (rear end of connector) with the hexagonal cavity, wrench size 4.95 mm of the crimping tool (910CZ00100008, Pic. 4) and squeeze the crimping tool handles until they release
- Alternative to jacket crimping, pasting of jacket is also possible simultaneously with fiber pasting.

Pic. 4 Crimping tool hexagonal for jacket crimping

5.3 Fiber end face processing:

- After crimping, insert connector into polishing disc (Pic. 5) and grind the protruding fiber by using the polish film, grain size 1000 placed on a smooth pad (e.g. glass plate). Press the polishing disc down on the polish film an grind the fiber until the connector is flush with the bottom of the disc
- Wipe the connector with a clean tissue. Best insertion loss results are achieved by wet grinding
- If the connector is not to be used immediately, cover the end with the dust cap.



Pic. 5 Polishing disc

HFBR connector for 1/2.2 mm POF

6 Technical data

Parameter	Condition	Min.	Typ.	Max.	Unit
Material	Ferrule Crimp sleeve		Plastic Metal		
Protection class	IP20				
Thermal conditions	Storage and recommended operation temperature Installation temperature	-40 0	-	85 70	°C
Retention force	Cable to connector	8.5	22	-	N
Insertion force	Plug into recepactle TOTX / -RX Modul	-	8	30	N
Retention force	Plug out of receptacle TOTX / -RX Modul 25 °C -40 bis 80 °C	 7 3	 8 -	 - -	N
Insertion loss	1mm POF, polished fiber end faces max. 0 to 70 °C; 25 °C	0.7	1.5	2.8	dB