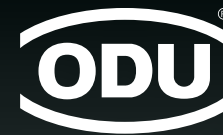


ODU MINI-SNAP[®] SERIES F

Assembly instructions

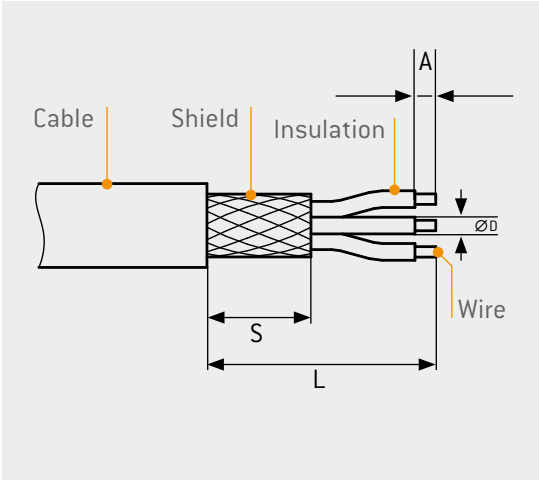


ASSEMBLY INSTRUCTIONS

General notes	<u>03</u>
Series F straight plug and in-line receptacle	<u>05</u>
Series F right-angled plug	<u>09</u>
Series F Super Shorty	<u>14</u>

General notes

Recommended stripping length



Strand stripping length A in mm

SOLDER	
AWG	Stripping length
12	4.5 + ØD
14 18 20	3.3 + ØD
22 26	2.8 + ØD
28	2.3 + ØD

CRIMP	
AWG	Stripping length
14-18	6.7
18-20	5.0
20-24	4.7
22-26	4.7
28-32	4.7

Tolerances (in mm)

Length	Cable sheath tolerance L
to 20	±1.0
21 to 50	±2.0
Length	Tolerance strand A
bis 5	±0.5
6 to 10	±1.0
Length	Tolerance braided shield S
to 10	±1.0

Cable stripping length L in mm

	Size	Straight		Right-angled	
		Solder	Crimp	Solder	Crimp
IP50	0	6	8	15	14
	1	10	14	13	16
	1.5	12	16	25	25
	2	11	15	22	30
	3	14	18	30	30
IP68	0	6	8	18	20
	1	9	14	25	30
	1.5	12	16	30	30
	2	10	15	27	30
	3	14	18	30	40
Super Shorty	0	15	15		
	1	12	16		
	1.5	13	16		
	2	11	16		
	3	14	12		

Shield stripping length S in mm

Series F	
Size	Stripping length
0	4.0
1	4.0
1.5	4.0
2	4.0
3	5.0
Super shorty (all sizes)	8.0

Tightening torque moment in Nm

Recommended tightening torques are depending on the cable strength.

Size	0	1	1.5	2	3
Back nut	0.6 ±0.1	1.0 ±0.2	1.5 ±0.3	2.0 ±0.4	3.5 ±0.7
Back-screw (right-angled plug)	0.3 ±0.1	0.4 ±0.1	0.6 ±0.1	0.9 ±0.3	1.3 ±0.4
Shielding sleeve (Super Shorty)	0.6 ±0.1	1.0 ±0.2	1.5 ±0.3	2.0 ±0.4	3.5 ±0.7

Receptacle thread	Tightening torque moment
M9 x 0.5	1.3 ± 0.3
M12 x 1	2.5 ± 0.5
M14 x 1	3.0 ± 0.6
M15 x 1	4.0 ± 0.8
M16 x 1	4.5 ± 0.9
M18 x 1	6.0 ± 1.2
M20 x 1	6.5 ± 1.3

General notes

ATTENTION!

Please note that for some connectors the scope of delivery may differ from the illustration in these general installation instructions. Therefore, these installation instructions must always be used together with the drawing of the respective plug connector. Deviating information on the drawing always has priority. Click here for the [Product-Finder](#)

Recommended glue for the back nut

Loctite® 243™, ODU part number 890.204.000.030.031

Recommended cleaning agent: Isopropyl alcohol

Tools / Accessories

ODU open-ended spanner and crimping tools see
ODU MINI-SNAP® series F catalog section accessories and tools.



Soldering



Glueing



Spanner wrench



Cutting



Potting

For assembly of crimp contacts, please follow the [crimp-instruction!](#)

All the connectors shown here are connectors without breaking capacity (COC) according to IEC 61984:2008 (VDE 0627:2009-11).“

Safety instructions

(For applications which do not run within the safety extra-low voltage (SELV)).

According to IEC 60364-4-41:2005 + A1:2017 (DIN VDE 0100-410:2018-10), two independent protective measures must be combined to create appropriate safety precautions against electric shock: one basic protective measure and one fault protective measure.

ATTENTION!

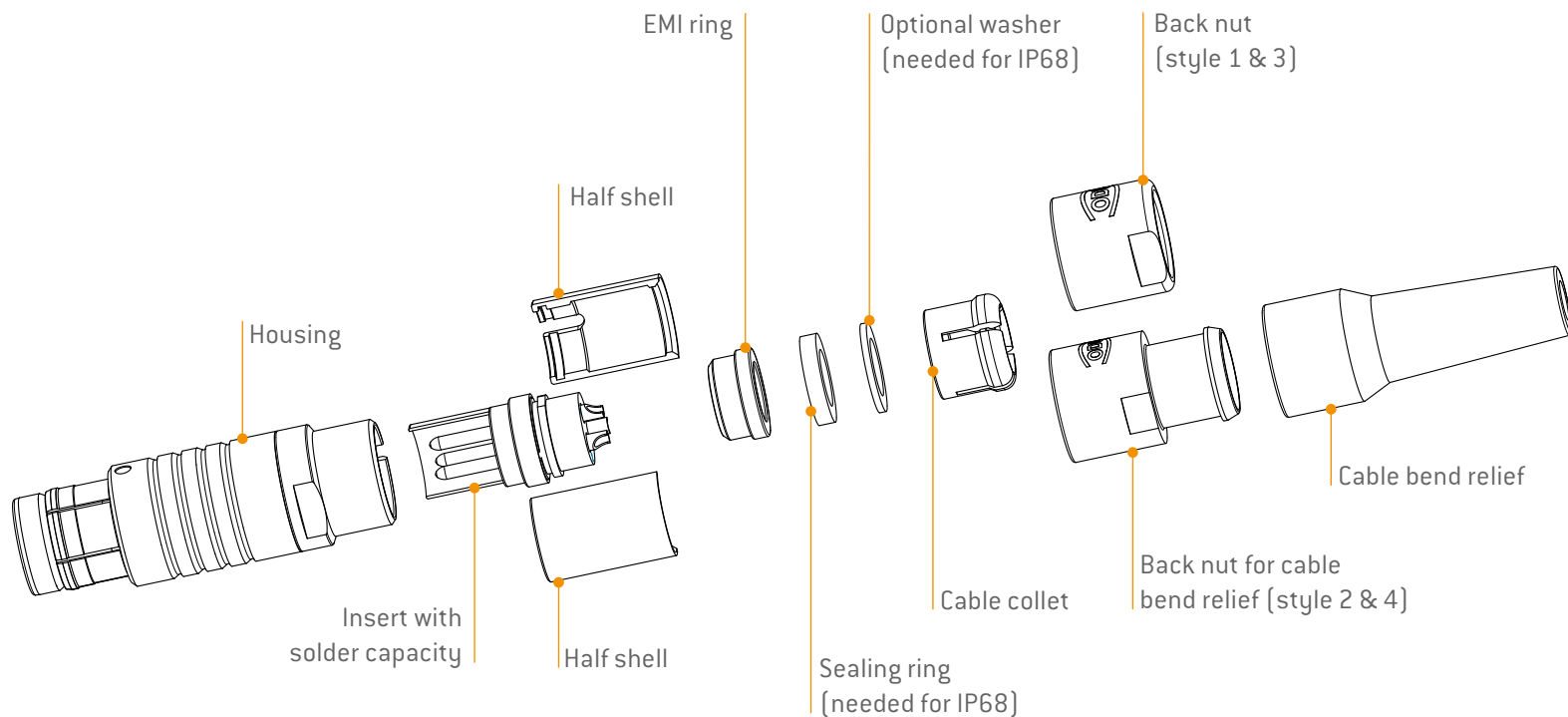
For voltages > 50 V AC and > 75 V DC, an additional protective measure (fault protective measure) to the basic insulation (basic protective measure) given by our connector is required according to IEC 60364-4-41:2005 + A1:2017 (DIN VDE 0100-410:2018-10). The standard describes in more detail which protective measures are suitable and permitted.

In this case the following must be observed for our connectors:

- The live side must be the socket-insert side.
- It is mandatory to glue the back nut with the recommended adhesive.

Overview of series F

straight plug and inline-receptacle

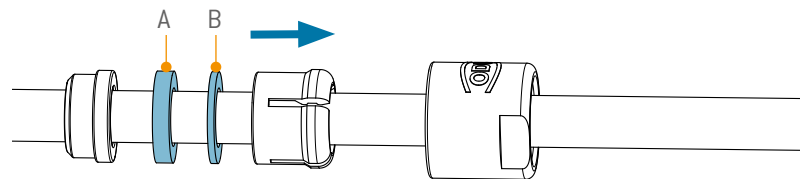


Assembly of series F

straight plug and inline-receptacle

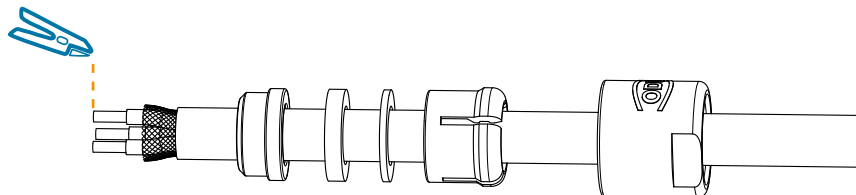
Step 1

- Slide cable bend relief (needed for style 2 & 4), back nut, cable collet, washer (needed for IP68) (B), sealing ring (needed for IP68) (A) and EMI ring over the cable.



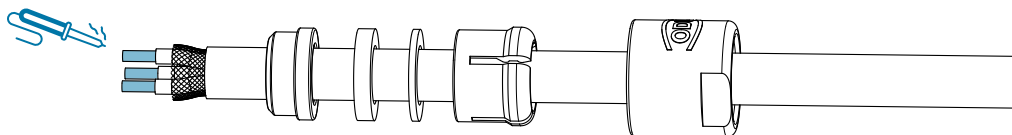
Step 2

- Strip cable and wires according to reference table ([see page 03](#)).



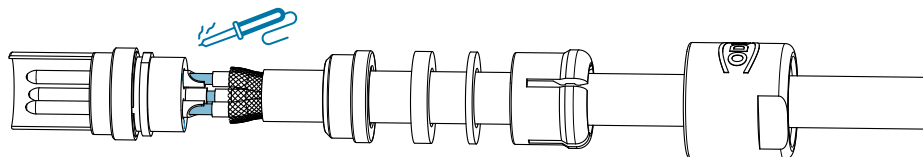
Step 3

- Pre-tin **strands**.



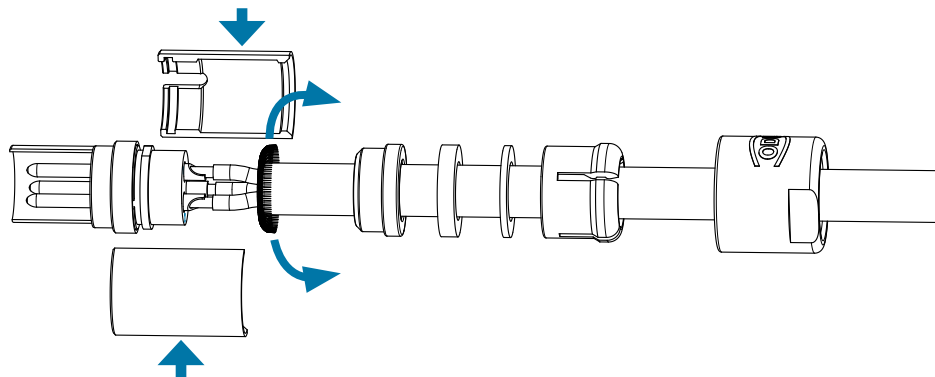
Step 4

- Solder the **wires** according to contact arrangement.



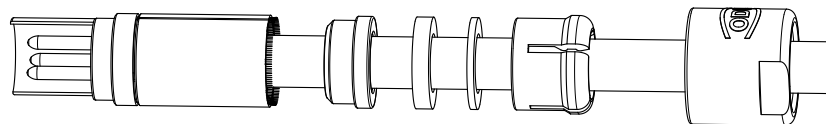
Step 5

- Bend cable shield outwards, assemble half shells.



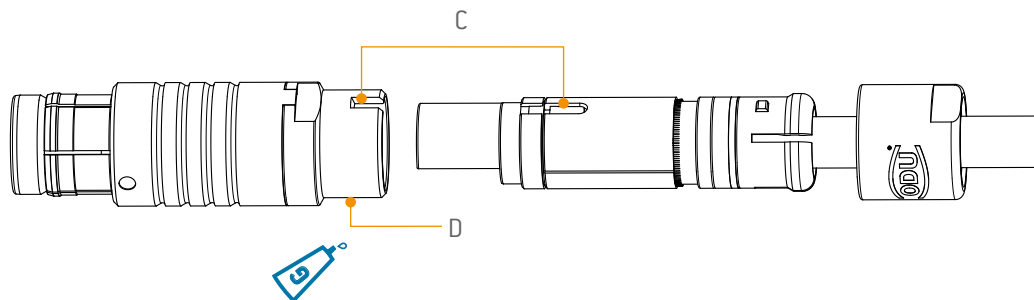
Step 6

- Slide the EMI ring, sealing ring, washer and the cable collet against the half-shells and clamp the shield against it.



Step 7

- Insert the complete assembly into the connector housing while respecting the **guidings** [C]. If necessary, secure **thread** [D] with adhesive [\[see page 04\]](#).



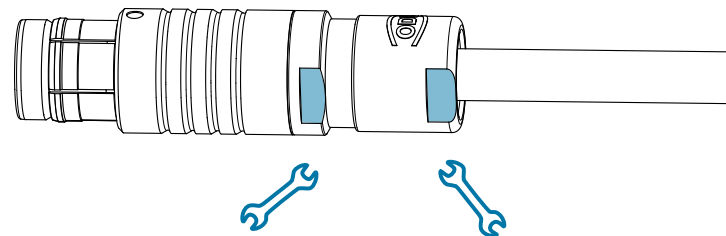
Step 8

- Screw back nut on the assembled plug, counterhold by means of the **spanner** and hold against with ODU spanner wrench.

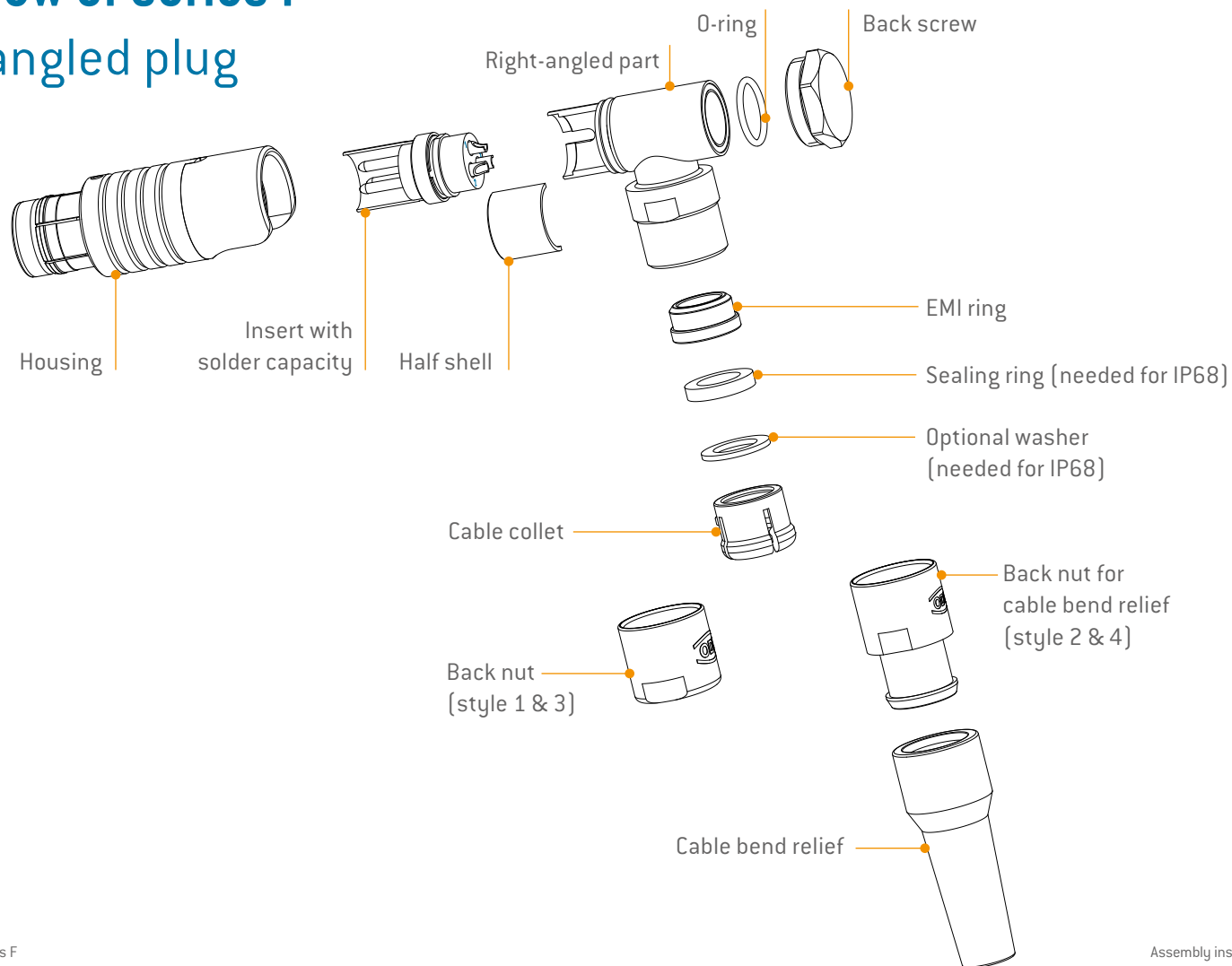
ATTENTION!

Consider tightening torque [\[see page 03\]](#).

The assembly is finished.



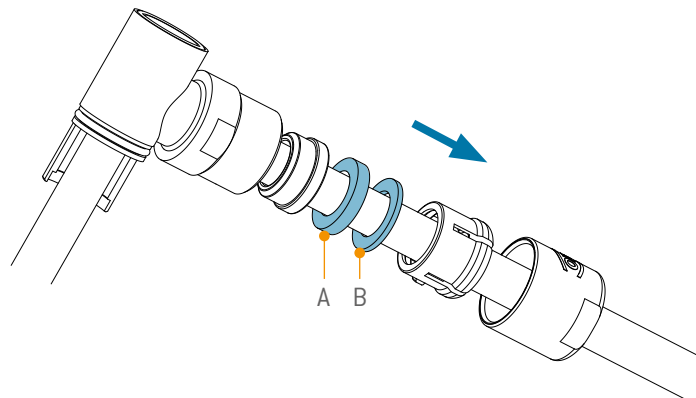
Overview of series F right-angled plug



Assembly of series F right-angled plug

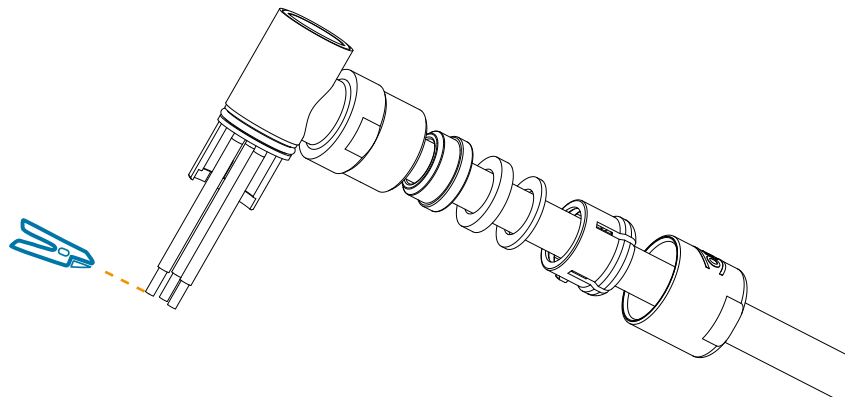
Step 1

- Slide cable bend relief (needed für style 2 & 4), back nut, cable collet, washer (needed for IP68) [B], sealing ring (needed for IP68) [A] and EMI ring over the cable.



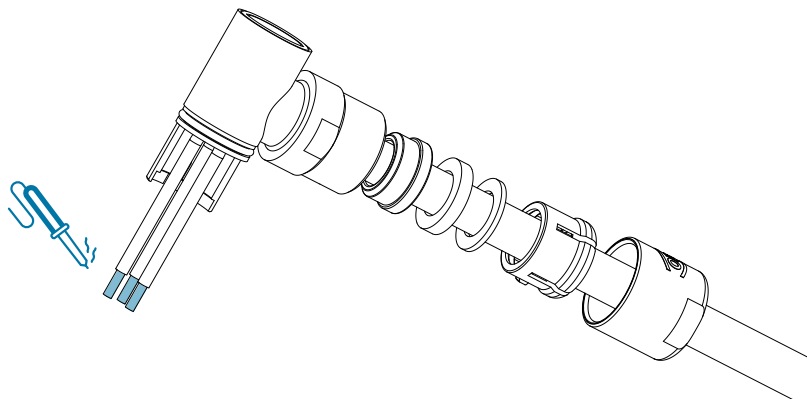
Step 2

- Strip cable and wires according to reference table ([see page 03](#)).



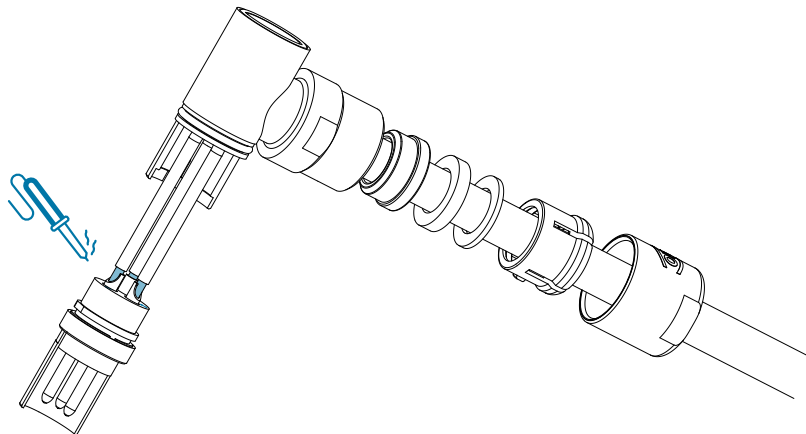
Step 3

- Pre-tin **strands**.



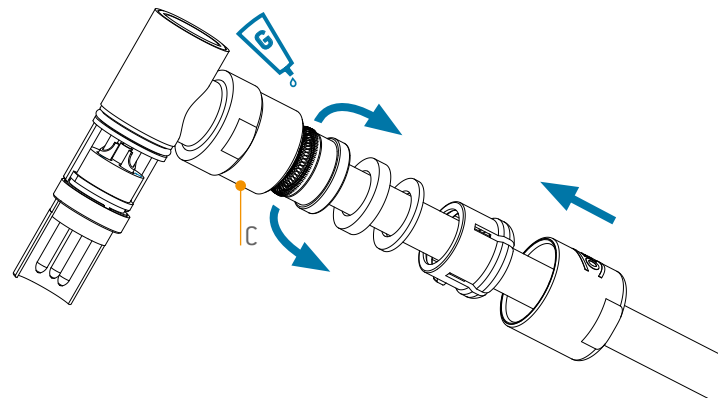
Step 4

- Solder the **wires** according to contact arrangement.



Step 5

- Bend cable shield outwards, place half-shells and right-angled part over the insulator. If necessary, secure **thread** [C] with adhesive ([see page 04](#)).

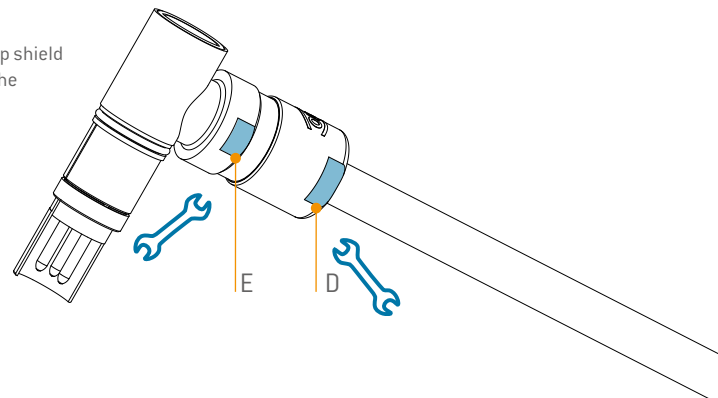


Step 6

- Slide EMI ring, sealing ring, washer and cable collet against the right-angled part, and clamp shield between EMI ring and right-angled part. Screw the **back nut** [D], counterhold by means of the **spanner** at [E] and tighten it with ODU spanner wrench.

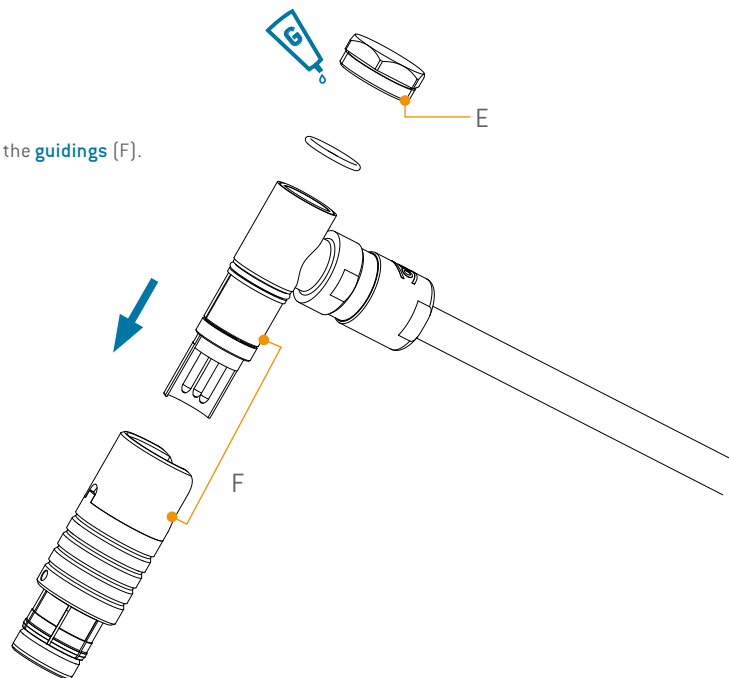
ATTENTION!

Consider tightening torque ([see page 03](#)).



Step 7

- Insert the complete assembly into the connector housing while respecting the **guidings** (F).
If necessary, secure **thread** (E) with adhesive ([see page 04](#)).



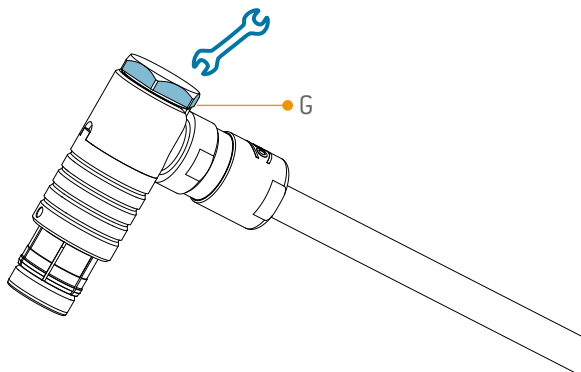
Step 8

- Mount back screw on the assembled plug and counterhold by means of the **spanner** at (G) with ODU spanner wrench.

ATTENTION!

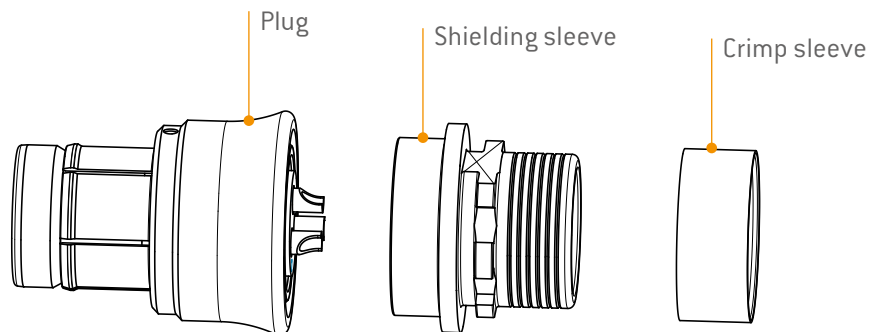
Consider tightening torque ([see page 03](#)).

The assembly is finished.



Overview of series F

Super Shorty

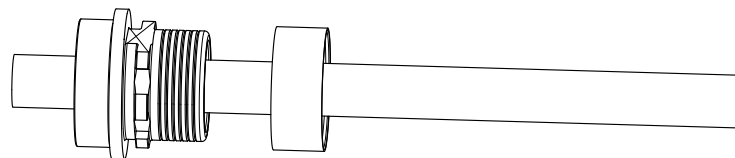


Assembly of series F

Super Shorty

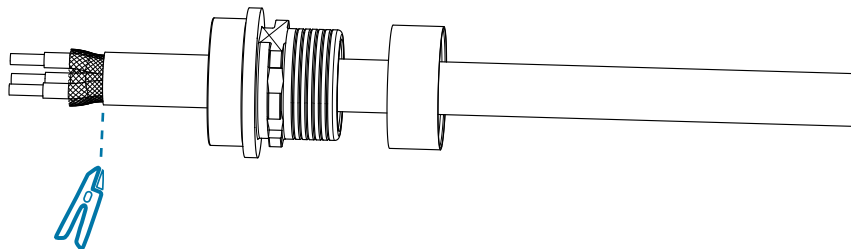
Step 1

- Slide crimp sleeve and shielding sleeve (and possibly shrink tube) over the cable. The crimp sleeve is not needed if a metal band is used for fastening the shield to the shielding sleeve.



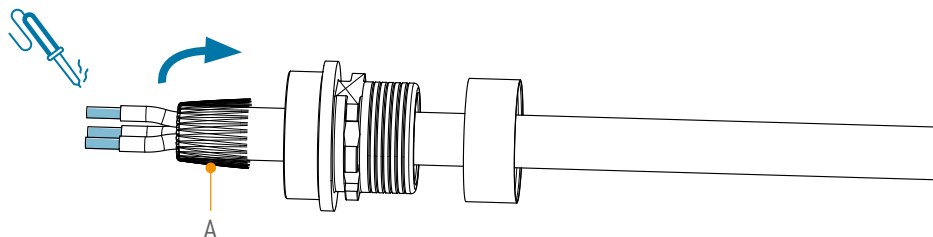
Step 2

- Strip cable and wires according to reference table ([see page 03](#)).



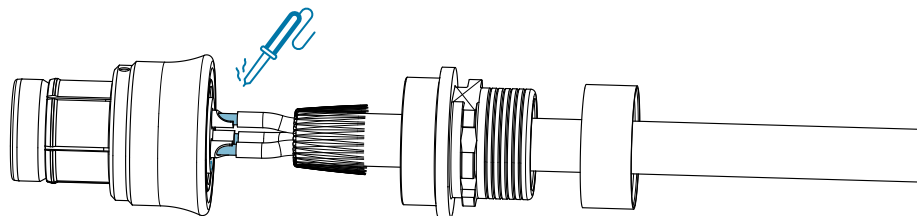
Step 3

- Fold back the **shield** (A) and, if necessary, use fastening tape to fasten it temporarily to the cable jacket. Pre-tin **strands**.



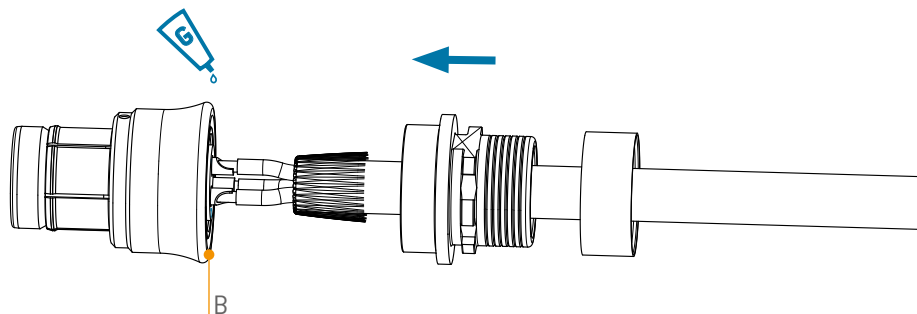
Step 4

- Solder the **wires** according to contact arrangement..



Step 5

- Secure **thread** [B] with adhesive ([see page 04](#)).

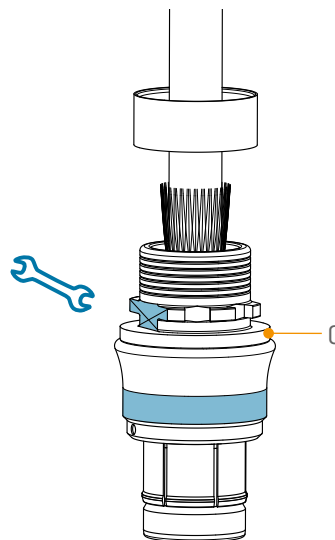


Step 6

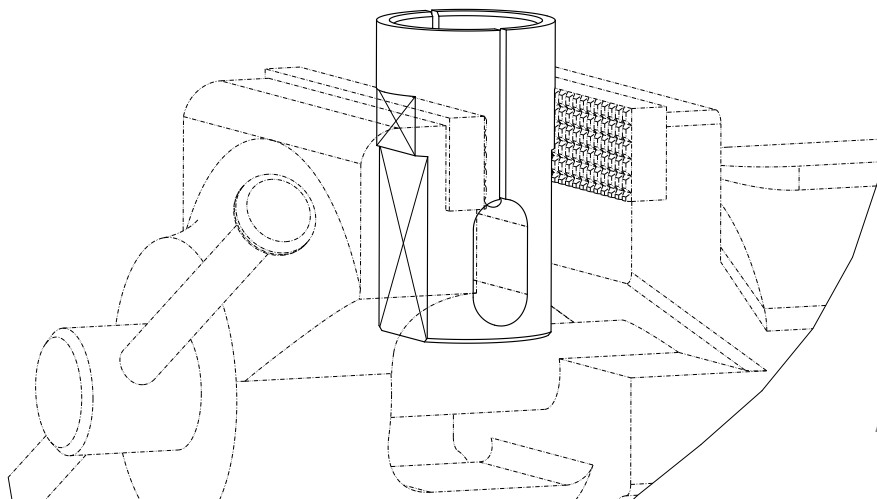
- Screw **shielding sleeve** [C] flush onto the assembled plug, counterhold by means of the ODU assembly tool and tighten with the ODU spanner wrench.

ATTENTION!

Consider tightening torque ([see page 03](#)).

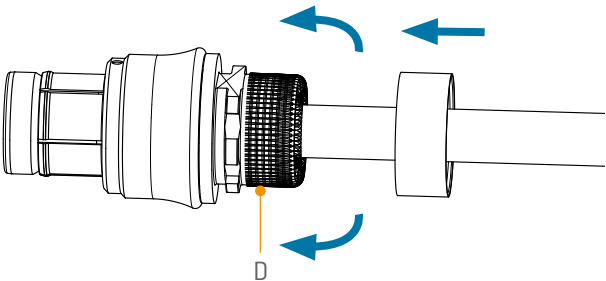


Assembly tools Super Shorty	
Size	Order number
0	080.000.076.631.100
1	080.000.076.631.101
1.5	080.000.076.631.10A
2	080.000.076.631.102
3	080.000.076.631.103



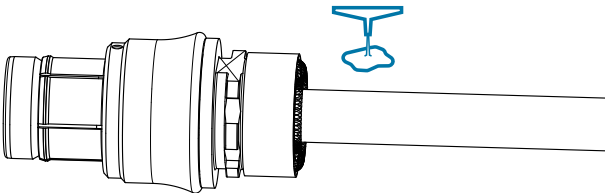
Step 7

► Remove the fastening tape and fold the **shield braid** [D] onto the shielding sleeve.



Step 8

► First fasten the shield braid to the shielding sleeve by means of crimping or by using a metal band. Afterwards pour potting compound into the termination area.



To connect the shielding with the shielding sleeve, using a crimp sleeve:

Crimp insert	
Size	Order number
0	080.000.026.700.000
1	080.000.026.701.000
1.5	080.000.026.715.000
2	080.000.026.702.000
3	080.000.026.703.000

Crimptong	
Size	Order number
0 - 3	080.000.026.000.000

To connect the shielding with the shielding sleeve, using a Band-It band:

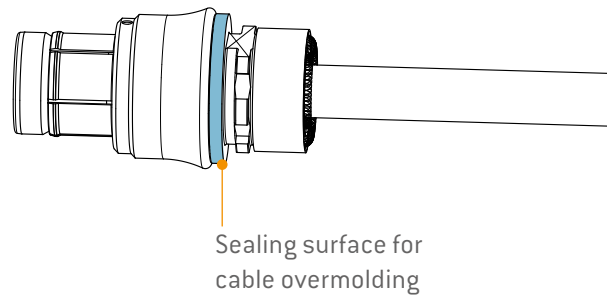
Band-It tool	
Size	Order number
0 - 3	080.000.058.000.000

Tie-Dex Micro Band	
Size	Order number
0 - 3	921.000.004.000.248

Step 9

- Bend relief: This can be implemented by means of overmolding or by using a shrink tube

The assembly is finished.





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All dimensions are in mm.

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