

F-SMA clamp connector for Plastic Optical Fiber 1/2.2 mm, simplex

1 General

The FO connector style F-SMA is optimized in particular for applications using standard 1 mm polymer optical fiber acc. IEC 60793-2-40, demanding a fast and easy cable assembly with high reliability, very good optical and mechanical characteristics. The clamp connector can be reused and connected to the POF cable without special tools and is based on IEC 61754-22.



Pic. 1 & 2 F-SMA clamp connector with knurled / hexagonal nut

2 Ordering information

F-SMA clamp connector for 1 mm POF with 1/2.2 mm jacket



Pic. 3 & 4 F-SMA clamp connector with knurled / hexagonal nut and anchor for bend protection boot

Specification

Part number

F-SMA hexagonal nut:

Without boot	902SS001SMK01
Boot (black)	902SS001SMK12
Boot (red)	902SS001SMK14

F-SMA hexagonal nut:

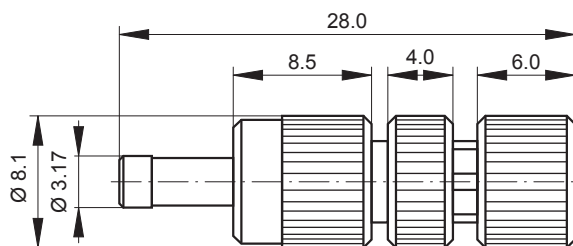
Without boot	902SS001SMK02
Boot (black)	902SS001SMK11
Boot (red)	902SS001SMK13

4 Application

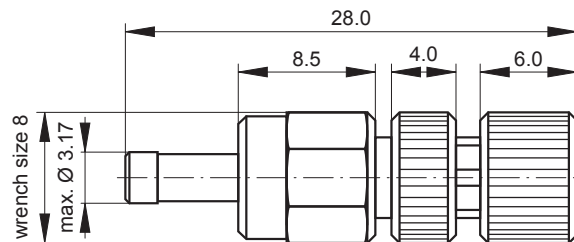
Due to the good optical features and the easy cable assembly, the F-SMA clamp connector is useable in several applications:

- optical networking
- Industrial electronics
- Power electronics
- Consumer electronics

3 Technical drawing



Pic. 5 F-SMA clamp connector with knurled nut



Pic. 6 F-SMA clamp connector with hexagonal nut

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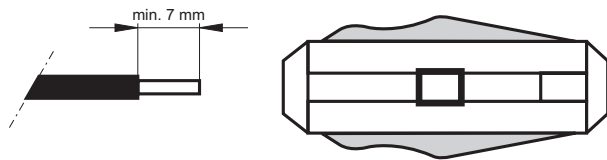
5. Cable assembly _____

Required tools for cable assembly of F-SMA connector with 1/2.2mm POF cable

Specification	Part number
Fiber stripper	910AB00100001
Polishing disc	910PSSMA00001
Polishing film, grain size 1000	910PB00100001

5.1 FO cable:

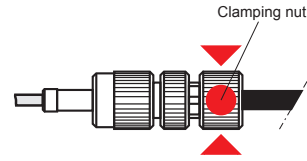
- Remove min. 7 mm of outer jacket 2.2 mm by using the fiber stripper



Pic. 7 Fiber stripper

5.2 Clamping of POF cable

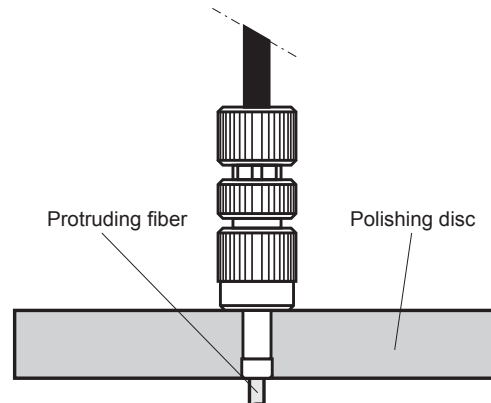
- Ensure that the rear clamping nut is not fixed on the thread.
- For models with boot, push at first the bend protection boot over the cable.
- Insert the dismantled POF*-cable into the connector up to the stop. The fiber should protrude min. 1 mm out of the connector tip.
- Due to tightening the rear clamping nut (by hand as strong as possible) the POF cable is fixed within the connector (Pic. 8).



Pic. 8 Clamping nut

5.3 End face processing

- Insert the connector into polishing disc (Pic. 9) and grind the protruding fiber by using the polishing film, grain size 1000 placed on a smooth pad (e.g. glass plate). Press the polishing disc down on the polishing film and 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. 9 Polishing disc with connector guidance

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6 Technical data_____

Parameter	Condition	Value	Unit
Material	Ferrule, Retainer, Nut Anti-kink sleeve Dust cap	German silver TPE HD-PE	
Insertion loss		≤ 2.5	dB
Retention force cable to connector	Cable clamping	≥ 40	N
Temperature range	Storage and operation	-40 to +85	°C
Mating cycles		≥ 500	Cycles
Protection class	IP20		

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