

## F-ST connector for glass optical fiber cable

### 1 General

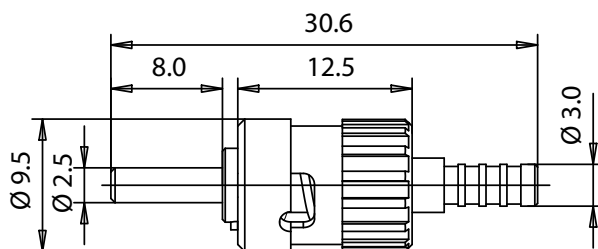
The FO connector style F-ST is optimized in particular for applications with glass optical fiber, demanding a fast and easy cable assembly with high reliability, very good optical and mechanical characteristics. The F-ST connector complies with IEC 61754-2 standard.

### 2 Application

Due to the very good optical characteristics and easy termination technique, these connectors can be used indifferent applications:

- Optical networks
- Industry electronics
- Power electronics
- Consumer electronics

### 3 Dimensioned drawing



Pic. 1 F-ST connector



Pic. 2 F-ST connector with plastic nut



Pic. 3 F-ST connector with metal nut

### 4 Ordering information

F-ST connector for glass optical fiber, zirconia ferrule, crimp sleeve and boot

#### F-ST with plastic nut

Singlemode type	Part number
Boot for 3.0 mm cable	902SS125ST090
Multimode type	Part number
Boot for 3.0 mm cable	902SS125ST001
Boot for 2.2 mm cable	902SS125ST003

#### F-ST with metal nut

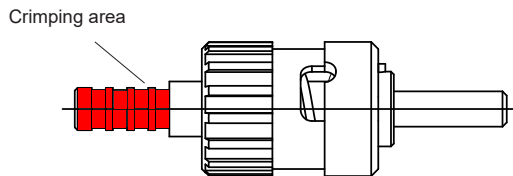
Singlemode type	Part number
Boot for 3.0 mm cable	902SS125ST105
Multimode type	Part number
Boot for 3.0 mm cable	902SS125ST104
Boot for 2.2 mm cable	902SS125ST103

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### 5 Cable assembly

Required tools for termination of F-ST connector with 50/62.5/125µm fiber optic cable (Pic. 4).

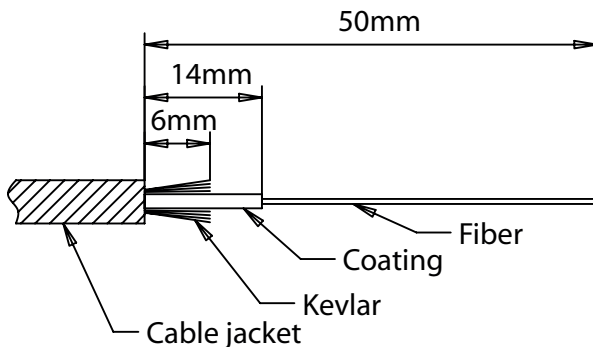
Crimping tool hexagonal	910CZ00100002
Fiber stripper 0.18mm	910AB00118001
Fiber stripper 0.3mm	910AB00130001
Cleaving tool	910FRW0100001
Epoxy mix	9102KKFERTIG1
One-way syringe with needle	910SPRITZ0001
Polishing film 5µm	910PB00105001
Polishing film 0.3µm	910PB00100301
Heat oven	910AO00100001
Polishing disc	910PS0ST00001
Microscope 100x	910MIKRO10002
Adapter	910MIADAST002



Pic. 4 Crimping area

#### 5.1 FO cable

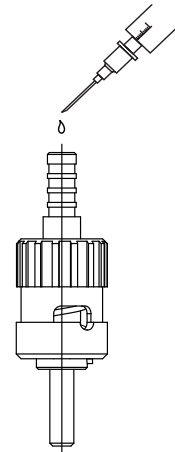
Strip the cable according to the measures mentioned below (Pic. 5) at minimum 50 mm, then cut down the aramid yarn/kevlar to 6 mm and strip the fiber. First remove the 0.5 mm coating with stripping tool 0.3 mm, then remove the 0.25 coating with the fiber stripper 0.18. Clean off gel residuals with a wipe.



Pic. 5 Stripping dimensions

#### 5.2 Pasting

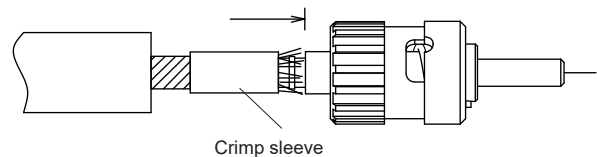
Compound the epoxy mix and fill it into the one-way syringe. Then fill the F-ST connector from the cable side with two drops (Ø 2mm) (Pic. 6).



Pic. 6 Filling F-ST connector with adhesive

#### 5.3 Strain relief

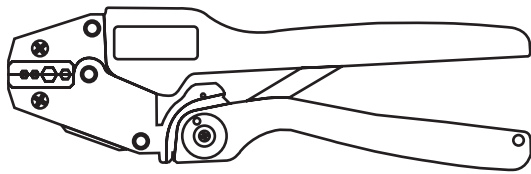
Push the crimp sleeve and the bend protection boot upon the cable. After that push the stripped fiber and the cable into the connector up to the end stop. The fiber has to stick out of the ferrule. Afterwards push the crimp sleeve over the kevlar/aramid yarn to the end stop upon the connector (Pic. 7).



Pic. 7 F-ST connector with crimp sleeve and boot

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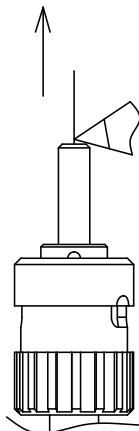
Crimp the sleeve with the allen crimping tool (spanner size 3.3) over the total length and push the bend protection boot onto the sleeve.



Pic. 8 Crimping tool hexagonal

Have the epoxy in the F-ST contact cured in the heat oven (curing time: min. 1 hour at 70°).

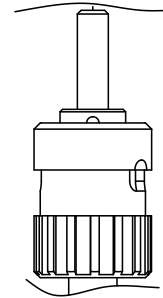
After curing take the connector out off the oven and cleave the overcoming fiber min. 1mm to the end of the ferrule with the cleaving tool (Pic. 9) and break it pulling lightly.



Pic. 9 Cleaving fiber

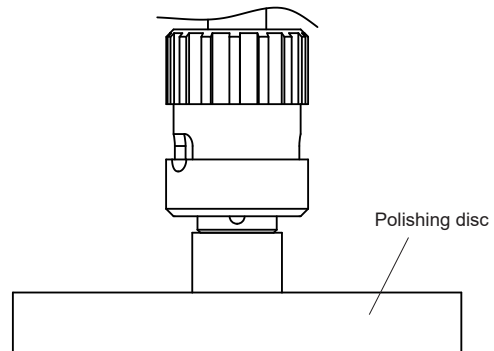
### 5.4 Fiber endface processing

Grind off carefully the protruding fiber end with polishing film 5 µm with low pressure (Pic. 10).



Pic. 10 Fiber grinding

Insert the F-ST connector into the polishing disc (Pic. 11) and polish it with polishing film 0.3 µm on hard base (glass plate) for flat polish.



Pic. 11 F-ST connector with polishing disc

- Check the quality of the fiber surface with the microscope
- Repeat polishing if the surface is not free of scratches in the core area.
- After polishing please wipe off the polishing residuals

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