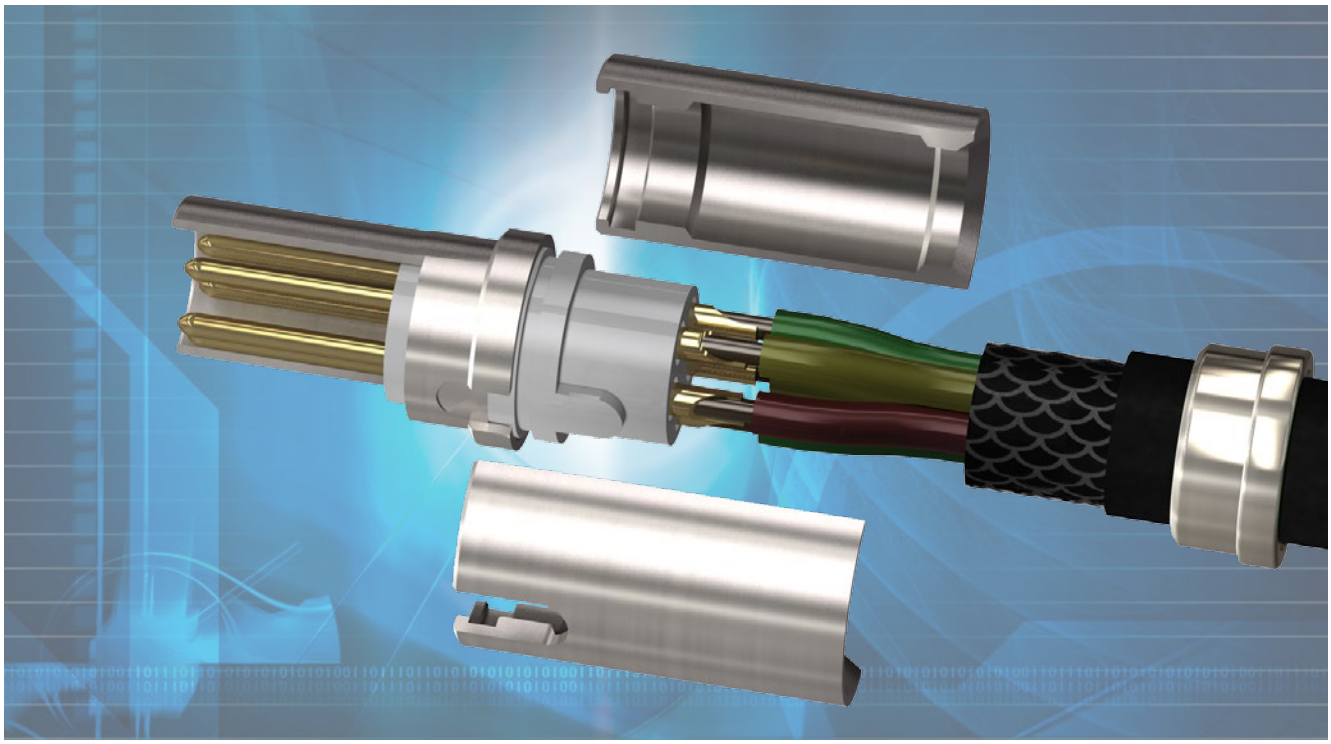
Assembly Instructions

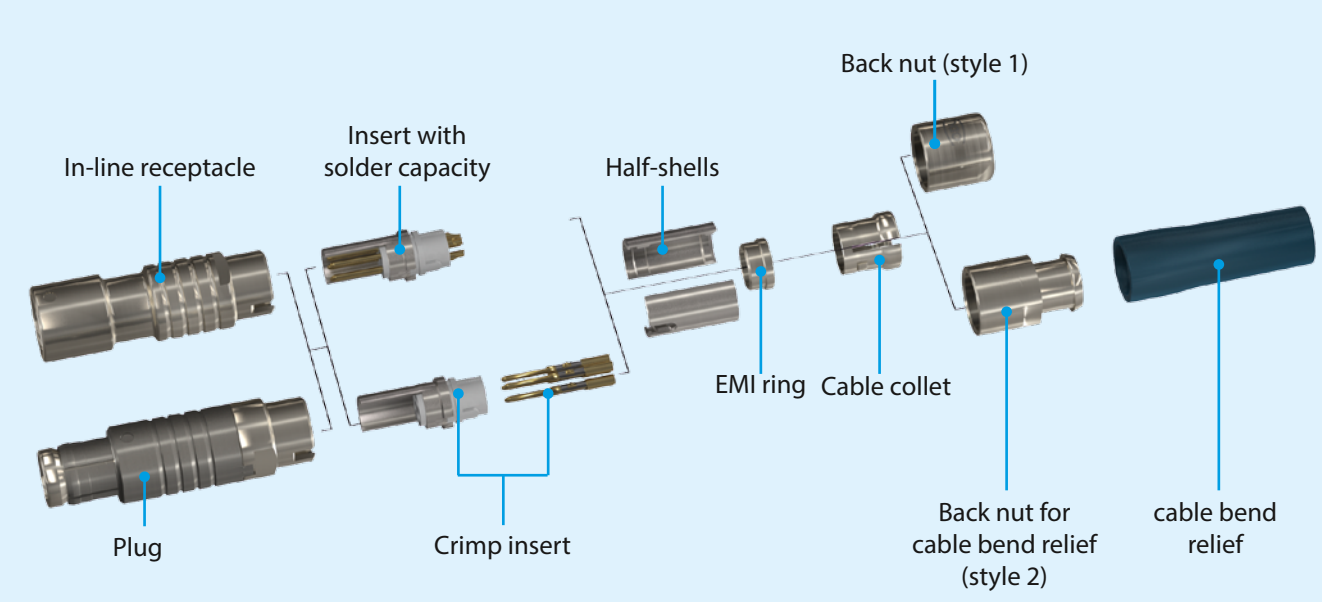


Unsealed Plugs (IP 50)
– Crimp Version
– Solder Version

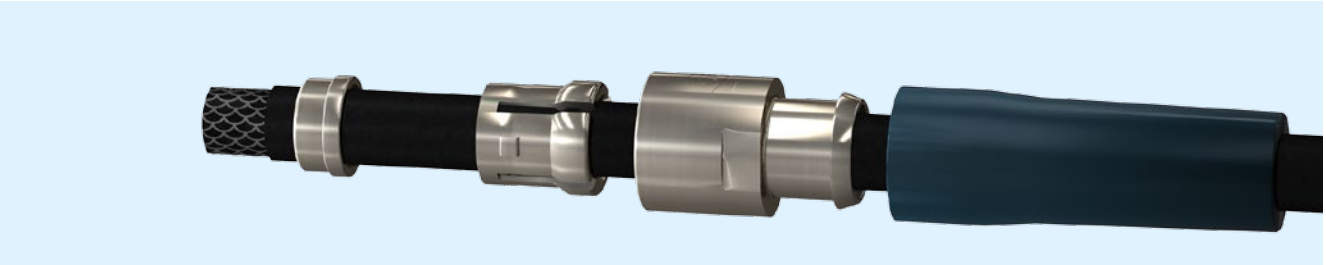
Sealed Plugs (IP 68)
– Crimp Version
– Solder Version

Sealed Right-Angled Plugs (IP 68)
– Crimp Version
– Solder Version

Assembly Straight Plug and In-line Receptacle IP 50 Crimp Version

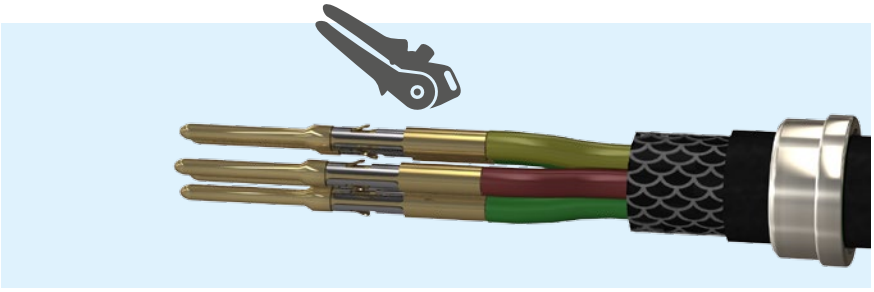


1. Slide cable bend relief, back nut, cable collet and EMI ring over the cable.

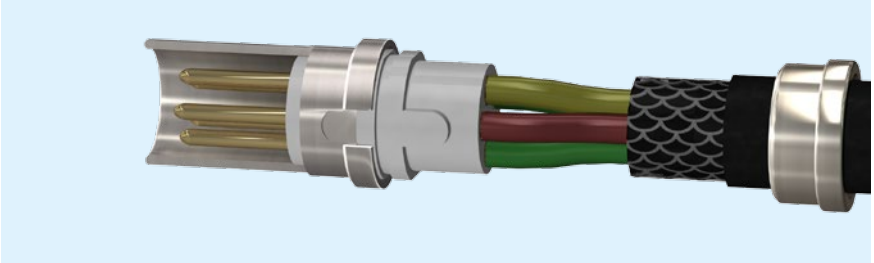


2. Strip cable and wire corresponding the table (see page 18).

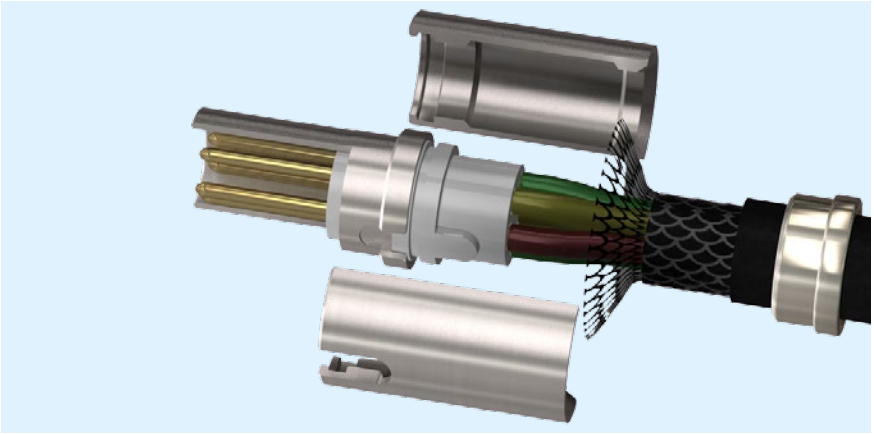
3. Fit wire into the contact barrel and crimp.



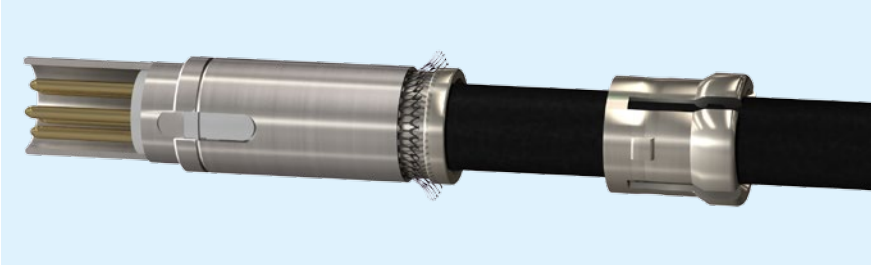
4. Insert contacts into insulator according to contact arrangement.



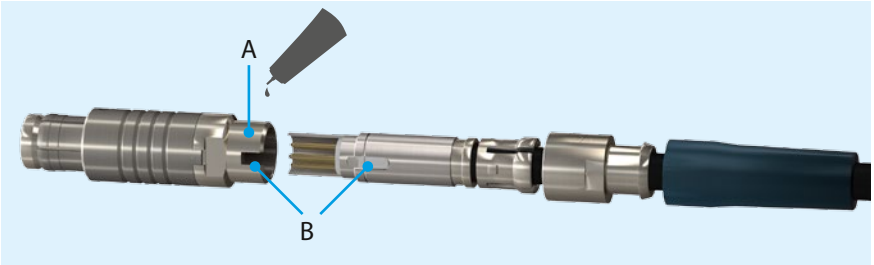
5. Bend cable shield outwards. Assemble half-shells.



6. Slide the EMI ring and the cable collet against the half-shells and clamp the shield against it.

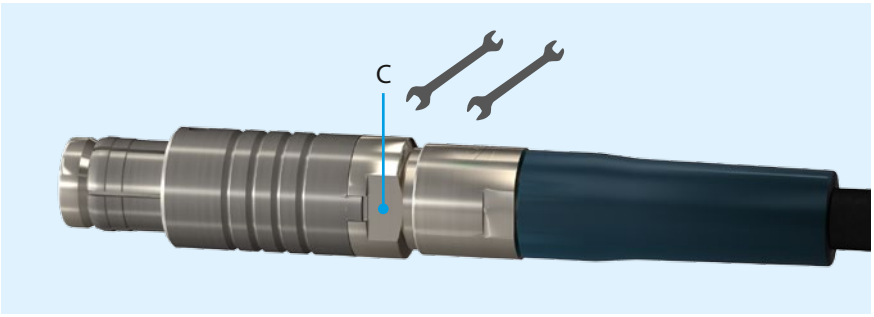


7. Put the assembled cable considering the guidings (B) in the connector housing. If necessary, secure thread (A) with adhesive (see page 18) .

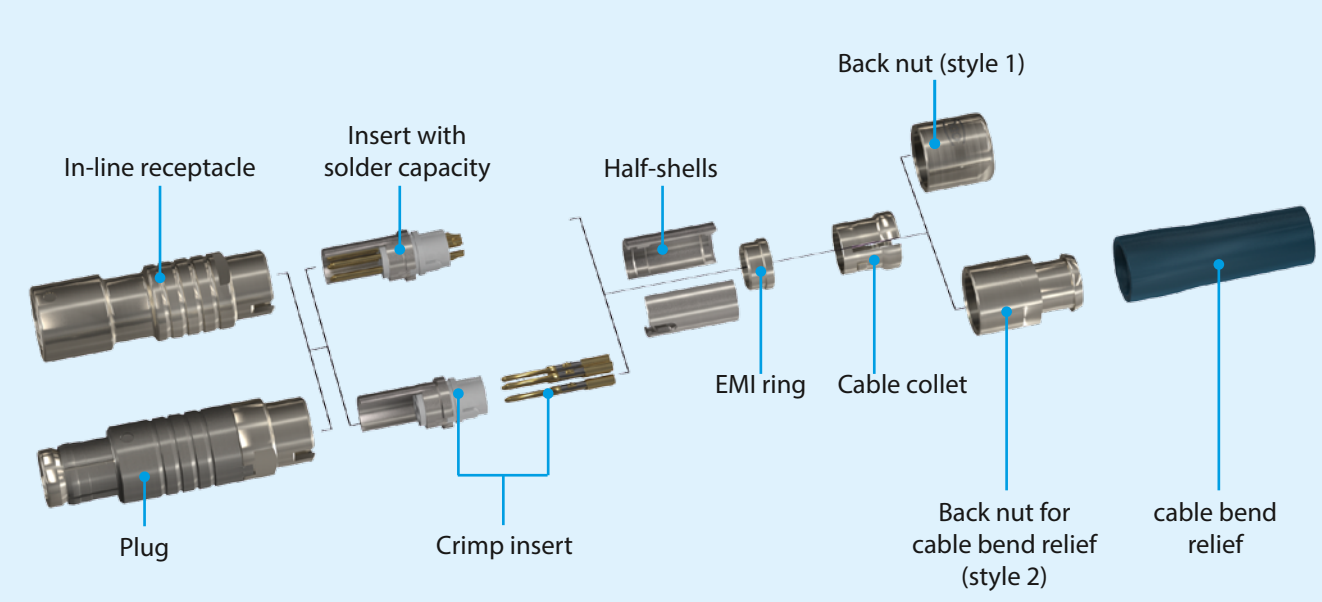


8. Screw back nut on the assembled plug and hold against (C) with ODU spanner wrench.

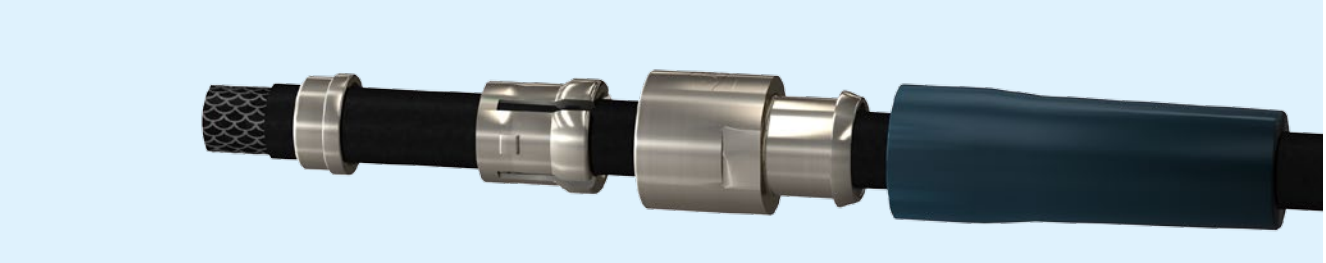
   Caution! Consider tightening torque (see page 18). The assembly is finished.



Assembly Straight Plug and In-line Receptacle IP 50 Solder Version

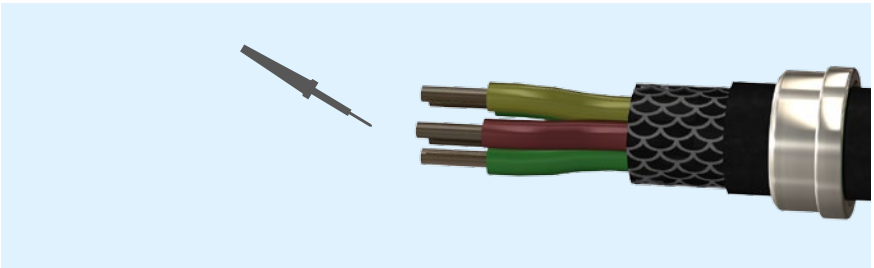


1. Slide cable bend relief, back nut, cable collet and EMI ring over the cable.

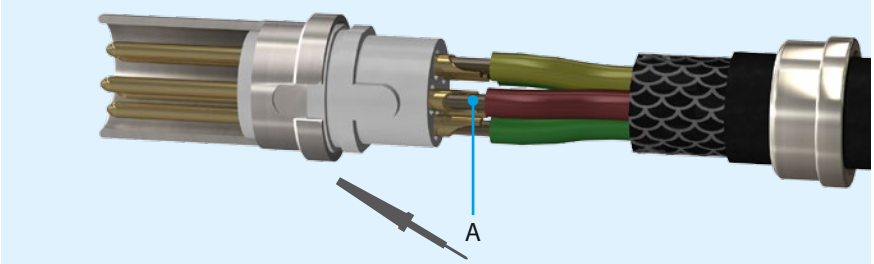


2. Strip cable and wire corresponding the table (see page 18).

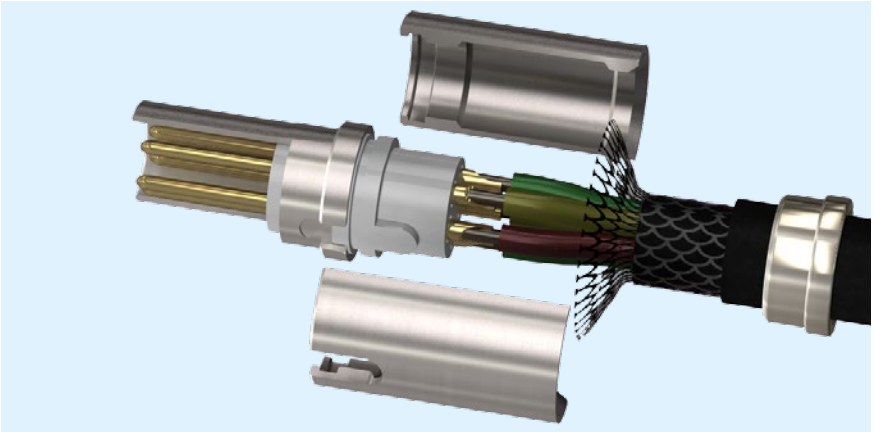
3. Pre-tinning of strands.



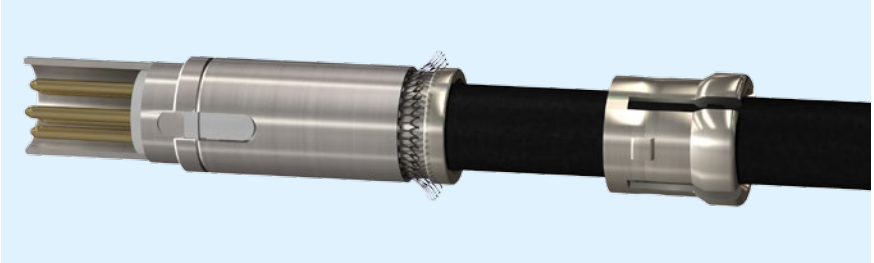
4. Solder the wires (A) according to contact arrangement.



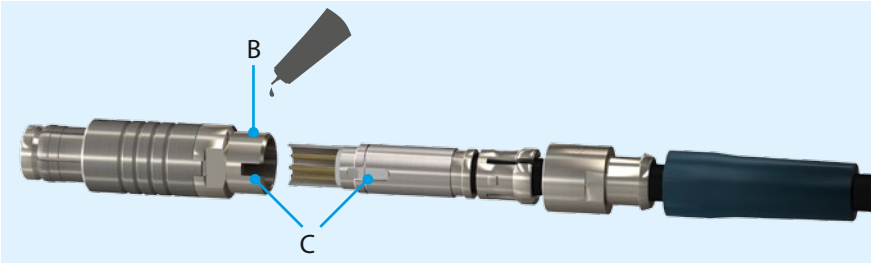
5. Bend cable shield outwards, assemble half shells.



6. Slide the EMI ring and the cable collet against the half-shells and clamp the shield against it.

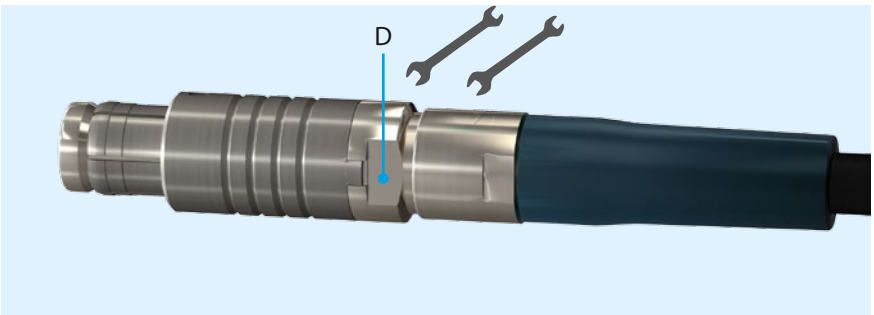


7. Put the assembled cable considering the guidings (C) in the connector housing. If necessary, secure thread (B) with adhesive (see page 18).

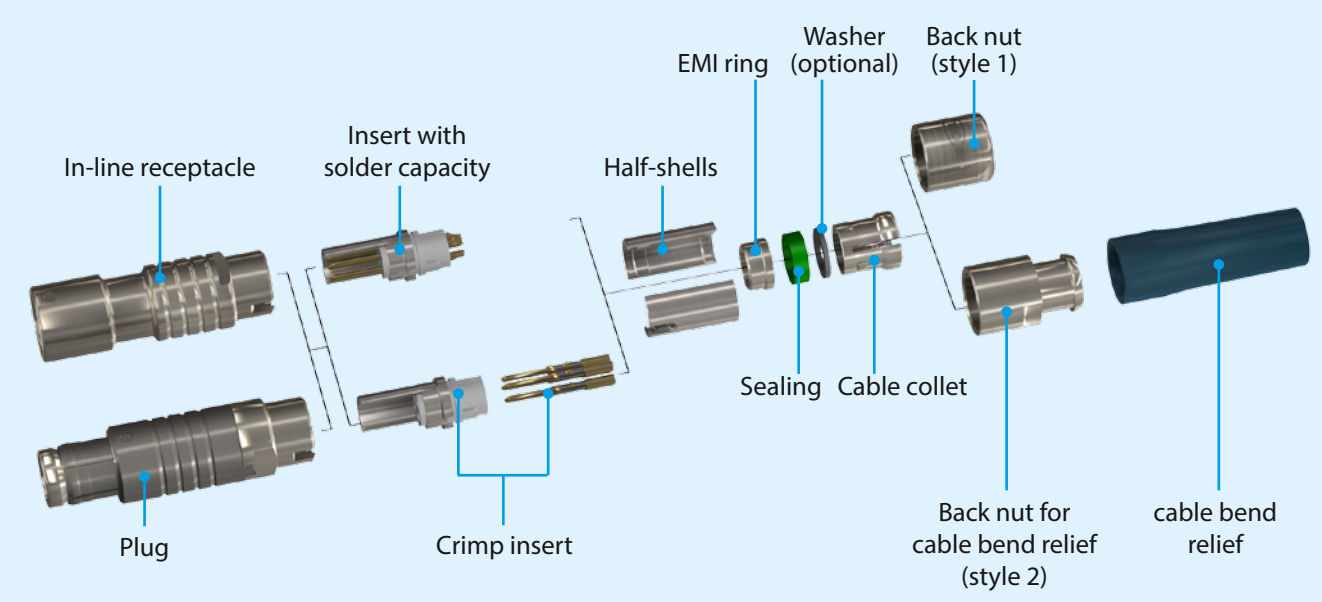


8. Screw back nut on the assembled plug, counterhold by means of the spanner flat (D) and hold against with ODU spanner wrench.

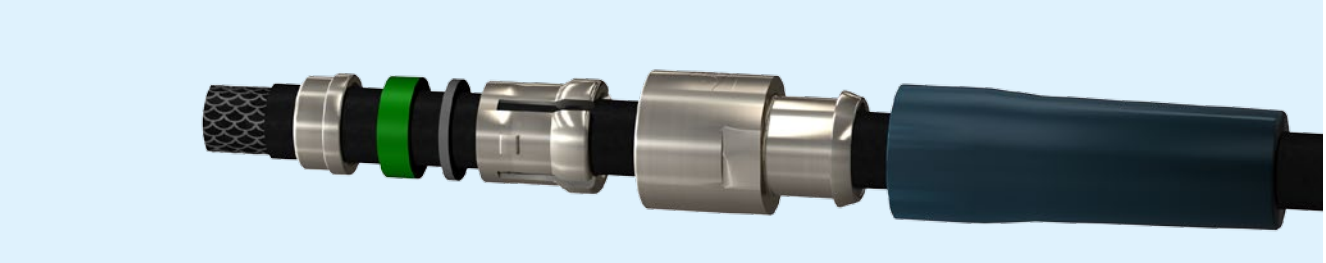
   Caution! Consider tightening torque (see page 18).
   The assembly is finished.



Assembly Straight Plug and In-line Receptacle IP 68 Crimp Version

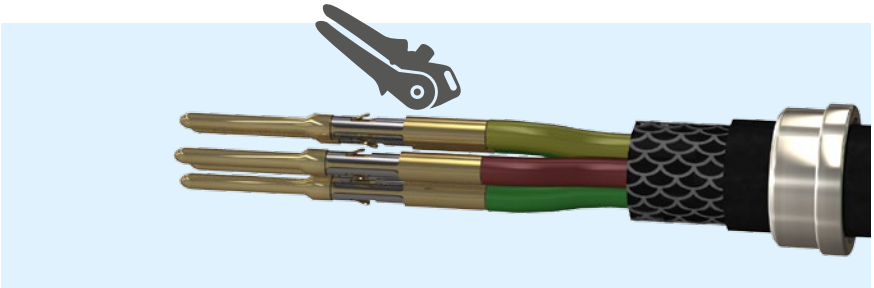


1. Slide cable bend relief, back nut, cable collet, washer, sealing and EMI ring over the cable.

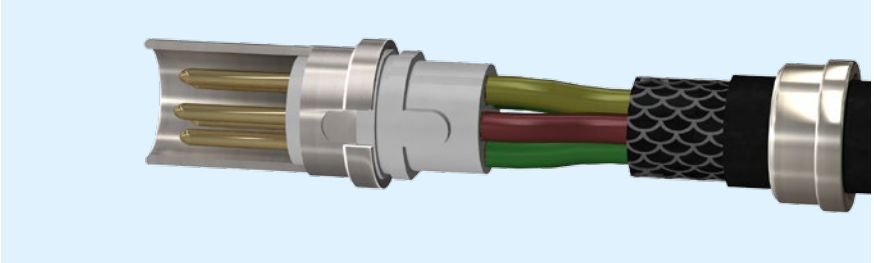


2. Strip cable and wire corresponding the table (see page 18).

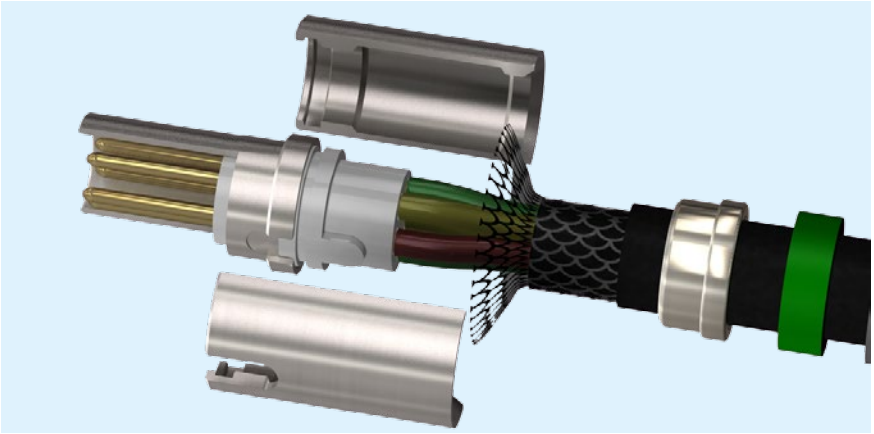
3. Fit wire into the contact barrel and crimp.



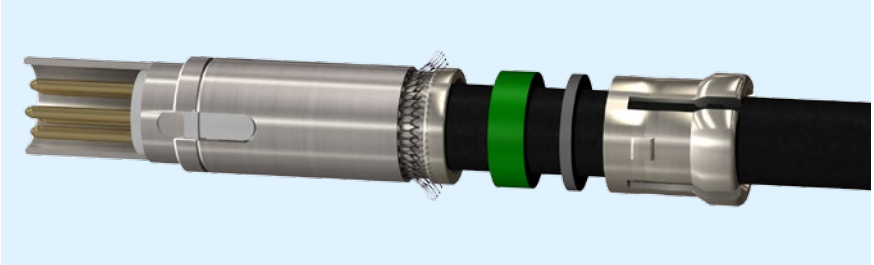
4. Insert contacts into insulator according to contact arrangement.



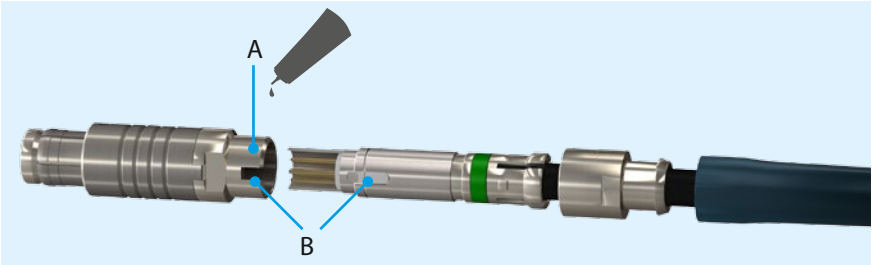
5. Bend cable shield outwards, assemble half shells.



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

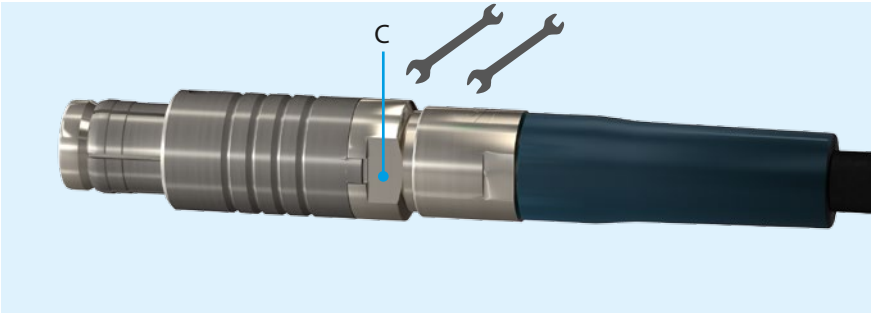


7. Put the assembled cable considering the guidings (B) in the connector housing. If necessary, secure thread (A) with adhesive (see page 18).

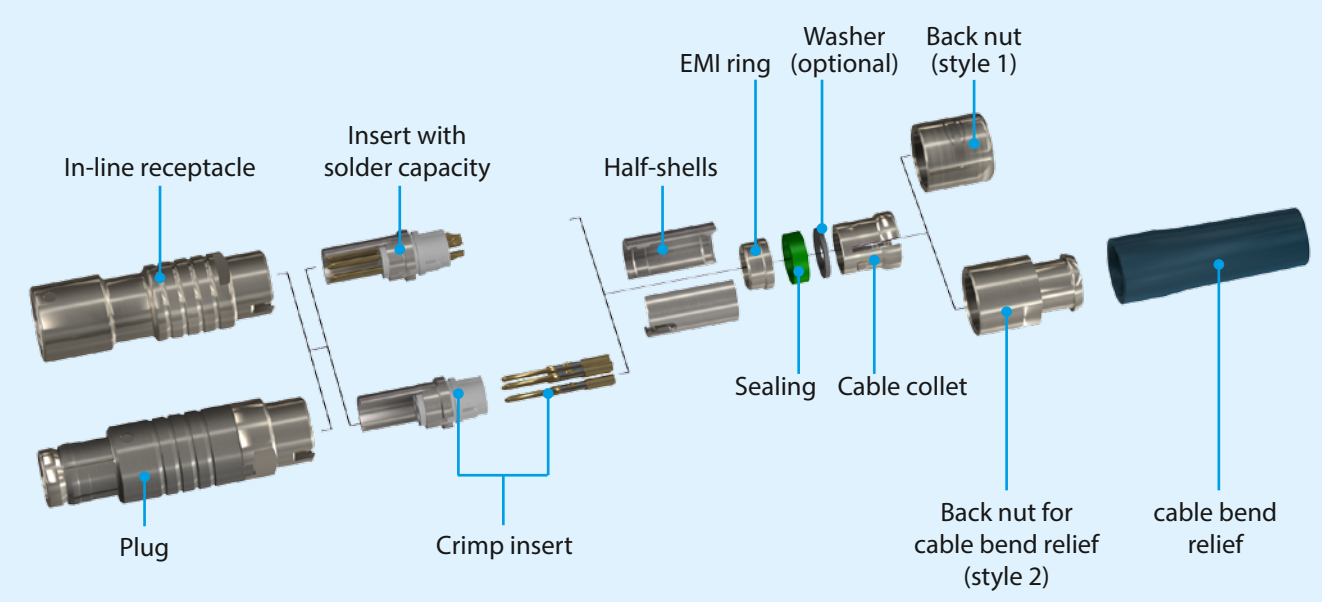


8. Screw back nut on the assembled plug, counterhold by means of the spanner flat (C) and hold against with ODU spanner wrench.

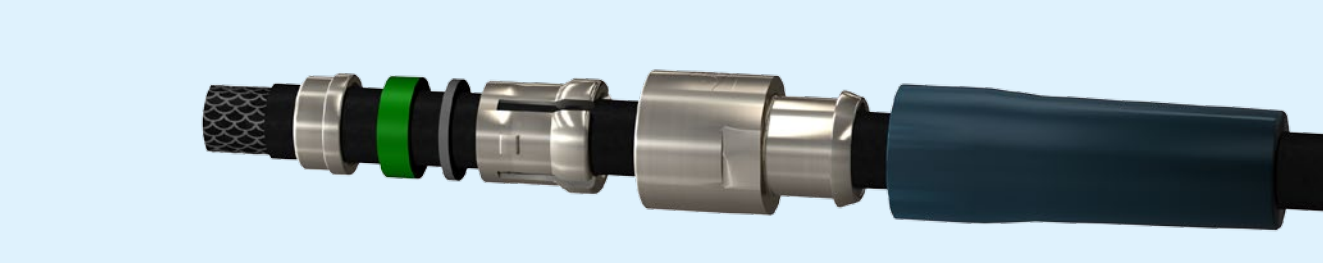
   Caution! Consider tightening torque (see page 18).
   The assembly is finished.



Assembly Straight Plug and In-line Receptacle IP 68 Solder Version

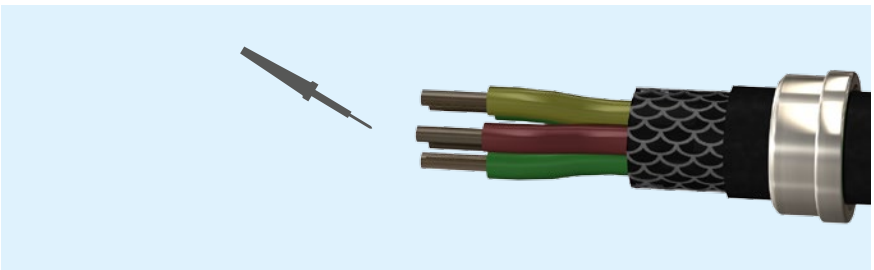


1. Slide cable bend relief, back nut, cable collet, washer, sealing and EMI ring over the cable.

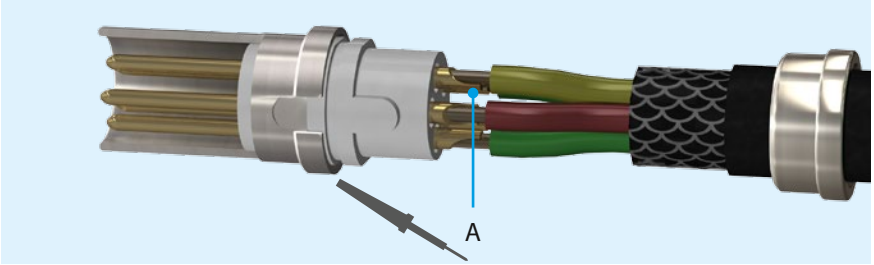


2. Strip cable and wire corresponding the table (see page 18).

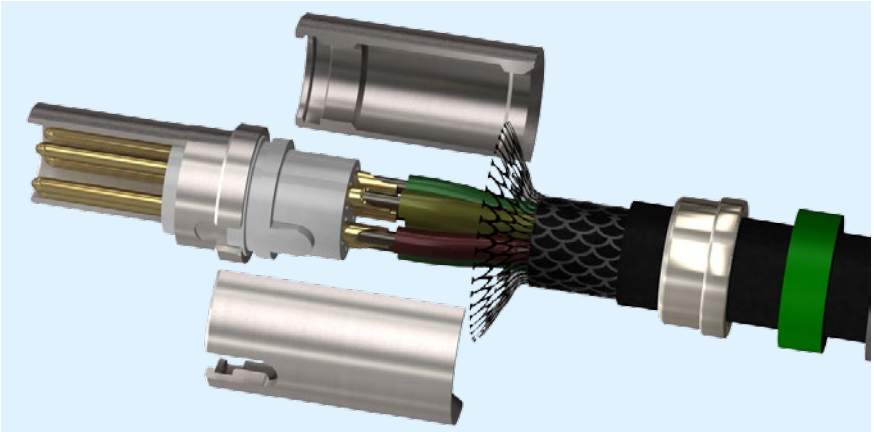
3. Pre-tinning of strands.



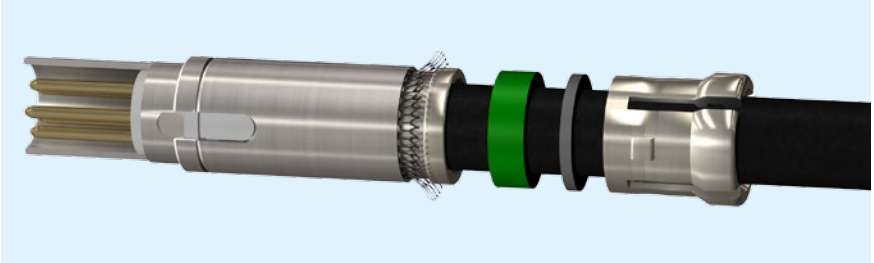
4. Solder the wires (A) according to contact arrangement.



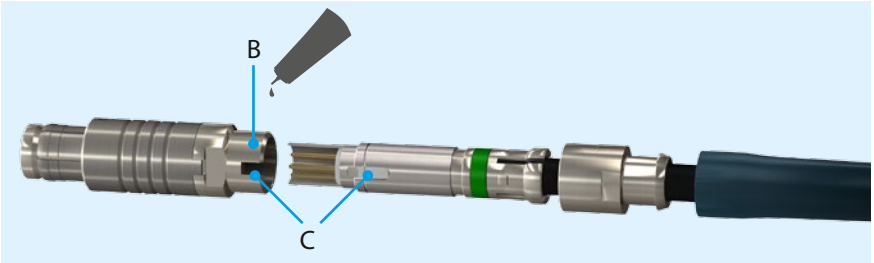
5. Bend cable shield outwards, assemble half shells.



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

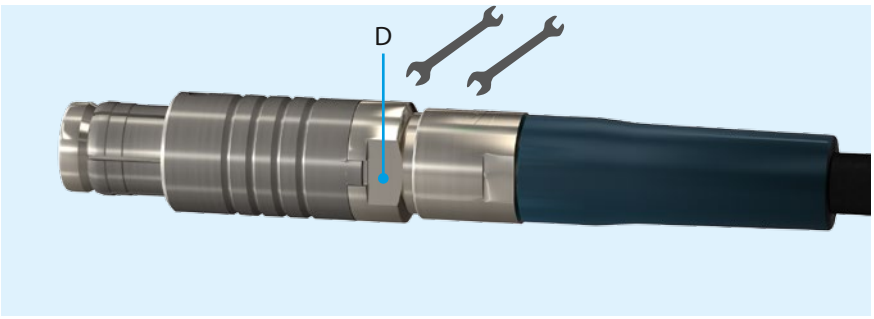


7. Put the assembled cable considering the guidings (C) in the connector housing. If necessary, secure thread (B) with adhesive (see page 18).

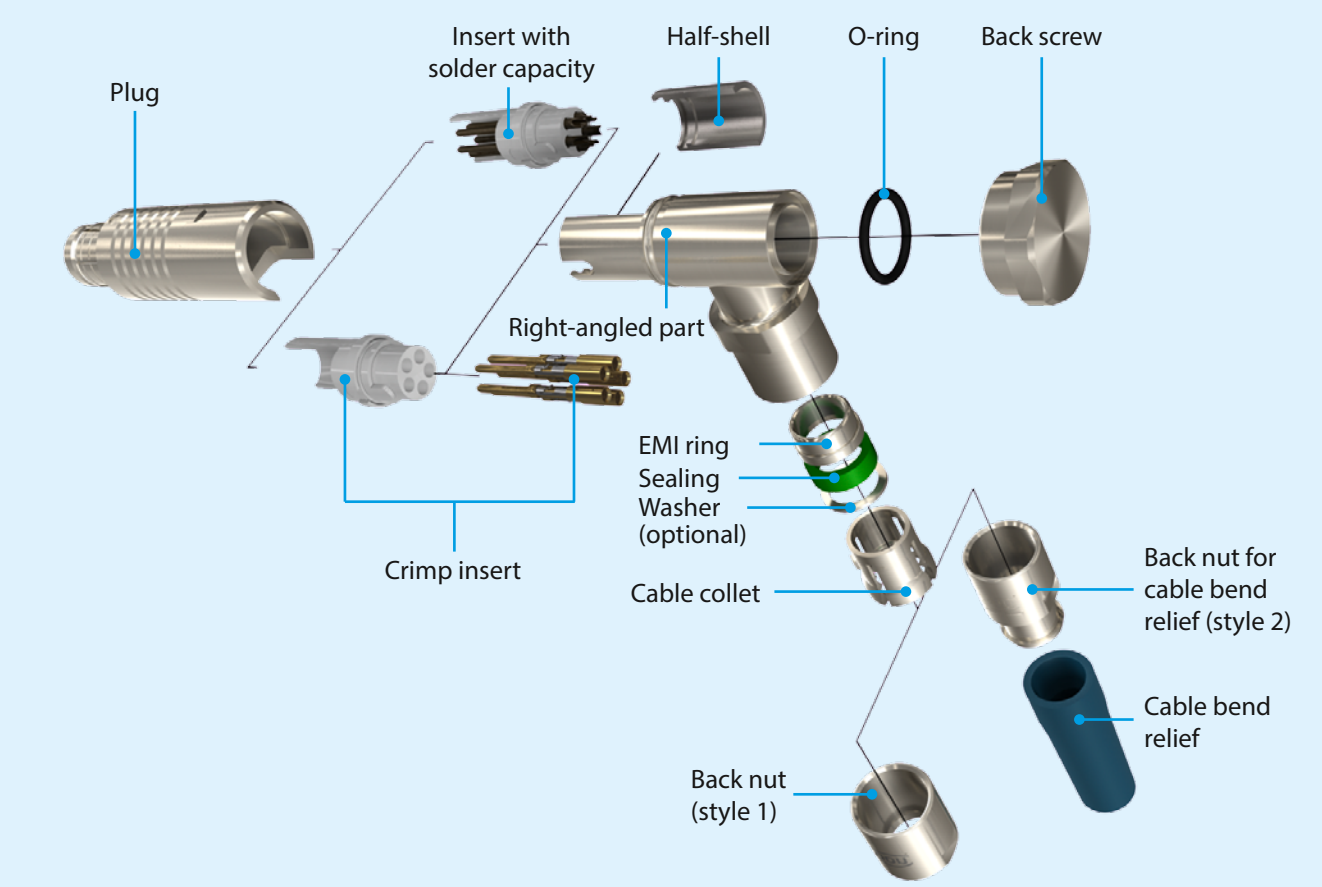


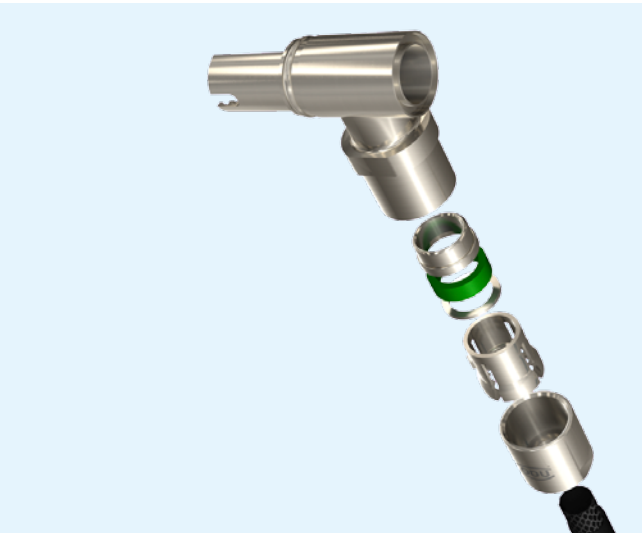
8. Screw back nut on the assembled plug, counterhold by means of the spanner flat (D) and hold against with ODU spanner wrench.

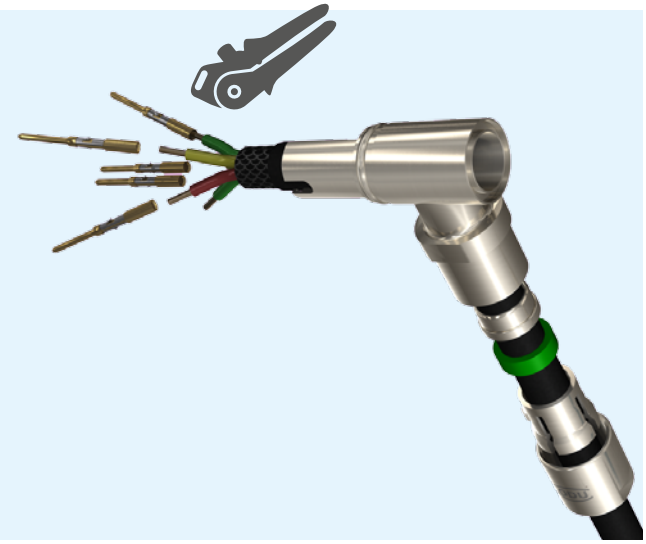
   Caution! Consider tightening torque (see page 18).
   The assembly is finished.



Assembly Right-Angled Plug IP 68
Crimp Version







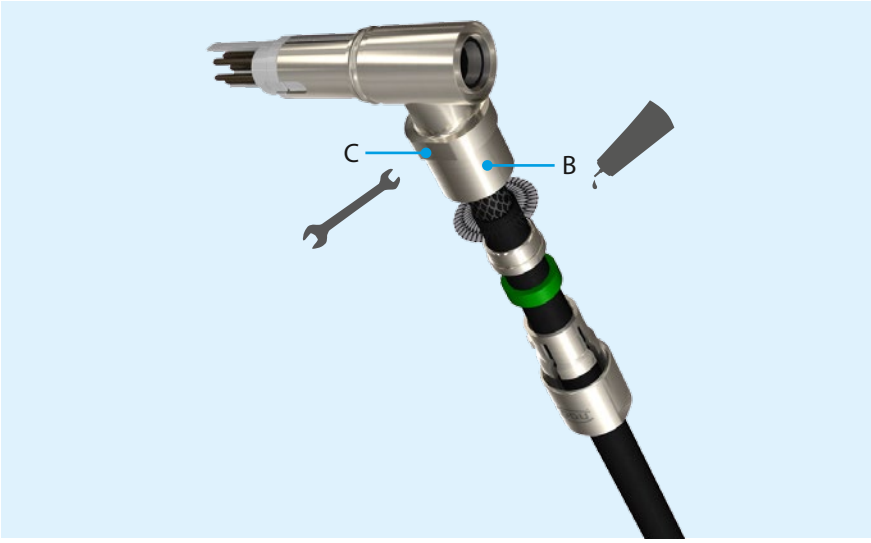
1. Slide cable bend relief, back nut, cable collet, washer, sealing, EMI ring and right-angled part over cable.
2. Strip cable and wire corresponding the table (see page 19).
3. Fit wire into the contact barrel and crimp.

4. Insert contacts into insulator according to contact arrangement.

5. Bend cable shield outwards, place half-shells and right-angled part over insulator.

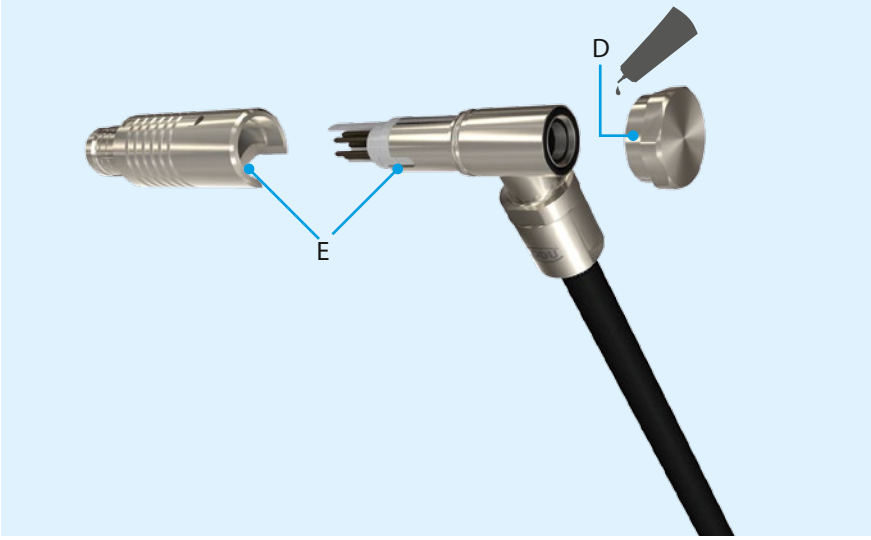
6. Slide EMI ring, sealing, washer and cable collet against the right-angled part, and clamp shield between EMI ring and right-angled part. If necessary, secure thread (B) with adhesive (see page 19). Screw back nut on the assembled plug, counterhold by means of the spanner flat (C) and hold against with ODU spanner wrench.

   Caution! Consider tightening torque (see page 19).



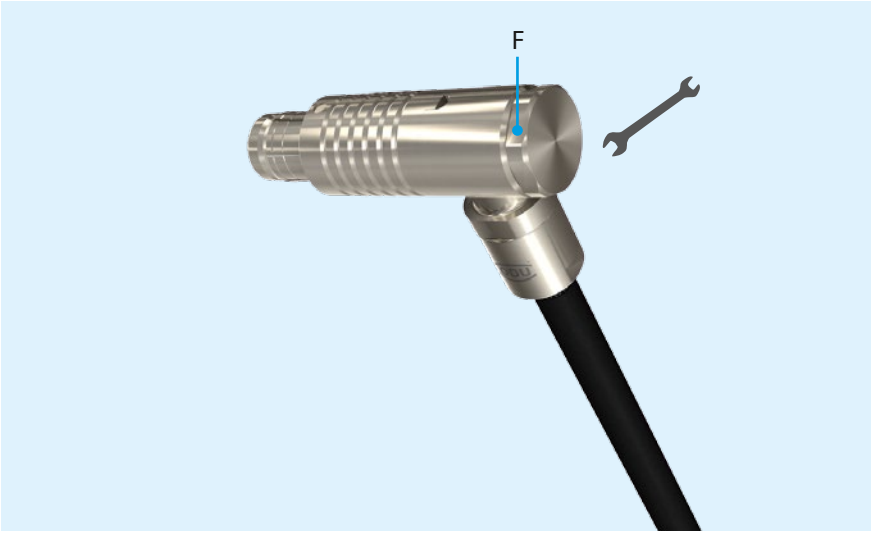
Assembly Right-Angled Plug IP 68 Crimp Version

7. Put the assembled cable considering the guidings (E) in the connector housing. If necessary, secure thread (D) with adhesive (see page 19).

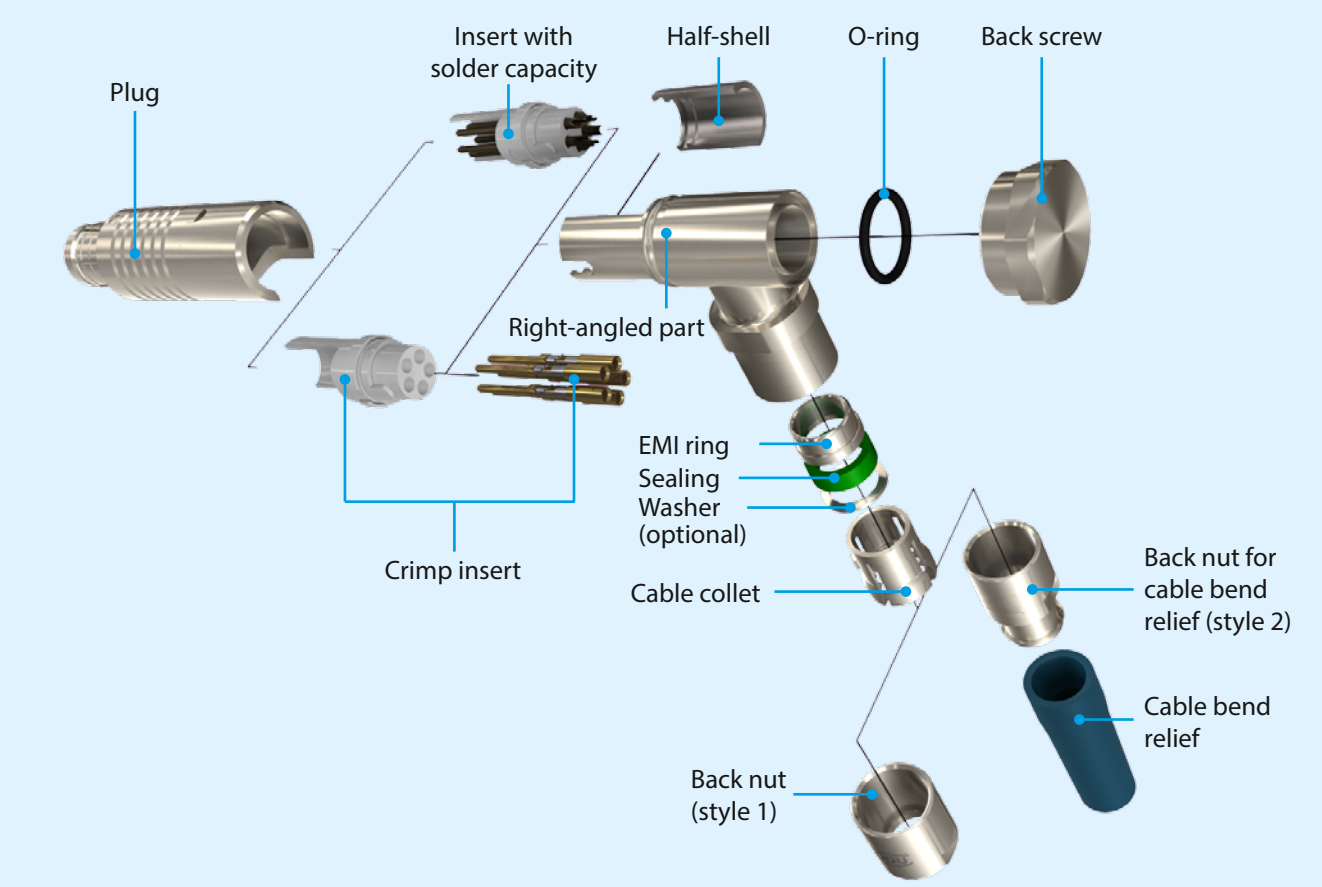


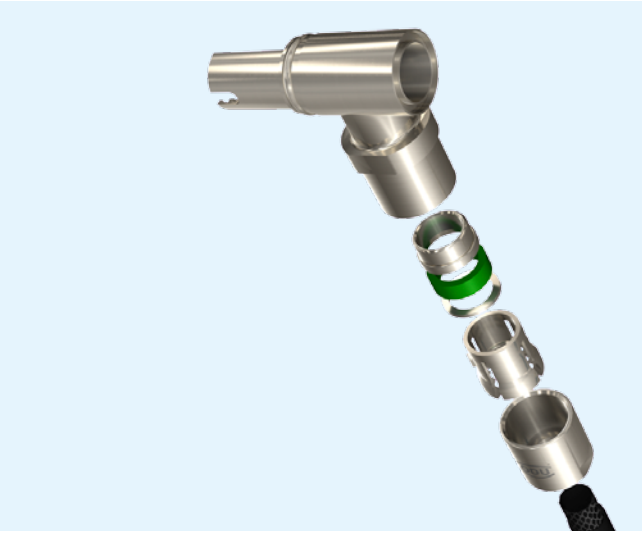
8. Mount back screw (F) on the assembled plug and fasten cable with the ODU spanner wrench in the housing.

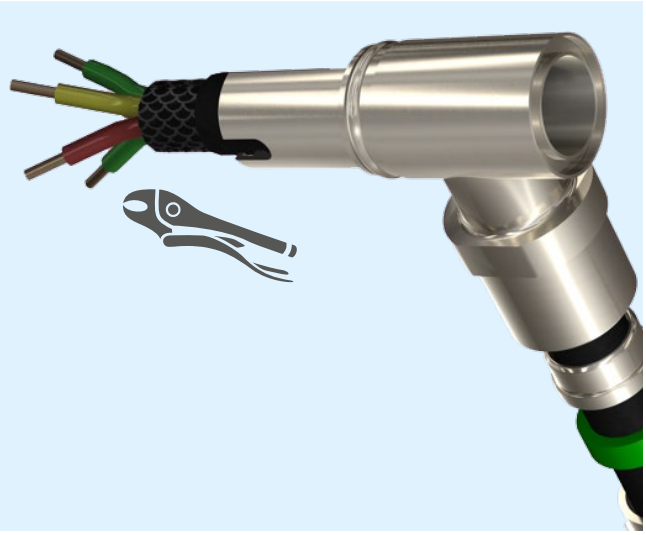
   Caution! Consider tightening torque (see page 19).
   The assembly is finished.



Assembly Right-Angled Plug IP 68
Solder Version

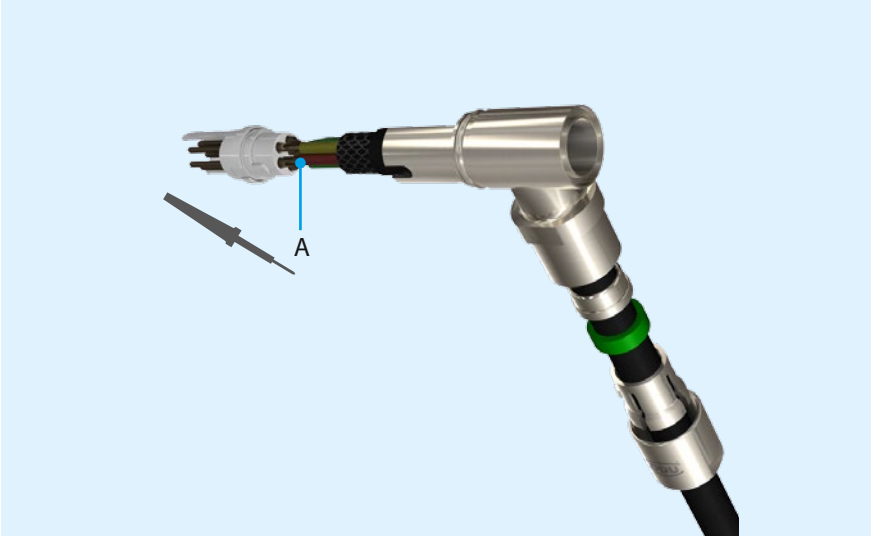






1. Slide cable bend relief, back nut, cable collet, washer, sealing, EMI ring and right-angled part over the cable.
2. Strip cable and wire corresponding the table (see page 19).
3. Pre-tinning of strands.

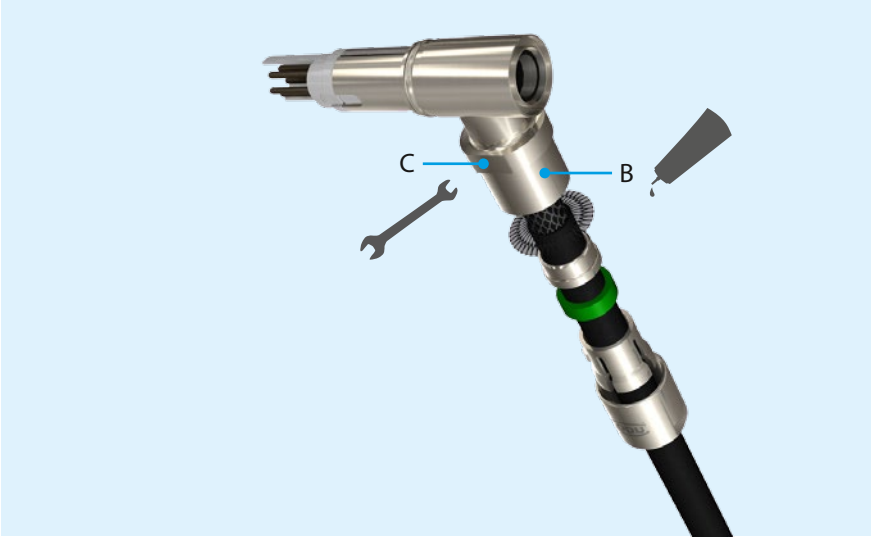
4. Solder the wires (A) according to contact arrangement.



5. Bend cable shield outwards, place half-shells and right-angled part over insulator.

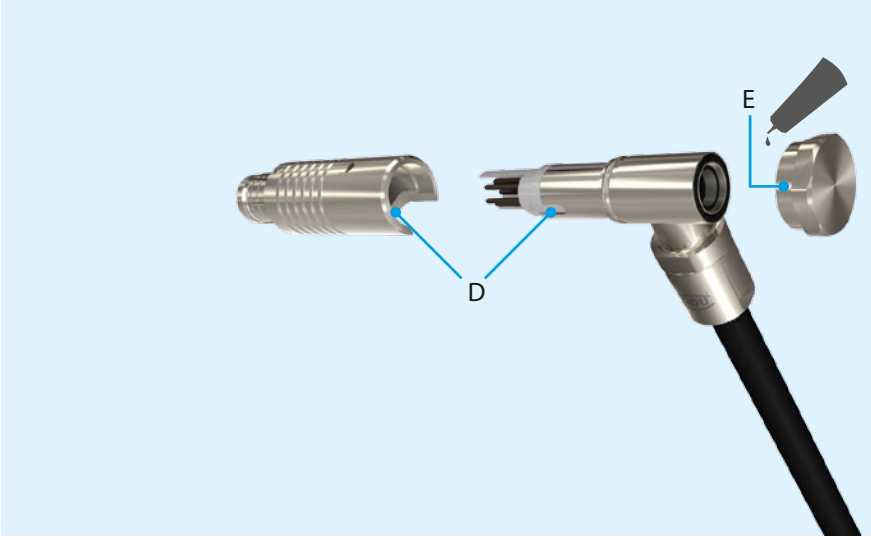
6. Slide EMI ring, sealing, washer and cable collet against the right-angled part, and clamp shield between EMI ring and right-angled part. If necessary, secure thread (B) with adhesive (see page 19). Screw the back nut, counterhold by means of the spanner flat (C) and tighten it with ODU spanner wrench.

   Caution! Consider tightening torque (see page 19).



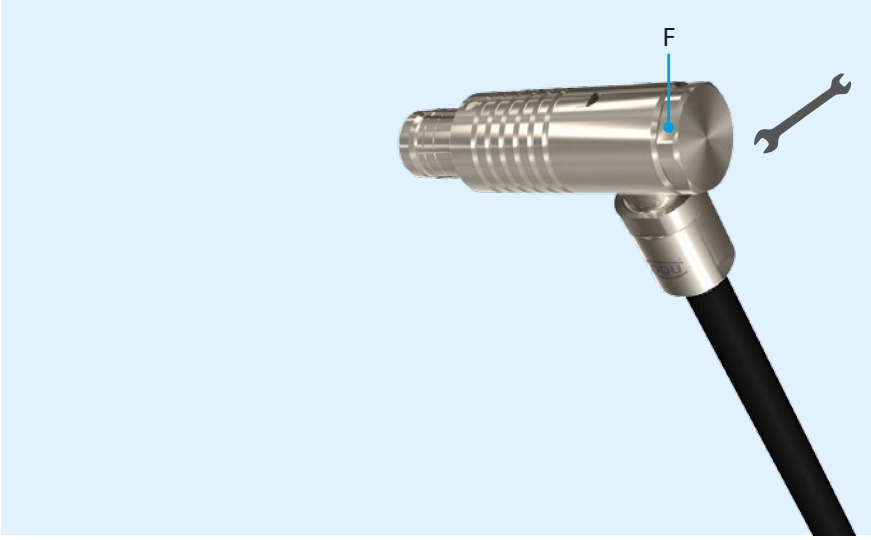
Assembly Right-Angled Plug IP 68 Solder Version

7. Put the assembled cable considering the guidings (D) in the connector housing. If necessary, secure thread (E) with adhesive (see page 19).



8. Mount back screw on the assembled plug and counterhold by means of the spanner flat (F) with ODU spanner wrench.

   Caution! Consider tightening torque (see page 19).
   The assembly is finished.



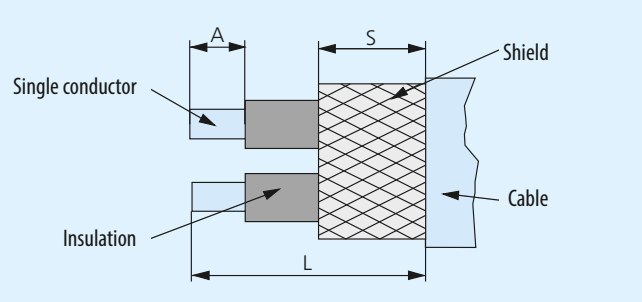
Notes for Straight Plug and In-line Receptacle IP 50 and IP 68
Crimp and Solder Version

In sealed versions plugs and cables must always be matched to each other, so we need detailed information about the cable you are using.

1. Recommended stripping length

Size	Contact diameter	Solder termination			Crimp termination		
		L	A	S	L	A	S
0	0.5	6	2	2.5	-	-	-
	0.7	6	2.5	2.5	6	3	2.5
	0.9	6	2.5	2.5	6	3	2.5
1	0.5	9	2	2.5	-	-	-
	0.7	9	2.5	2.5	13	4	2.5
	0.9	9	2.5	2.5	13	4	2.5
	1.3	9	3	2.5	13	4	2.5
1.5	0.5	12	2	2.5	-	-	-
	0.7	12	2.5	2.5	16	4	2.5
2	0.7	11	2.5	2.5	15	4	2.5
	0.9	11	2.5	2.5	15	4	2.5
	1.3	11	3	2.5	15	4	2.5
3	0.7	14	2.5	2.5	18	4	2.5
	0.9	14	2.5	2.5	18	4	2.5
	1.3	14	3	2.5	18	4	2.5

All dimensions in mm, dimension tolerance: +10 %



A = Stripping length single conductor
L = Stripping length cable jacket
S = Schirmgeflechtlänge

2. Tightening torque of the back nut

Size	0	1	1.5	2	3
Torque moment in Nm	0.6	1.0	1.5	2.0	3.5

3. Tools/Accessories

– ODU open-ended spanner see ODU MINI-SNAP series F, product catalogue section accessories and tools
– ODU crimping tool see ODU MINI-SNAP series F, product catalogue section accessories and tools

Torque wrench 0.2 – 2.0 Nm
Part number: 098.002.002.101.000
Torque wrench 1.0 – 10.0 Nm
Part number: 098.002.002.102.000
Plug-in wrench, different width across flats
Part number: 098.002.003.10..000
Calibration clockwork 0.2 – 4.0 Nm
Part number: 098.002.001.001.000
Calibration clockwork 1.0 – 12.0 Nm
Part number: 098.002.001.002.000

4. Recommended glue for the back nut

Loctite® 243™, ODU part number 890.204.000.030.031

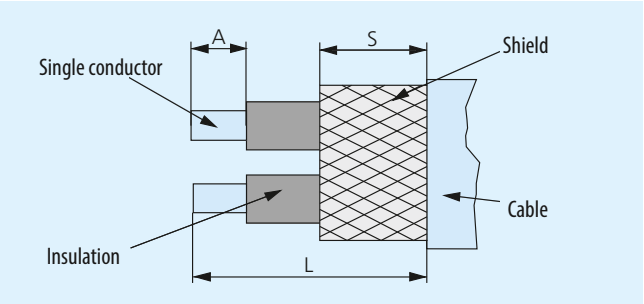
Notes for Right-Angled Plug IP 68
Crimp and Solder Version

In sealed versions plugs and cables must always be matched to each other, so we need detailed information about the cable you are using.

1. Recommended stripping length

Size	Contact diameter	Solder termination			Crimp termination		
		L	A	S	L	A	S
0	0.5	16	2	2.5	-	-	-
	0.7	16	2.5	2.5	18	3	2.5
	0.9	16	2.5	2.5	18	3	2.5
1	0.5	23	2	2.5	-	-	-
	0.7	24	2.5	2.5	28	4	2.5
	0.9	24	2.5	2.5	28	4	2.5
	1.3	24	3	2.5	28	4	2.5
1.5	0.5	18	2	2.5	-	-	-
	0.7	19	2.5	2.5	24	4	2.5
2	0.7	20	2.5	2.5	24	4	2.5
	0.9	20	2.5	2.5	24	4	2.5
	1.3	20	3	2.5	24	4	2.5
3	0.7	25	2.5	2.5	30	4	2.5
	0.9	25	2.5	2.5	30	4	2.5
	1.3	25	3	2.5	30	4	2.5

All dimensions in mm, dimension tolerance: +10 %



A = Stripping length single conductor
L = Stripping length cable jacket
S = Schirmgeflechtlänge

2. Tightening torque of the back nut

Size	0	1	1.5	2	3
Torque moment in Nm	0.6	1.0	1.5	2.0	3.5

3. Tightening torque of the back screw (right-angled plug)

Size	0	1	1.5	2	3
Torque moment in Nm	0.3	0.4	0.6	0.9	1.3

4. Tools/Accessories

– ODU open-ended spanner see ODU MINI-SNAP series F, product catalogue section accessories and tools
– ODU crimping tool see ODU MINI-SNAP series F, product catalogue section accessories and tools

Torque wrench 0.2 – 2.0 Nm
Part number: 098.002.002.101.000
Torque wrench 1.0 – 10.0 Nm
Part number: 098.002.002.102.000
Plug-in wrench, different width across flats
Part number: 098.002.003.10..000
Calibration clockwork 0.2 – 4.0 Nm
Part number: 098.002.001.001.000
Calibration clockwork 1.0 – 12.0 Nm
Part number: 098.002.001.002.000

5. Recommended glue for the back nut

Loctite® 243™, ODU part number 890.204.000.030.031