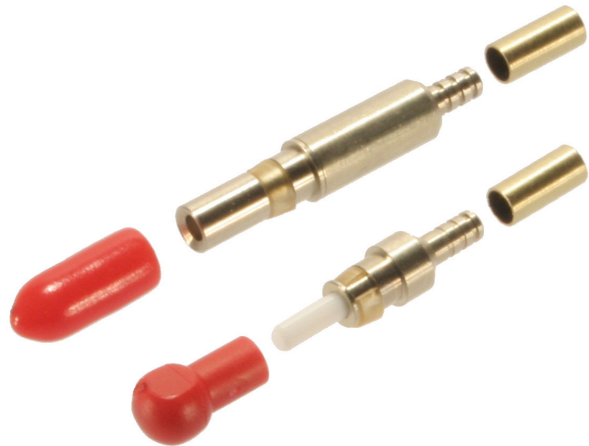


Male / female contact for 50 - 62.5/125µm GI-Fiber

1 General

The FO contacts CECC 78001-801 and DIN 41626 part 3 are especially optimised for applications with 50/125µm and 62.5/125µm GI-fiber in combination with connectors DIN EN 60603-2, type M demanding a fast and easy cable assembly with high reliability, very good optical and mechanical characteristics. For hybrid applications, demanding additional electrical power transmission, appropriate contacts are available.

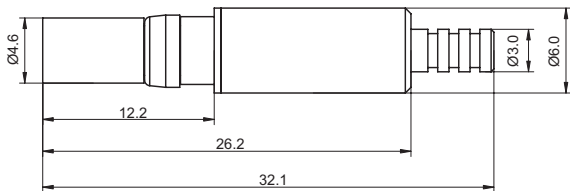


Pic. 3 DIN 41626 female / male contact

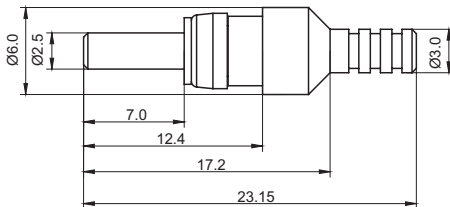
2 Applications

- optical network
- industry electronics
- power electronics

3 Technical drawings



Pic. 1 Female contact



Pic. 2 Male contact

4 Technical data

Parameter	Condition	Value
Material	body clip	metal plastic
Suitable fiber	GI-fiber	50/125µm 62.5/125µm
Mating cycles	Insert DIN EN 60603-2	500
Insertion loss	50/125µm GI 62.5/125µm GI	typ. < 0.5 dB
Thermal properties	during operation storage	-40 .. +85°C -40 .. +85°C

5 Ordering information

Specification	Part number
Female contact	902DI125BU002
Male contact	902DI125ST002



Male / female contact for 50 - 62.5/125µm GI-Fiber

6 Termination _____

Recommended termination tools

Specification	Part number
Cutter	910CM00100001
Kevlar cutter	910KS00100001
Stripping tool 0.50mm	910AB00150001
Stripping tool 0.18mm	910AB00118001
Epoxy mix	9102KKFERTIG1
One-way syringe with needle	910SPRITZ0001
Crimping tool hexagonal	910CZ00100002
Heat oven	910A000100001
Cleaving tool	910FRW0100001
Polishing disc	910PSDIN00001
Polishing plate	910PP00100001
Polishing film 5µm	910PB00105001
Polishing film 0.3µm	910PB00100301
Inspection microscope	910MIKRO10002
Microscope adaptor	910MIADAST002

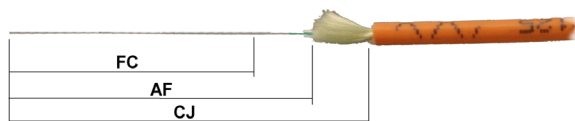
6.1 FO cable _____

Recommended tools:

- Cutter (W1)
- Kevlar cutter (W2)
- Stripping tool 0.50mm (W3)
- Stripping tool 0.18mm (W4)

Working steps:

- cut cable to length
- strip the cable according to the dimensions in chart 3 (W1)
- cut down the kevlar / aramid yarn (W2)
- remove buffer and secondary coating with stripping tool 0.5mm (W3)
- remove primary coating with stripping tool 0.18mm (W4)
- wipe off possible residual coating or gel



Pic. 4 Stripping dimensions

Stripping dimensions chart 3		
Specification	female contact	male contact
CJ - cable jacket	40mm	40mm
AF - Kevlar secondary coating	34mm	22mm
FC - coating	22mm	28mm

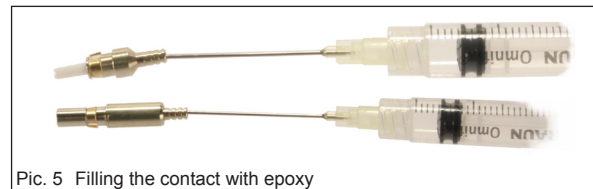
6.2 Insert _____

Recommended tools:

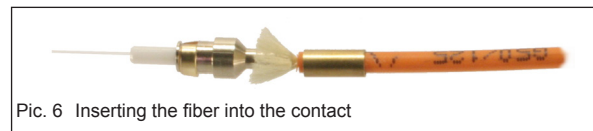
- Epoxy mix (W5)
- One-way syringe with needle (W6)
- Crimping tool hexagonal (W7)
- Heat oven (W8)

Working steps:

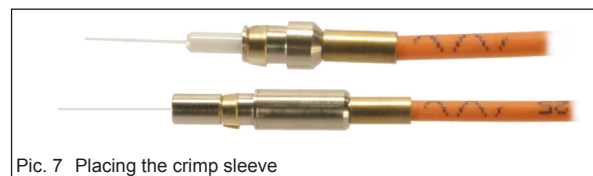
- mix the two component epoxy and load it into the syringe
- fill the contact from the cable side with adhesive (Pic. 5) (W6)
- slip the crimp sleeve on the cable
- insert the stripped fiber through the contact until mechanical stop is reached; fiber should protrude the connector top by approx. 20mm (Pic. 6)
- slip back the crimp sleeve over the kevlar/ aramid yarn to end stop upon the contact (Pic. 7)



Pic. 5 Filling the contact with epoxy



Pic. 6 Inserting the fiber into the contact



Pic. 7 Placing the crimp sleeve

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- place the contact with the crimp sleeve into the cavity size 3.3mm (Pic. 8) (W7)
- pretension the crimping tool, adjust the contact and close the tool until it unlocks audible



Pic. 8 Crimping

6.3 Epoxy mix curing

The epoxy compound has a pot life of approximately 90 minutes at ambient room temperature. An elevated temperature will advance the initiation of the chemical curing reaction of the epoxy compound. Suggested minimum temperatures and times are listed in the chart below. Further treatment of the contacts should be accomplished only after the epoxy compound has cured completely.

Temperature	Time
20°C	12 h
80°C	30min
100°C	10min
120°C	5min
150°C	1min

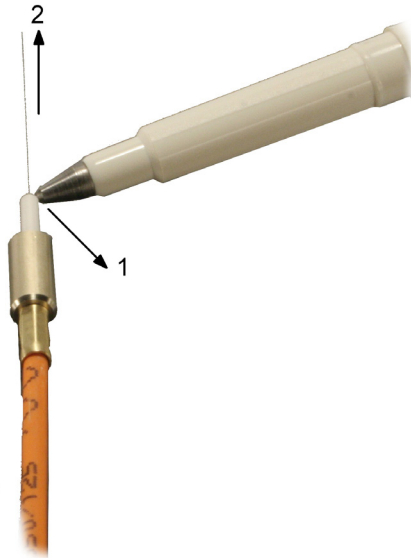
In order to avoid breakage of the fiber, please insert the crimped contacts very carefully into the heat oven cavities. Remove female contact ferrule sleeve before epoxy mix curing (Pic. 9).



Pic. 9 Disassembled ferrule sleeve DIN 41626 female contact

6.4 Cleaving

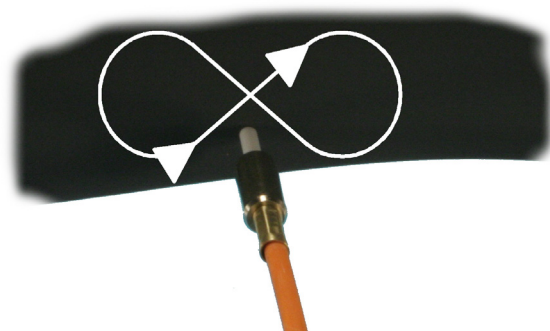
After curing remove the contact from the oven and cleave the protruding fiber at least 1mm to the end of the ferrule with the cleaving tool (figure 1) and remove the protruding fiber by breaking and pulling it lightly (figure 2) (Pic. 10)



Pic. 10 Fiber cleaving and removing

6.5 Fiber grinding

Grind off manually and carefully the protruding fiber end with polishing paper 5µm and with low pressure (Pic. 11). Do not use an underlayment.



Pic. 11 Fiber grinding



Male / female contact for 50 - 62.5/125µm GI-Fiber

6.4 Fiber endface polishing _____

- Put the contact into polishing disc (Pic. 12) and polish it with polishing paper 0.3µm on hard base (glass plate) for flat polish.
- Check the quality of the fiber surface with the microscope.
- Please repeat if you see scratches in the core area.
- After polishing please wipe off the residuals of polishing using a soft wipe.
- Screw on the flange of the female contact and preserve the fiber end face against dust and soiling with a protection cap.



Pic. 12 Polishing disc with male / female contact

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