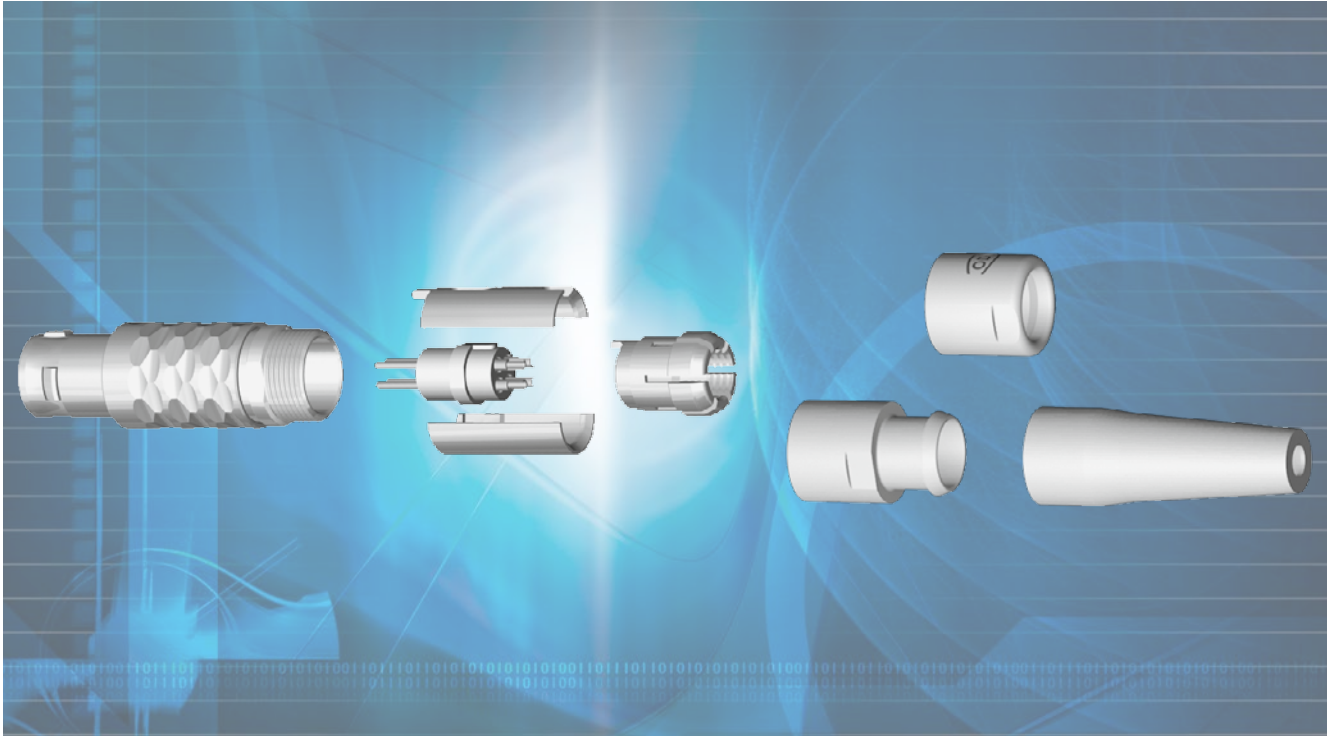


## Assembly Instructions



### **Series L (Crimp Version, Solder Version)**

**Unsealed Plugs (IP 50)**

**Unsealed Right-Angled Plugs (IP 50)**

### **Series K (Crimp Version, Solder Version)**

**Sealed Plugs (IP 68)**

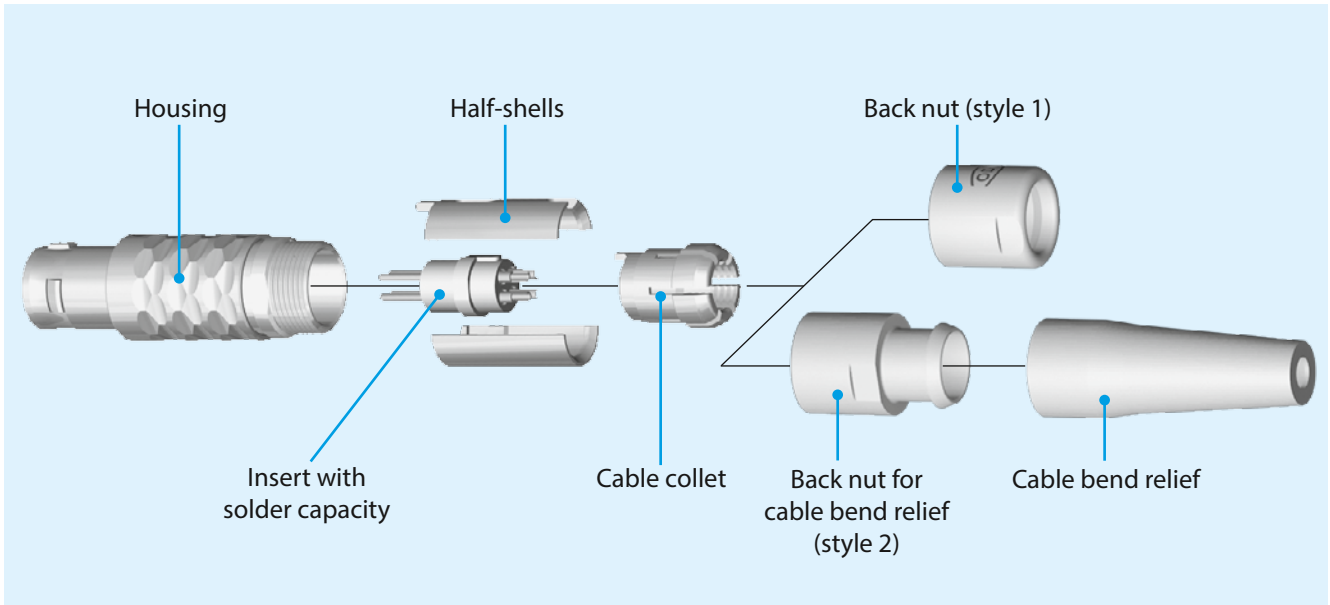
**Sealed Right-Angled Plugs (IP 68)**

### **Series B (Crimp Version, Solder Version)**

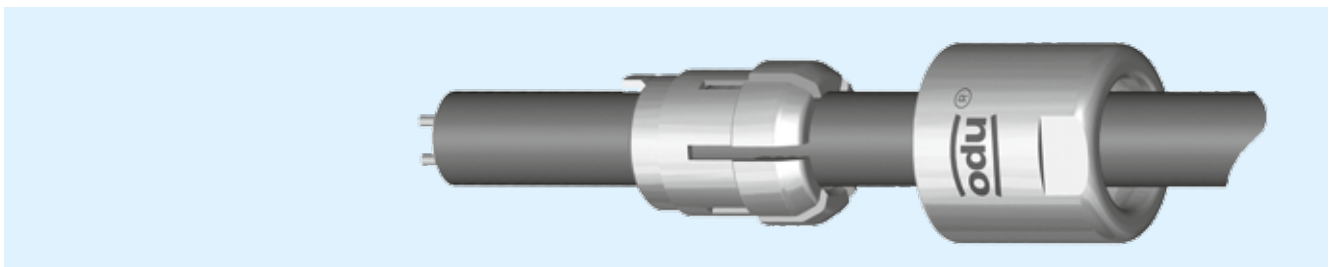
**Sealed Plugs (IP 68)**

**Sealed Right-Angled Plugs (IP 68)**

**Assembly Unsealed Plugs, Series L (IP 50)**

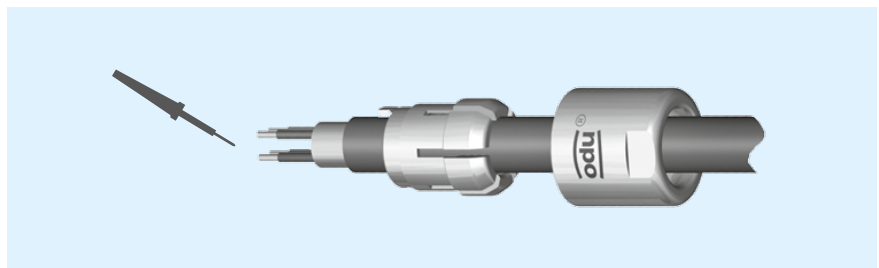


1. Slide back nut and cable collet (and possibly cable bend relief) over the cable.

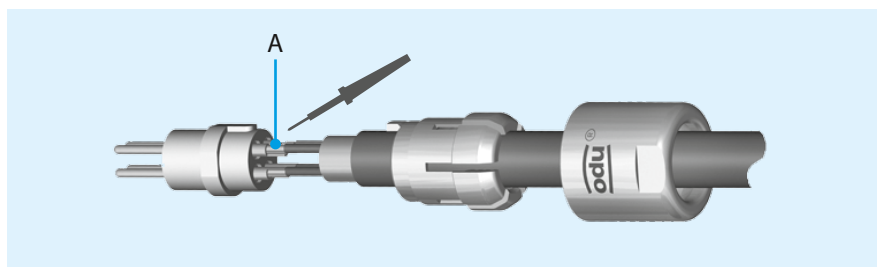


2. Strip cable and wire corresponding the table (see page 18).

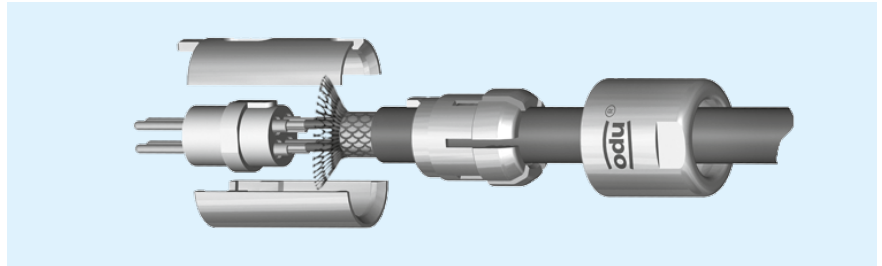
3. Pre-tinning of strands.



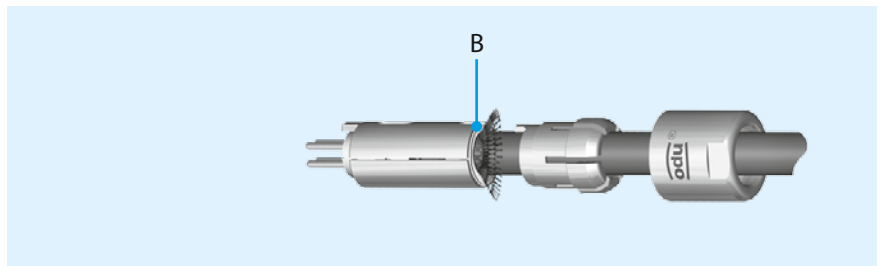
4. Solder each wire (A) to the corresponding contact.



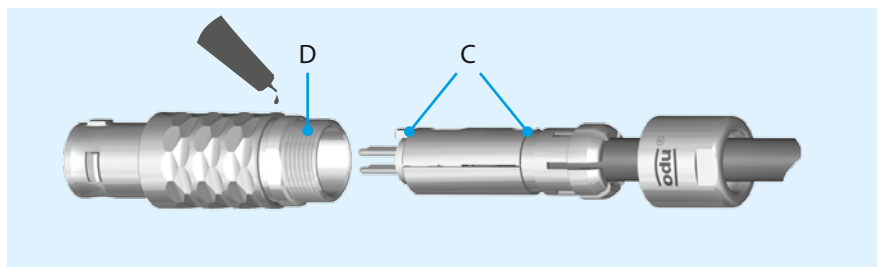
5. Bend cable shield outwards, assemble half-shells.



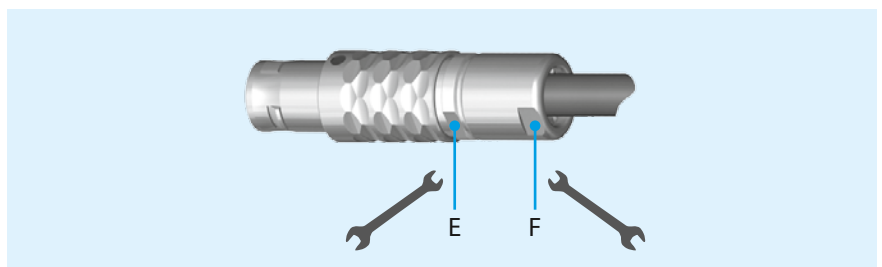
6. Slide the cable collet against the half-shells and clamp the shield (B) between it.



7. Now you can put the assembled cable considering the guidings (C) into the connector housing. If necessary, secure thread (D) with adhesive (see page 18).

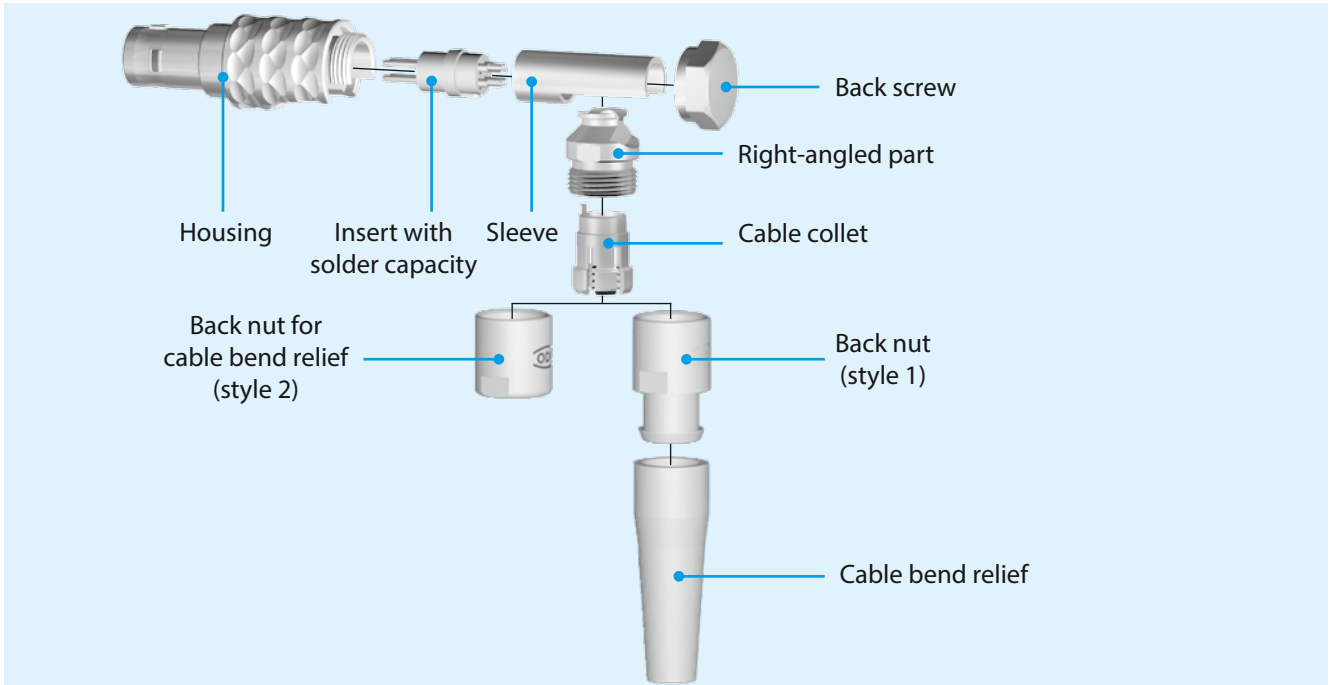


8. Screw back nut on the assembled plug, counterhold spanner flat (E) and tighten to spanner flat (F) with ODU spanner wrench.

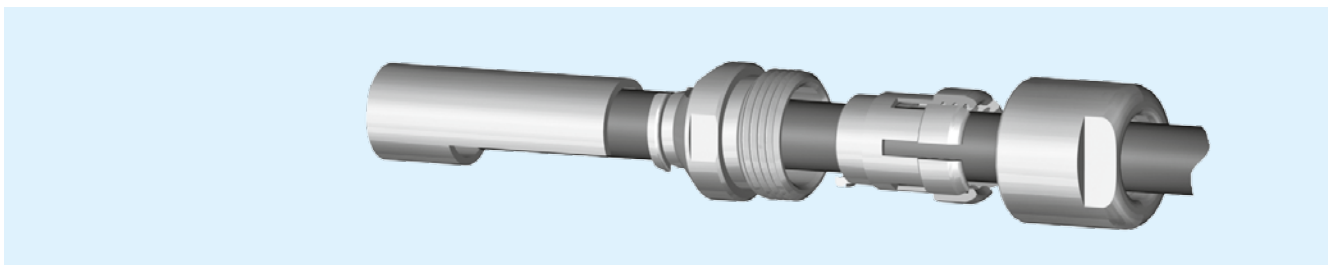


Caution! Consider tightening torque (see page 18).  
 The assembly is finished.

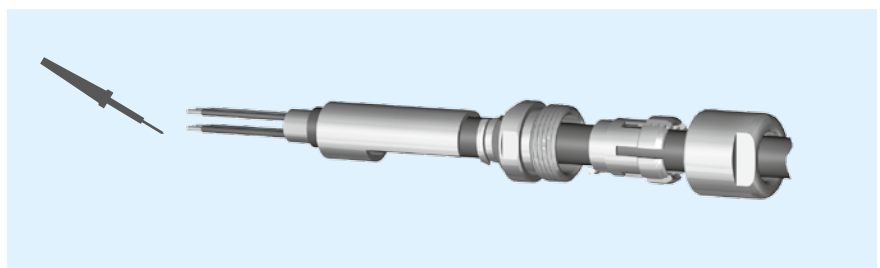
**Assembly Unsealed Right-Angled Plugs, Series L (IP 50)**



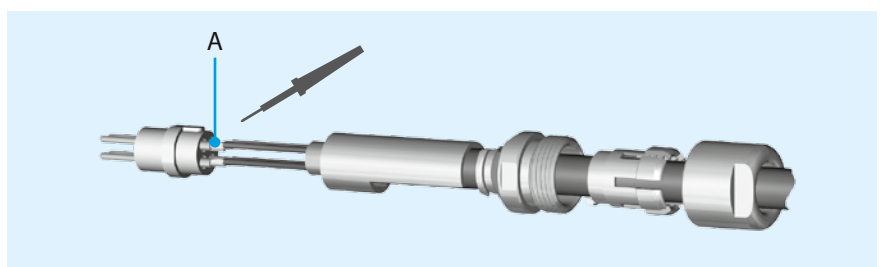
1. Slide back nut, cable collet, right-angled part and sleeve (and possibly cable bend relief) over the cable.

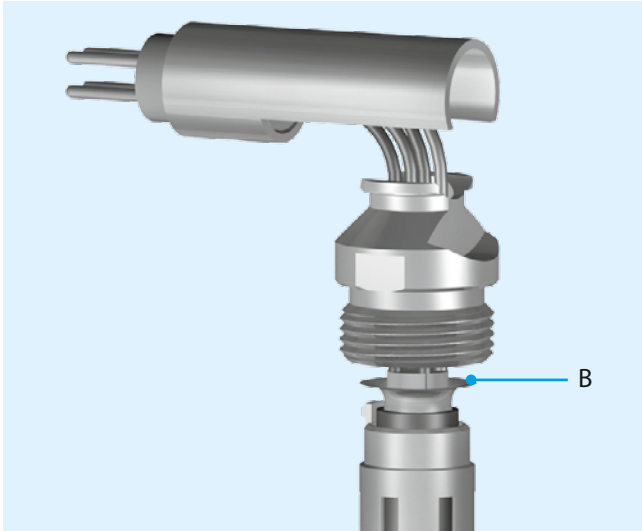


2. Strip cable and wire corresponding the table (see page 18).
3. Pre-tinning of strands.

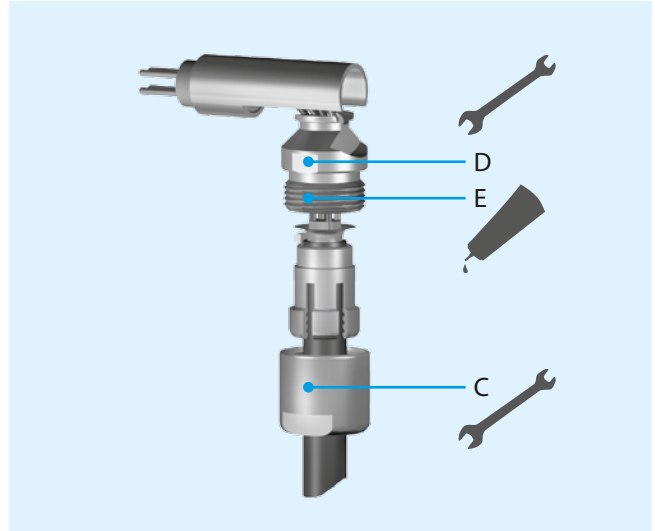


4. Solder each wire (A) to the corresponding contact.

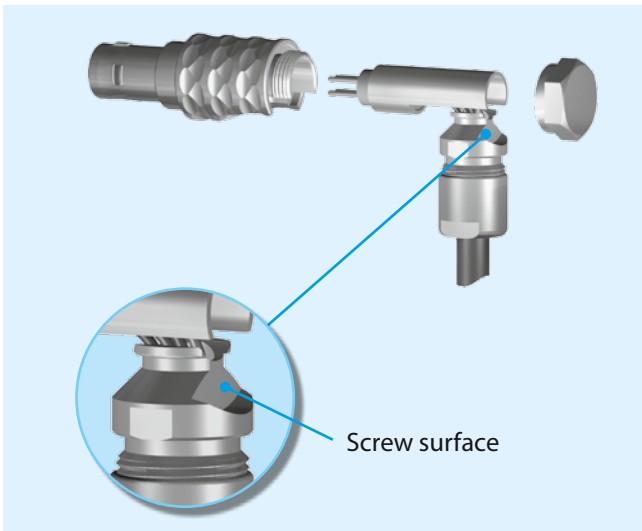




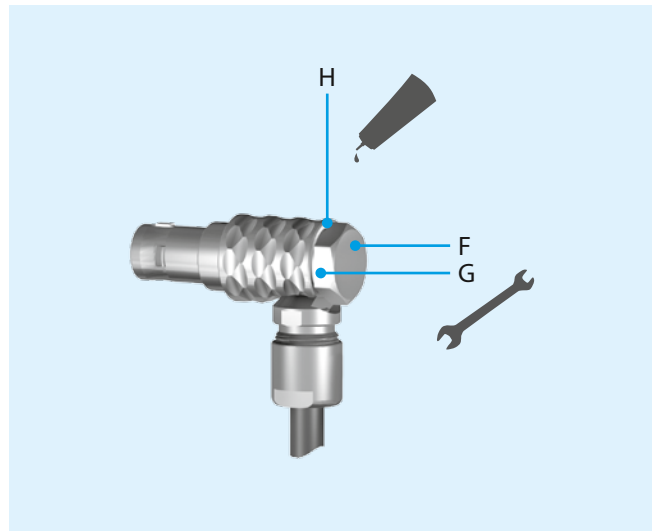
5. Pull cable back and bend 90° down. Spread the cable shield (B) over collet ring. Slide sleeve over insulator.



6. Slide the cable collet against the right-angled part and clamp the shield between it. Screw back nut (C) on the right-angled part and hold against with the ODU spanner wrench (D). If necessary, secure thread (E) with adhesive (see page 19).  
 Caution! Consider tightening torque (see page 18).



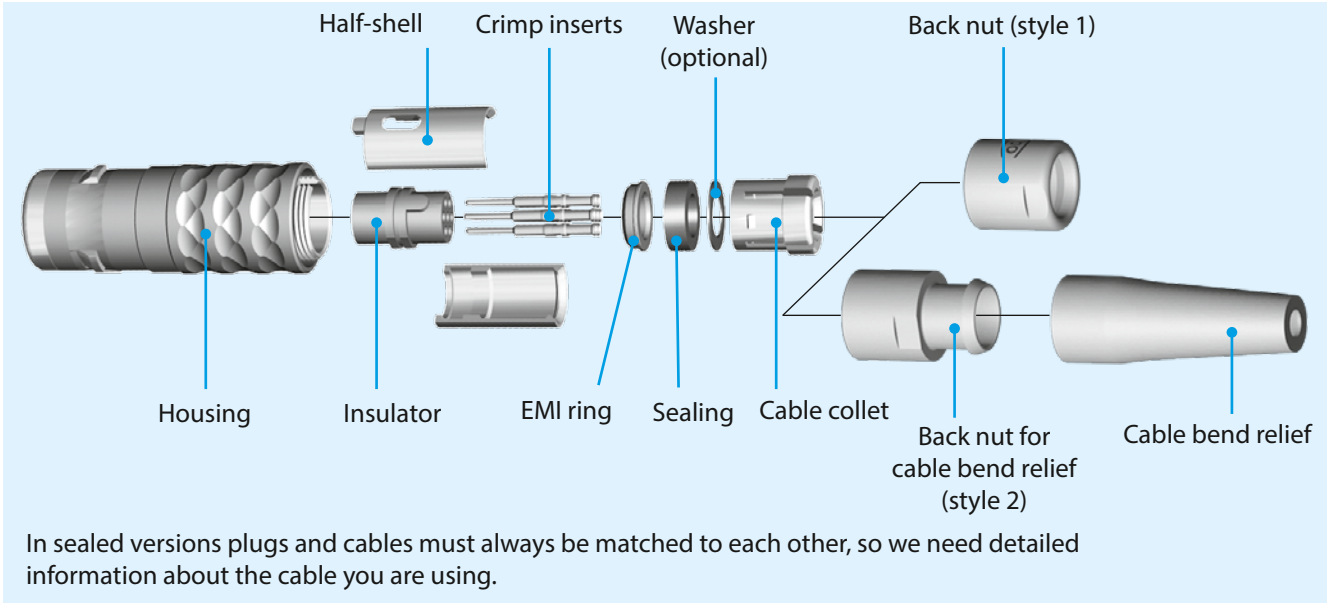
7. Now you can put the assembled cable considering the guidings into the connector housing.



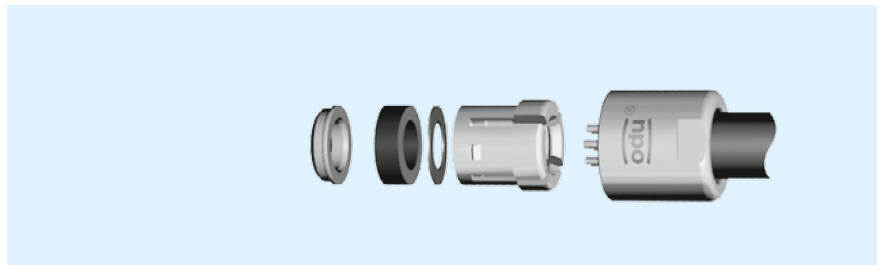
8. Mount back screw (F) on the plug and fasten cable with the ODU spanner wrench (G). If necessary, secure thread (H) with adhesive (see page 19).

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

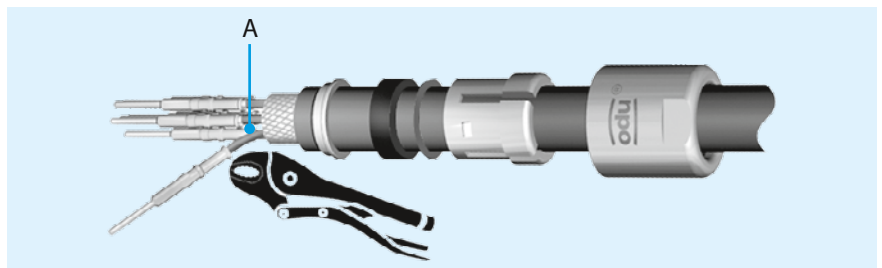
## Assembly Sealed Plugs, Series K (IP 68) Crimp Version



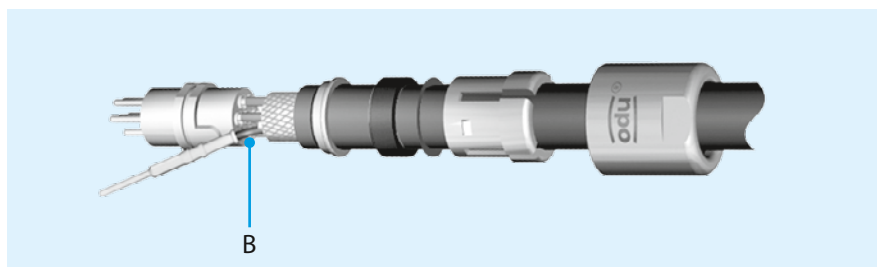
1. Slide back nut, cable collet, washer, sealing and EMI ring (and possibly cable bend relief) over the cable.



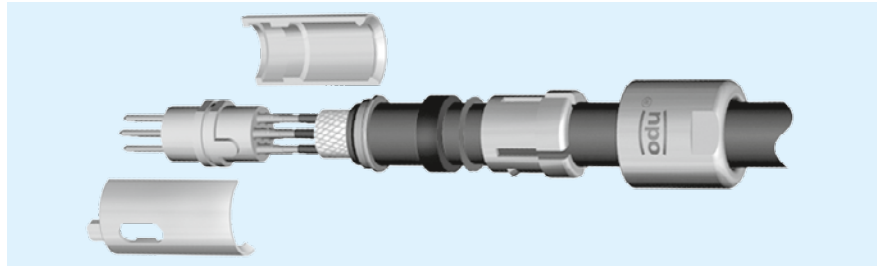
2. Strip cable and wire corresponding the table (see page 18).
3. Fit wire into the contact barrel and crimp (A).



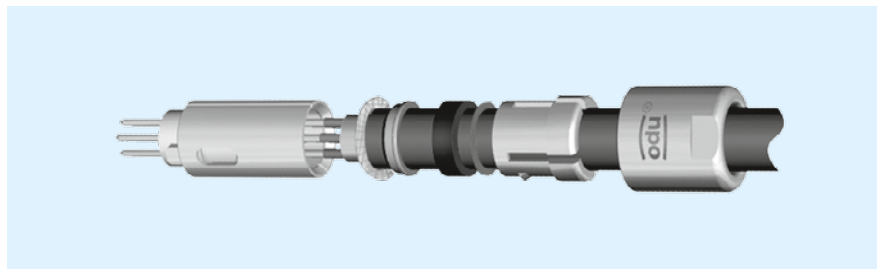
4. Insert contacts into insulator and insert with insertion tool (B).



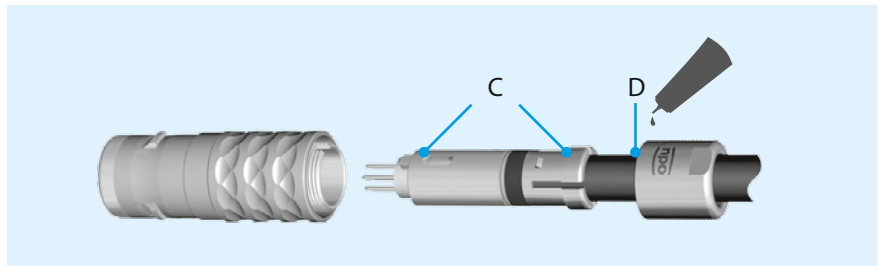
5. Bend cable shield outwards, assemble half-shells.



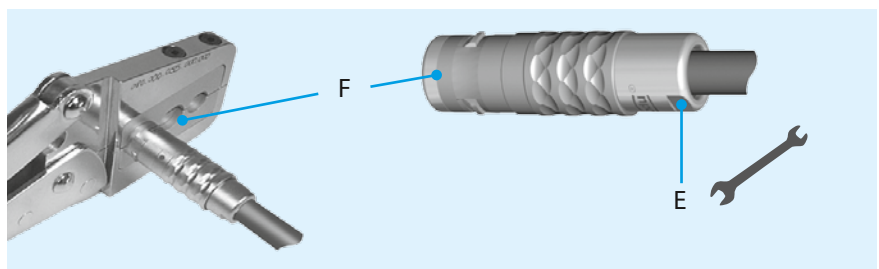
6. Slide the EMI ring, sealing, washer and cable collet against the sleeve and clamp the shield between them.



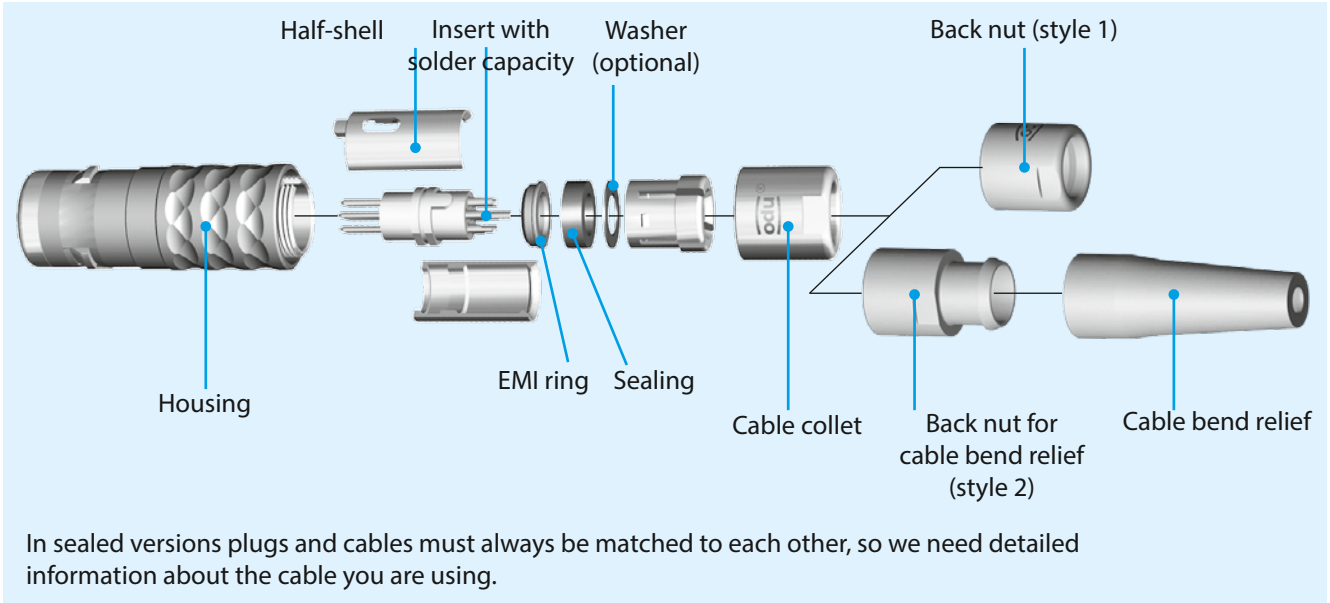
7. Now you can put the assembled cable considering the guidings (C) into the connector housing. If necessary, secure thread (D) with adhesive (see page 19).



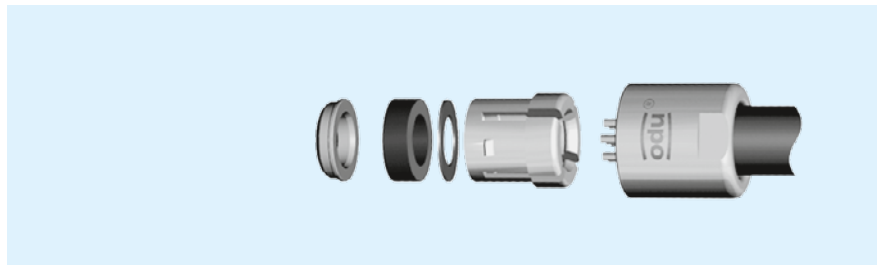
8. Screw back nut on the plug and fasten cable in the housing. Tighten with the ODU spanner wrench (E) and hold against with ODU tongs (F) (see page 19). Caution! Consider tightening torque (see page 18). The assembly is finished.



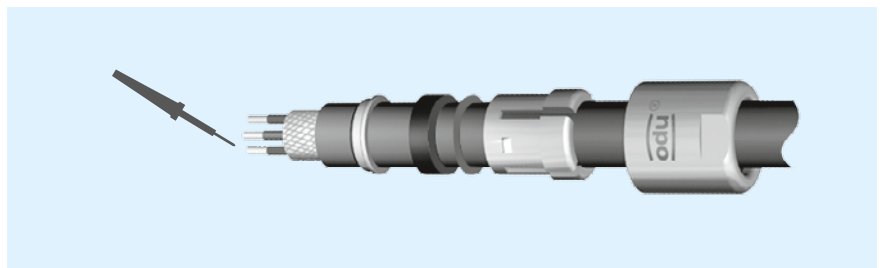
**Assembly Sealed Plugs, Series K (IP 68)  
 Solder Version**



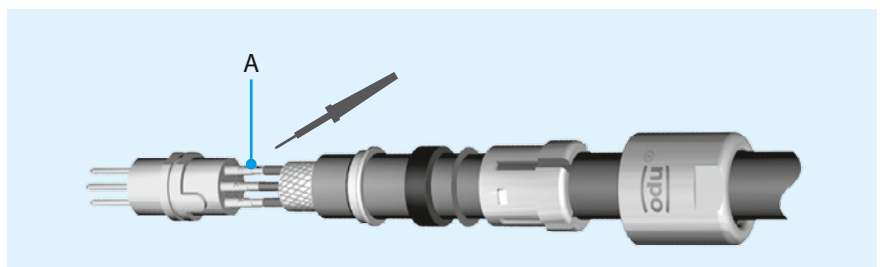
1. Slide back nut, cable collet, washer, sealing and EMI ring (and possibly cable bend relief) over the cable.



2. Strip cable and wire corresponding the table (see page 18).
3. Pre-tinning of strands.

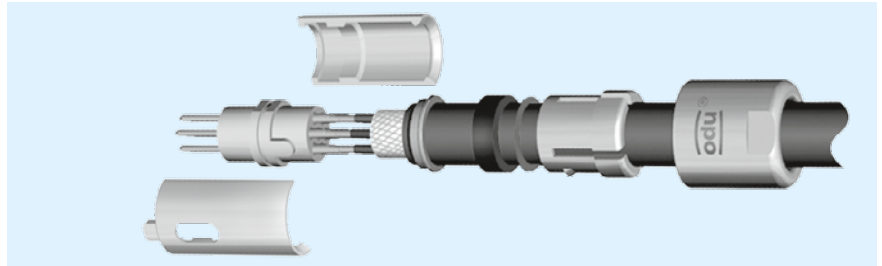


4. Solder each wire (A) to the corresponding contact.

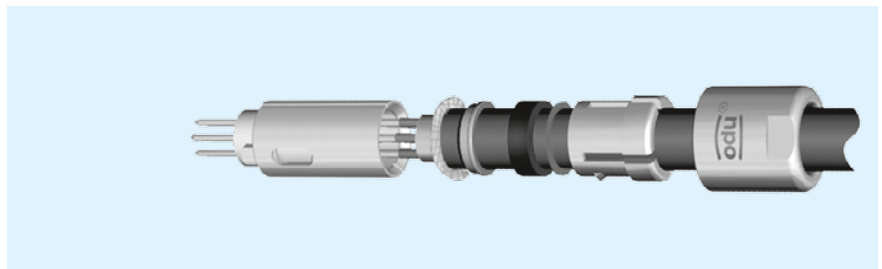




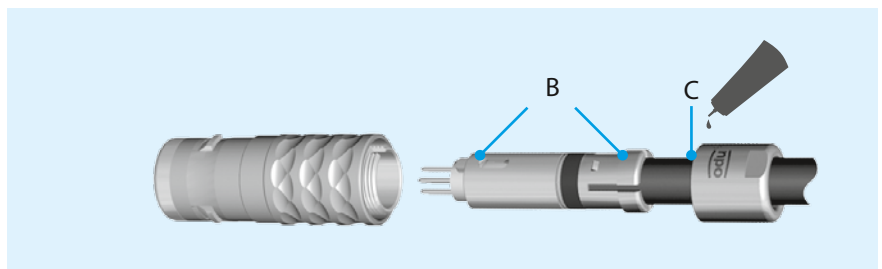
5. Bend cable shield outwards, assemble half-shells.



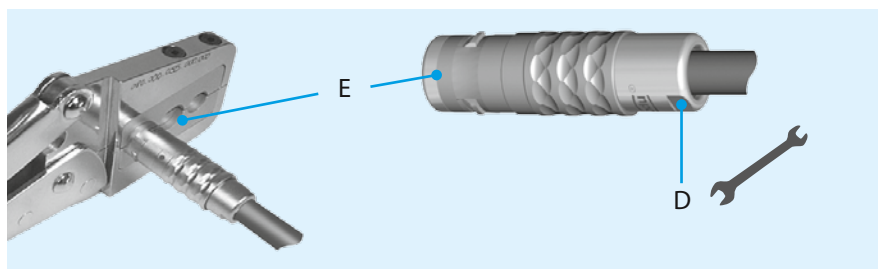
6. Slide the EMI ring, sealing washer and cable collet against the sleeve and clamp the shield between it.



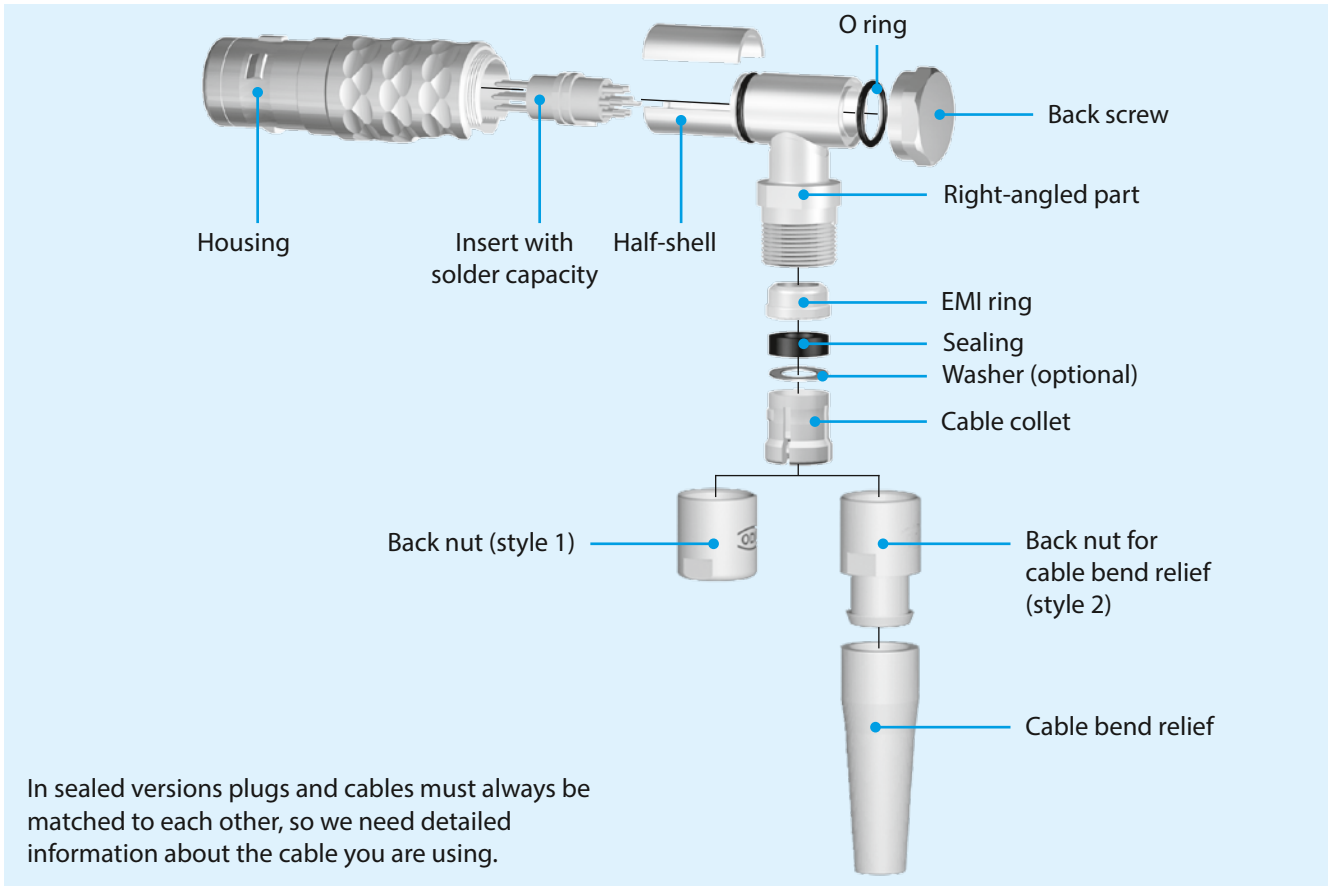
7. Now you can put the assembled cable considering the guidings (B) into the connector housing. If necessary, secure thread (C) with adhesive (see page 19).



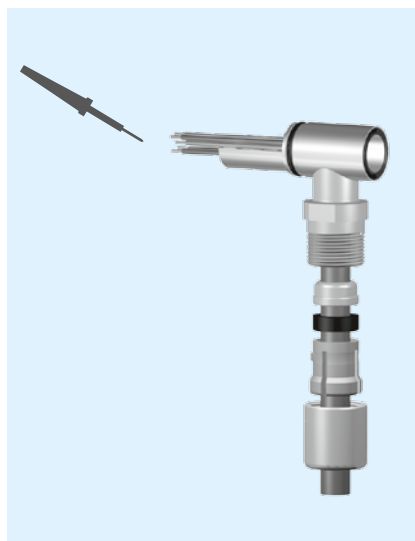
8. Screw back nut on the plug and fasten cable in the housing. Tighten with the ODU spanner wrench (D) and hold against with ODU tongs (E) (see page 19). Caution! Consider tightening torque (see page 18). The assembly is finished.



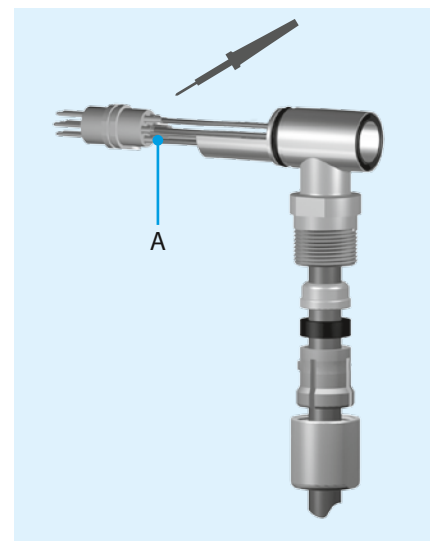
**Assembly Sealed Right-Angled Plugs, Series K (IP 68)**



1. Slide back nut, cable collet, washer, sealing, EMI ring and right-angled part (and possibly cable bend relief) over the cable.

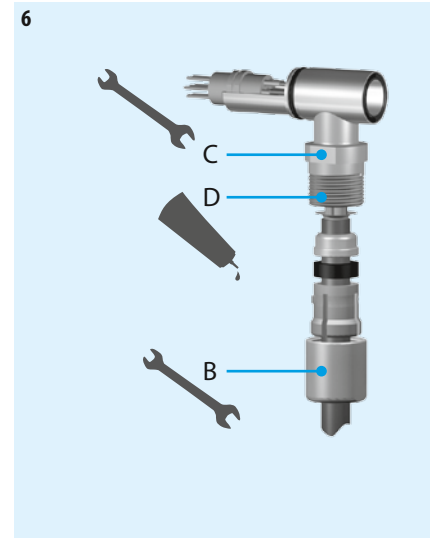
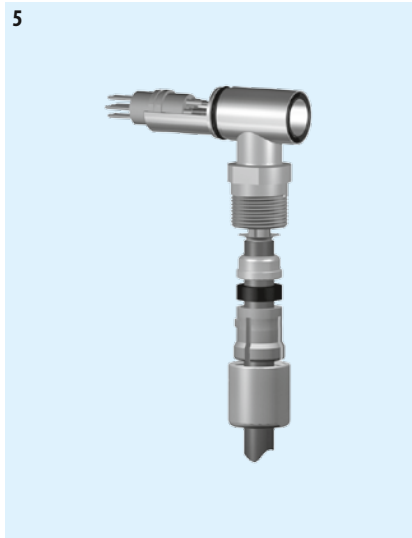


2. Strip cable and wire corresponding the table (see page 18).  
 3. Pre-tinning of strands.

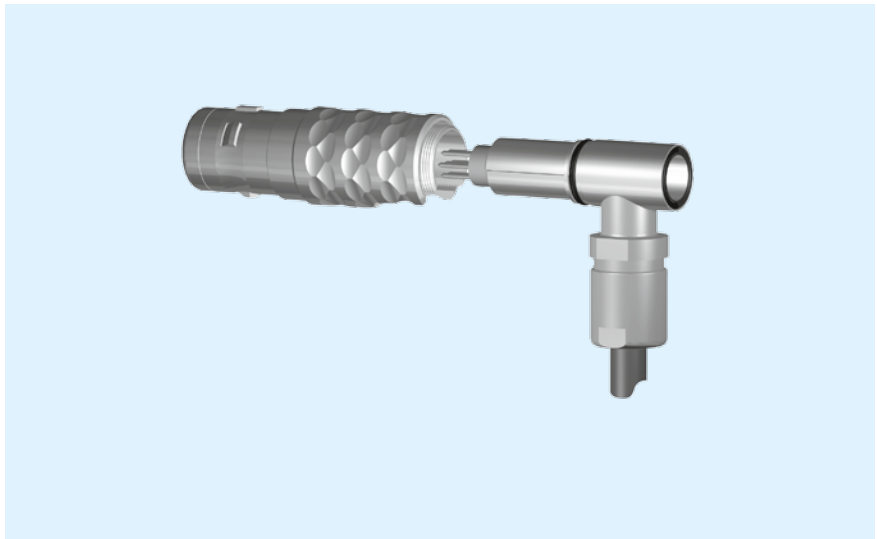


4. Solder each wire (A) to the corresponding contact (crimp version see straight connector).

5. Pull cable back. Spread the cable shield over collet ring.
6. Slide EMI-ring, sealing, washer and cable collet against the right-angled part and clamp the shield between EMI ring and right-angled part. Screw back nut (B) on the right-angled part, counterhold by means of the spanner flat (C) and hold against with ODU spanner wrench. If necessary, secure thread (D) with adhesive (see page 19).  
 Caution! Consider tightening torque (see page 18).  
 Please half-shell over insulator.

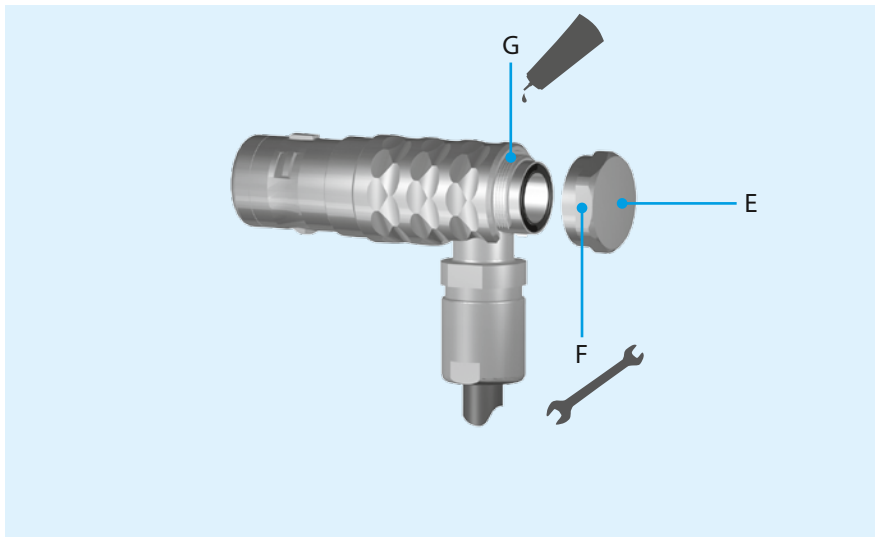


7. Now you can put the assembled cable considering the guidings into the connector housing.

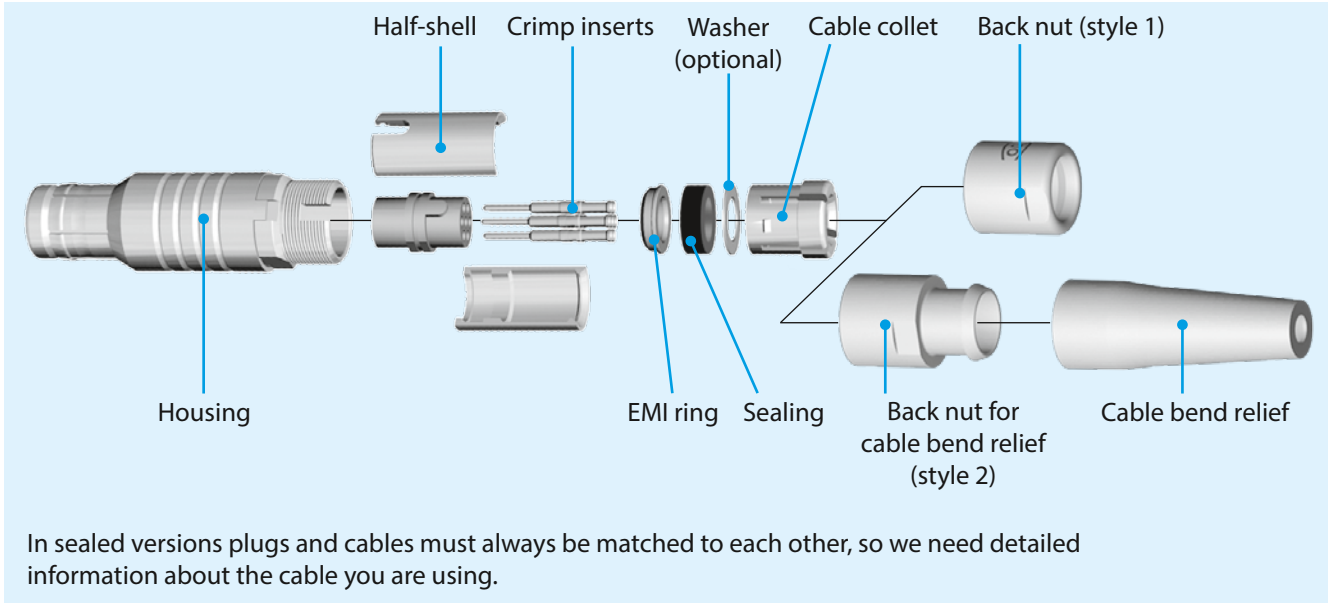


8. Mount back screw (E) on the plug and fasten cable in the housing and tighten with the ODU spanner wrench (F). If necessary, secure thread (G) with adhesive (see page 19).

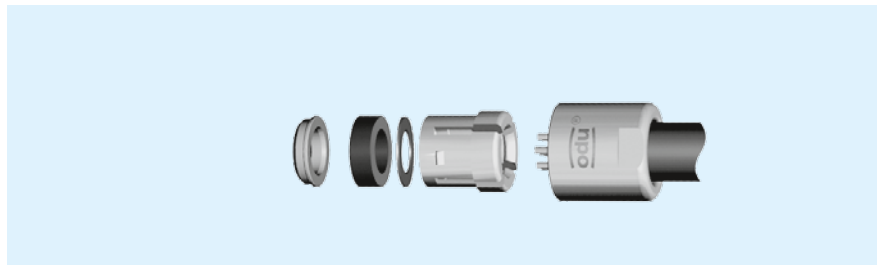
Caution! Consider tightening torque (see page 19).  
 The assembly is finished.



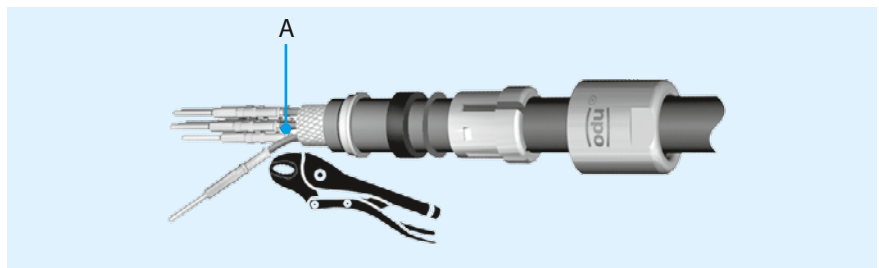
## Assembly Sealed Plugs, Series B (IP 68) Crimp Version



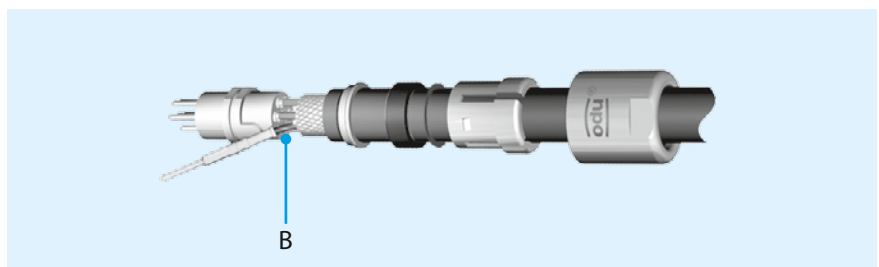
1. Slide back nut, cable collet, washer, sealing and EMI ring (and possibly cable bend relief) over the cable.



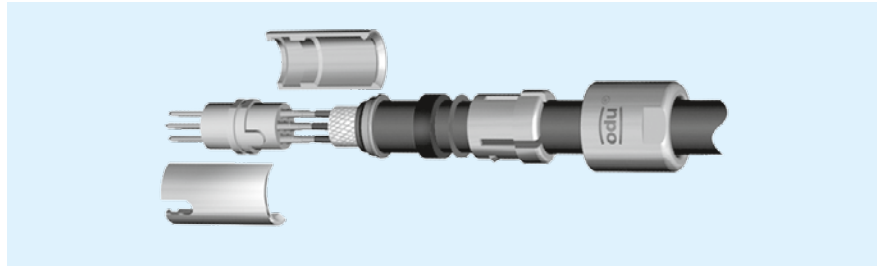
2. Strip cable and wire corresponding the table (see page 18).
3. Fit wire into the contact barrel and crimp (A).



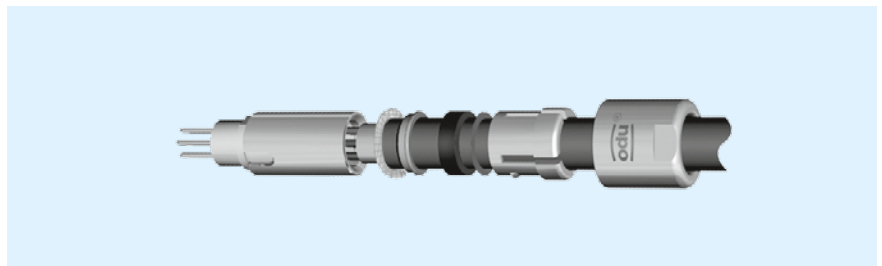
4. Insert contacts according to contact arrangement into insulator and insert with insertion tool (B).



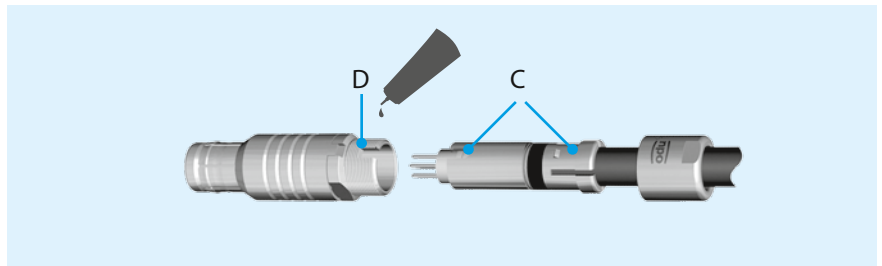
5. Bend cable shield outwards, assemble half-shells.



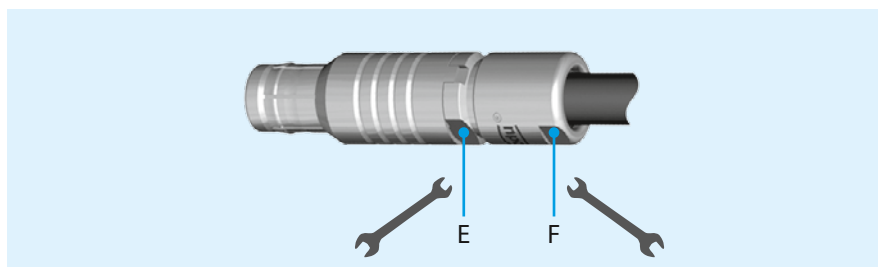
6. Slide the EMI ring, sealing, washer and cable collet against the sleeve and clamp the shield between it.



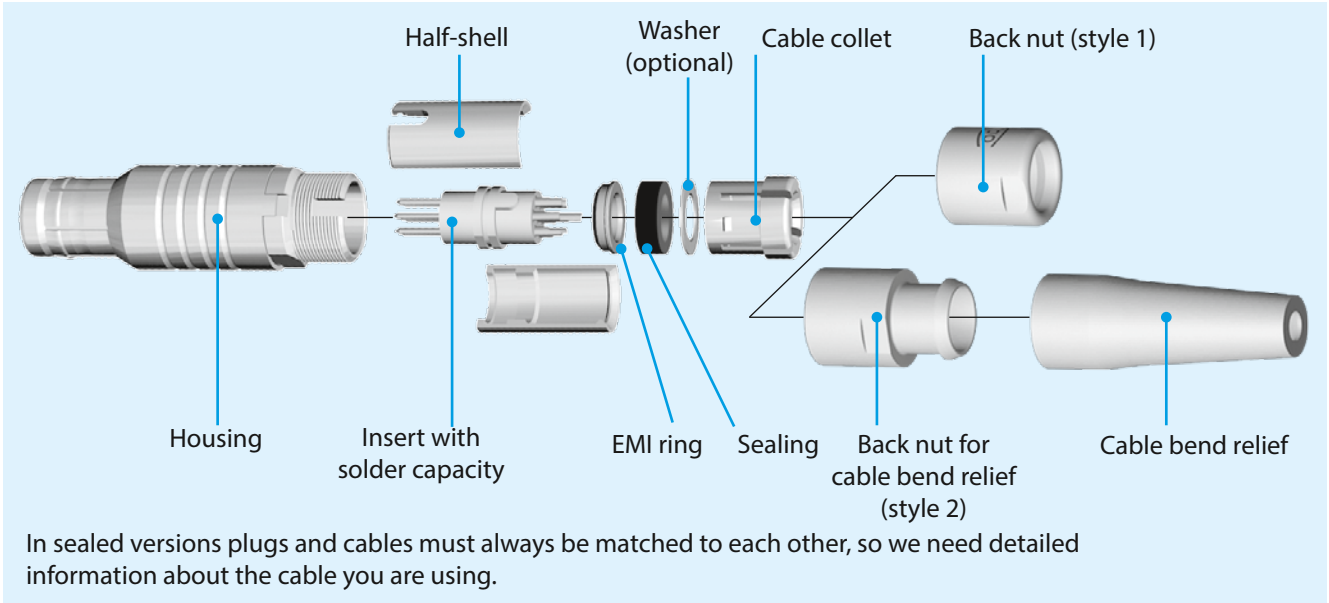
7. Now you can put the assembled cable considering the guidings (C) into the connector housing. If necessary, secure thread (D) with adhesive (see page 19).



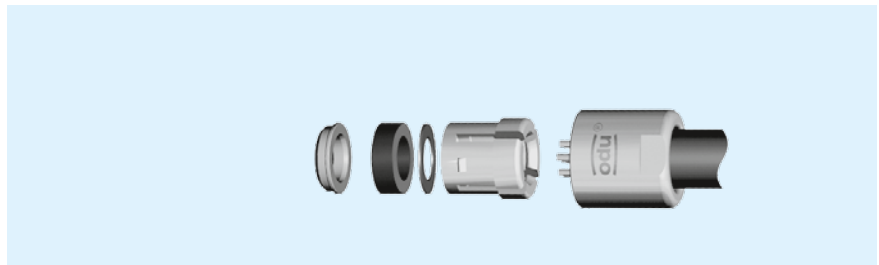
8. Screw back nut on the plug, hold against flat (E) and fasten cable with the ODU spanner wrench in the housing (F). Caution! Consider tightening torque (see page 18). The assembly is finished.



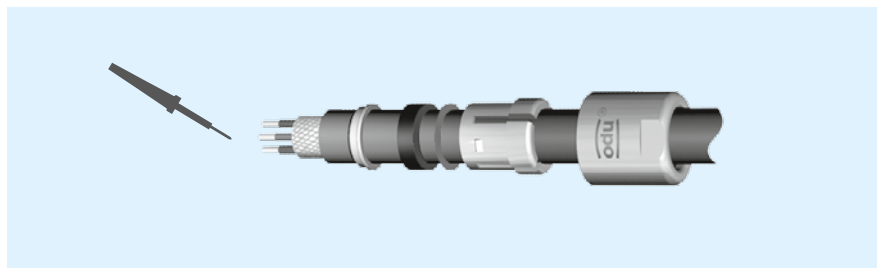
**Assembly Sealed Plugs, Series B (IP 68)  
 Solder Version**



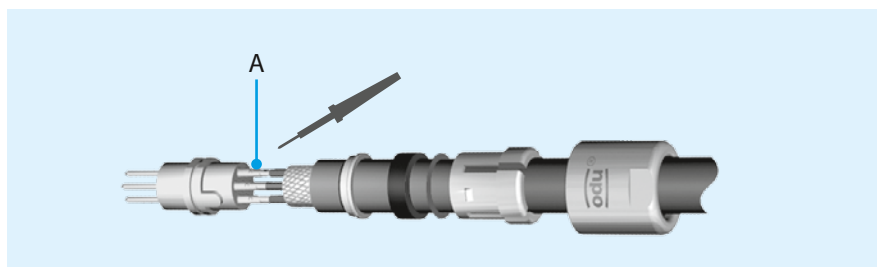
1. Slide back nut, cable collet, washer, sealing and EMI ring (and possibly cable bend relief) over the cable.



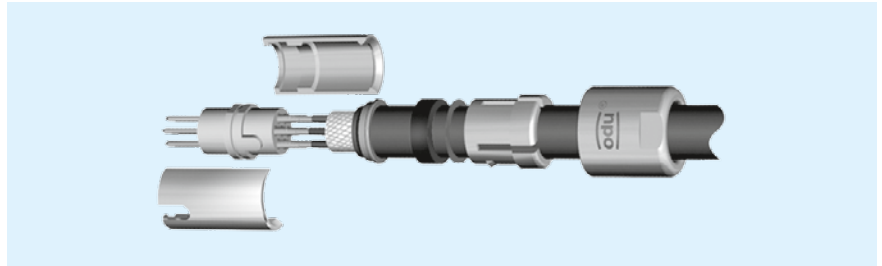
2. Strip cable and wire corresponding the table (see page 18).
3. Pre-tinning of strands.



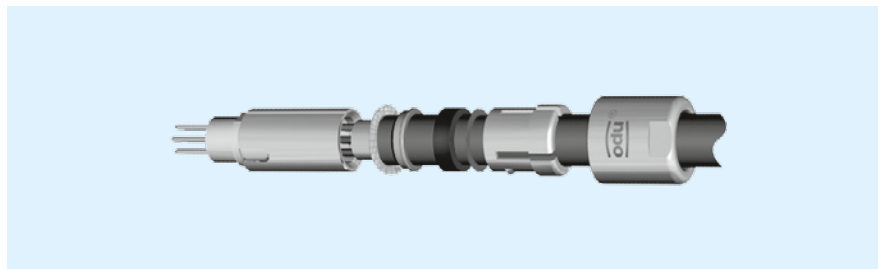
4. Solder each wire (A) to the corresponding contact.



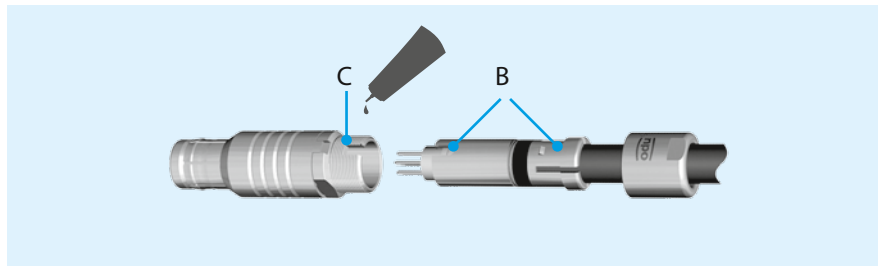
5. Bend cable shield outwards, assemble half-shells.



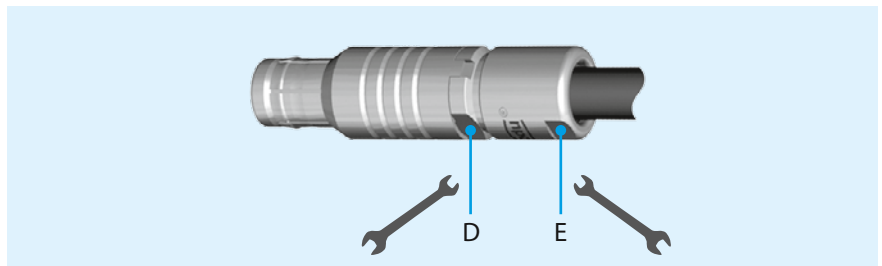
6. Slide the EMI ring, sealing, washer and cable collet against the sleeve and clamp the shield between it.



7. Now you can put the assembled cable considering the guidings (B) into the connector housing. If necessary, secure thread (C) with adhesive (see page 19).

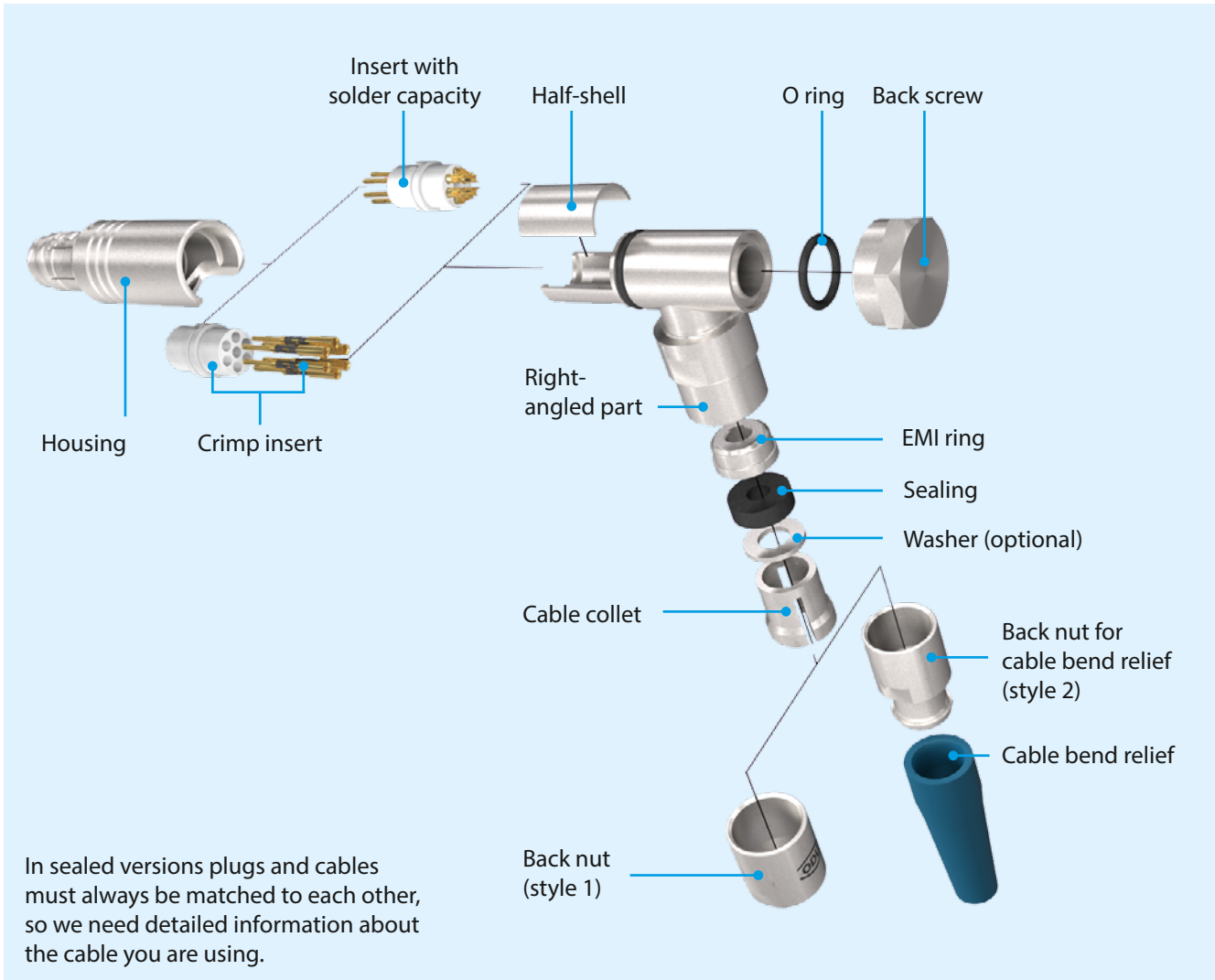


8. Screw back nut on the plug, hold against flat (D) and fasten cable with the ODU spanner wrench in the housing (E).

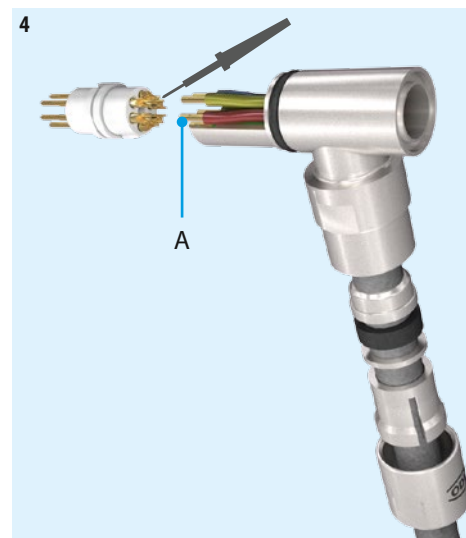
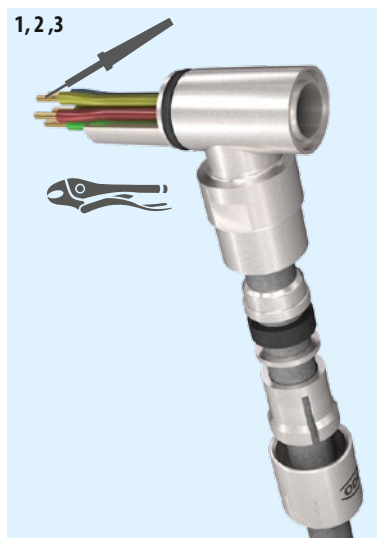


Caution! Consider tightening torque (see page 18).  
 The assembly is finished.

## Assembly Sealed Right-Angled Plugs, Series B (IP 68) Crimp and Solder Version



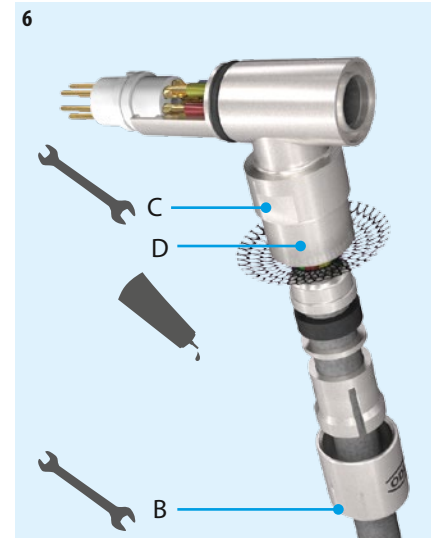
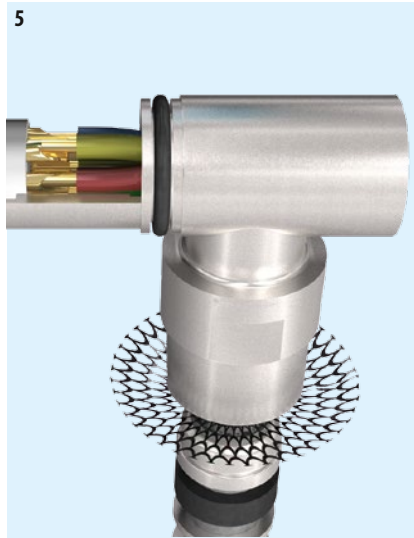
1. Slide back nut, cable collet, washer, sealing, EMI ring and right-angled part (and possibly cable bend relief) over the cable.
2. Strip cable and wire corresponding the table (see page 18).
3. Pre-tinning of strands.
4. Solder each wire (A) to the corresponding contact (crimp version see straight connector).



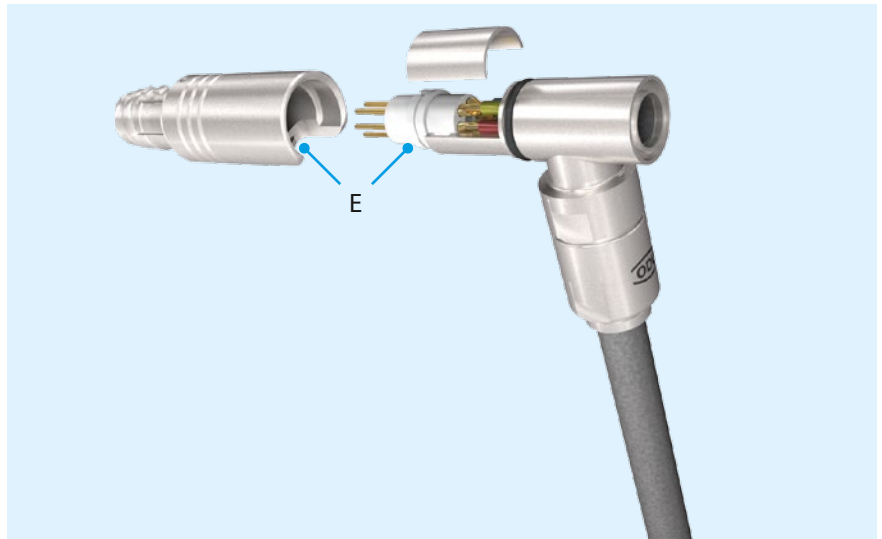


5. Pull cable back. Spread the cable shield over the collet ring.
6. Slide EMI ring, sealing, washer, cable collet against the right-angled part and clamp the shield between EMI ring and right-angled part.

Screw back nut (B) on the right-angled part and hold against on flat (C) with the ODU spanner wrench. If necessary, secure thread (D) with adhesive (see page 19). Caution! Consider tightening torque (see page 18).

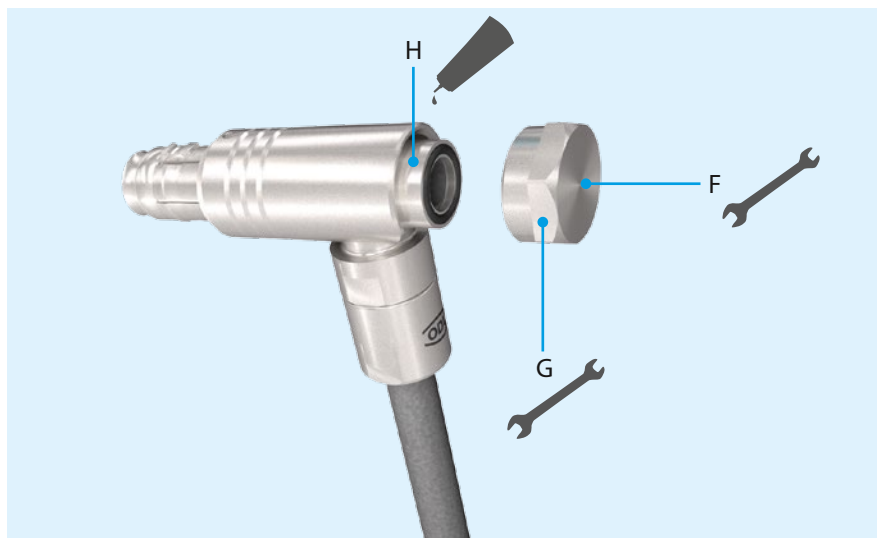


7. Please half-shell over insulator. Now you can put the assembled cable considering the guidings (E) into the connector housing.



8. Mount back screw (F) on the plug and fasten cable with the ODU spanner wrench in the housing (G). If necessary, secure thread (H) with adhesive (see page 19).

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



## Notes for Plugs and Right-Angled Plugs, Series L (IP 50), K (IP 68) and B (IP 68) Crimp and Solder Version

### 1. Tightening torque for back nuts

Tightening torque for styles

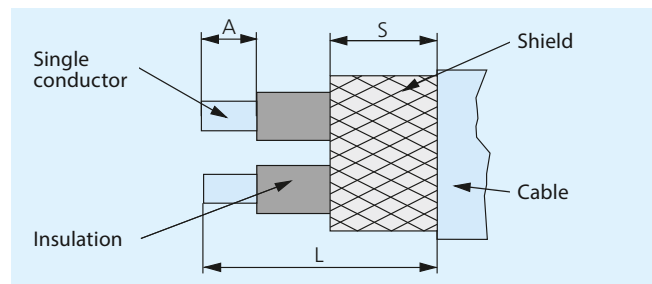
- Straight plug S1, S2, S3, S4, S7, S8
- Right-angled plug W1, W2, W3, W4
- Break-Away plug A1, A2, A5, A6
- In-line receptacle K1, K2, K3, K4
- Receptacle G6, G7

| Size                    | 00   | 0   | 1   | 2   | 3   | 4   |
|-------------------------|------|-----|-----|-----|-----|-----|
| Tightening torque in Nm | 0.25 | 0.6 | 1.0 | 2.0 | 3.5 | 3.5 |

1 Nm = 8.85 inch-pounds

### 2. Stripping length for turned contacts

The following table provides recommended guidelines for the cable assembly. It contains guideline figures for the preparation of the cable in relation to the stripping lengths.



A = Stripping length single conductor  
 L = Stripping length cable jacket  
 S = Stripping length braided shield

| Size | Straight plug      |   |     |                   |   |     | Right-angled plug series L |   |     |                   |   |     | Right-angled plug IP 68 series B |   |     |                   |   |     |
|------|--------------------|---|-----|-------------------|---|-----|----------------------------|---|-----|-------------------|---|-----|----------------------------------|---|-----|-------------------|---|-----|
|      | Solder termination |   |     | Crimp termination |   |     | Solder termination         |   |     | Crimp termination |   |     | Solder termination               |   |     | Crimp termination |   |     |
|      | L                  | A | S   | L                 | A | S   | L                          | A | S   | L                 | A | S   | L                                | A | S   | L                 | A | S   |
| 00   | 5                  | 2 | 2   | –                 | – | –   | 11                         | 2 | 2   | –                 | – | –   | –                                | – | –   | –                 | – | –   |
| 0    | 7                  | 2 | 2.5 | 10                | 3 | 2.5 | 16                         | 2 | 2.5 | 21                | 3 | 2.5 | 18                               | 2 | 2.5 | 21                | 3 | 2.5 |
| 1    | 9                  | 2 | 2.5 | 12                | 3 | 2.5 | 18                         | 2 | 2.5 | 21                | 3 | 2.5 | 18                               | 2 | 2.5 | 21                | 3 | 2.5 |
| 2    | 11                 | 2 | 2.5 | 14                | 3 | 2.5 | 27                         | 2 | 2.5 | 30                | 3 | 2.5 | 27                               | 2 | 2.5 | 30                | 3 | 2.5 |
| 3    | 13                 | 2 | 2.5 | 17                | 3 | 2.5 | 30                         | 2 | 2.5 | 32                | 3 | 2.5 | 28                               | 2 | 2.5 | 32                | 3 | 2.5 |
| 4    | 21                 | 2 | 2.5 | 26                | 3 | 2.5 | 43                         | 2 | 2.5 | 48                | 3 | 2.5 | –                                | – | –   | –                 | – | –   |

All dimensions in mm. Exceptions are noted on special instructions. Right-angled plugs have special instructions.

### 3. Tightening torque for back screw (right-angled plugs)

| Size | Unsealed right-angled plugs, series L (IP 50) | Sealed right-angled plugs, series K (IP 68) | Sealed right-angled plugs, series B (IP 68) |
|------|---|---|---|
|      | Nm  | Nm  | Nm  |
| 00   | 0.25  | –   | –   |
| 0    | 0.3   | 0.3   | 0.3   |
| 1    | 0.4   | 0.4   | 0.4   |
| 2    | 0.9   | 0.9   | 0.9   |
| 3    | 1.3   | 1.3   | 1.3   |
| 4    | 2.0   | –   | –   |

### 4. Tools/Accessories

- ODU open-ended spanner see [ODU MINI-SNAP, series L, K, B product catalogue](#) section accessories and tools
- ODU crimping tool see [ODU MINI-SNAP, series L, K, B product catalogue](#) section accessories and tools
- ODU mounting plier straight plug, series K: part number 080.000.055.000.000

### 5. Recommended adhesive for back nut

Loctite® 243™, ODU part number 890.204.000.030.031