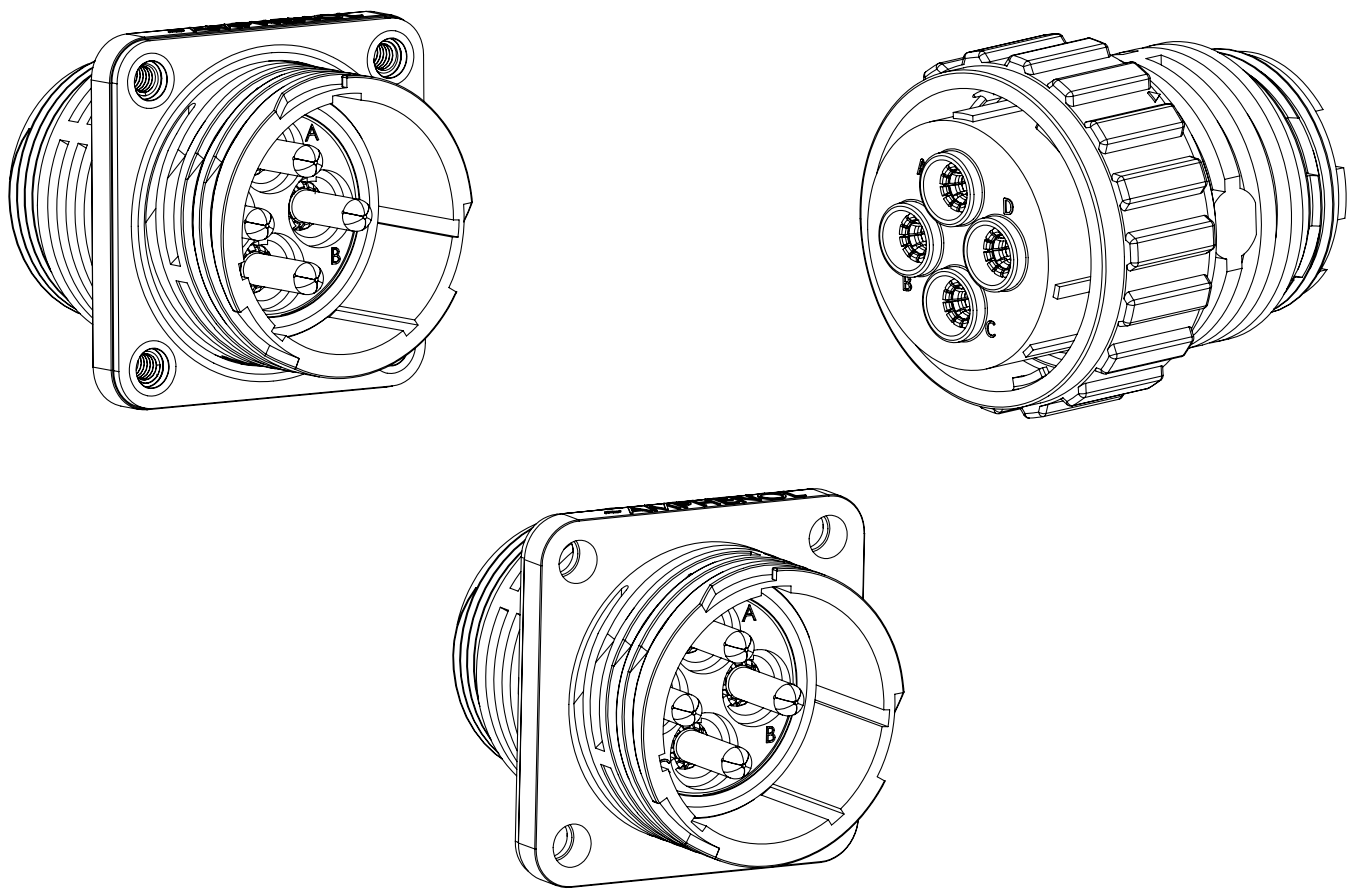


APC series product installation (18-4)



Revision	Date	Position	Description	Owner
A	2022/12/16	N/A	Initial release	Andy Zhang

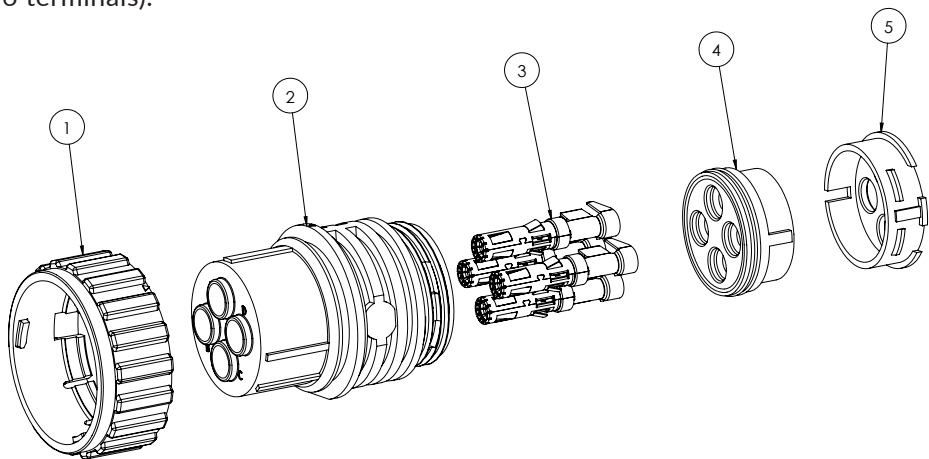
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1: Product composition

Note:Terminals need to be purchased separately and are not included in the connector part number. The number of terminals varies according to the insert arrangement : 18-4 (4 terminals), 18-11 (5 terminals), and 18-15 (16 terminals).

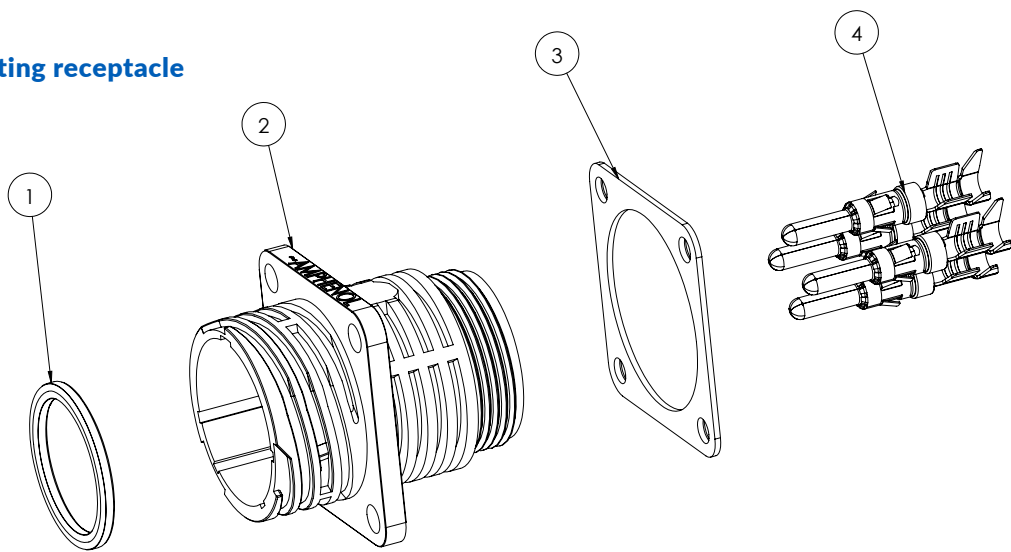
Plug



NO.	Description	QTY.
1	Coupling nut	1
2	Housing	1
3	#10 contact	4

NO.	Description	QTY.
4	Grommet	1
5	Cover	1
/	/	/

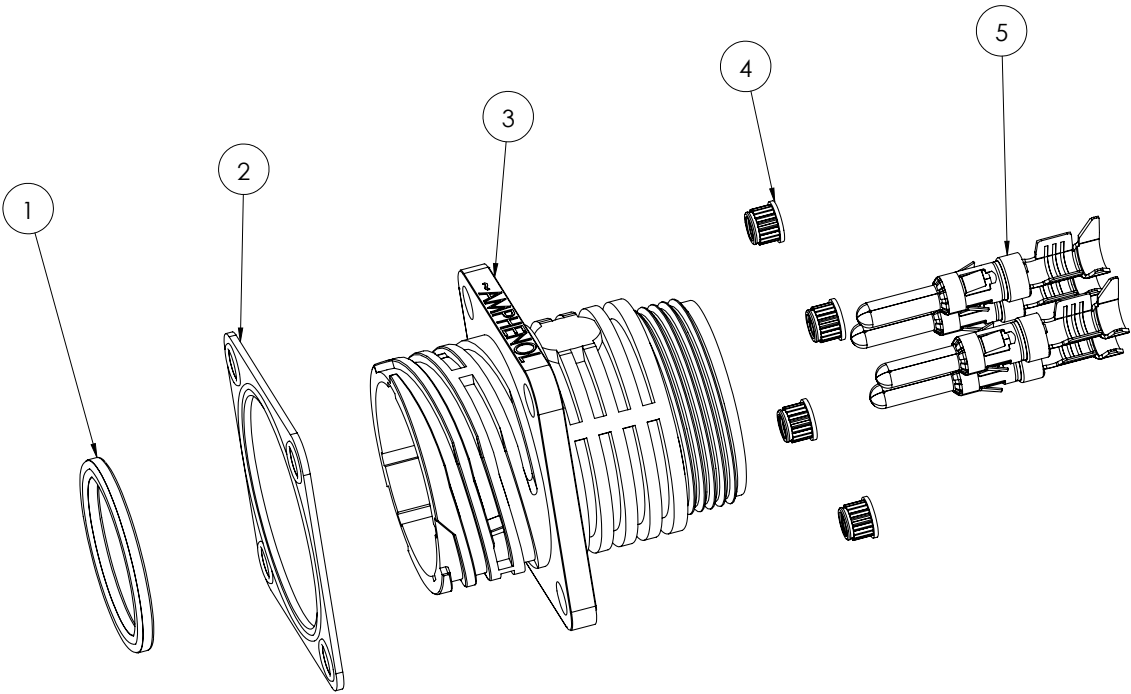
Front mounting receptacle



NO.	Description	QTY.
1	Coupling nut	1
2	Housing	1

NO.	Description	QTY.
3	Gasket	1
4	#10 contact	4

Rear mounting receptacle



NO.	Description	QTY.
1	Sealing ring	1
2	Gasket	1
3	Housing	1

NO.	Description	QTY.
4	Nut	4
5	#10 contact	4
/	/	/

2: Product assembly

Step 1: Stripping wire

As shown in Figure 1 and Table 1, strip the wire, and ensure that the cut surface of the insulation layer is smooth, the wire is not damaged, and the cut surface of the wire is flush.

Table 1

Contact size	A
10	6.0 ± 0.4
12	6.0 ± 0.4
16	4.8 ± 0.4

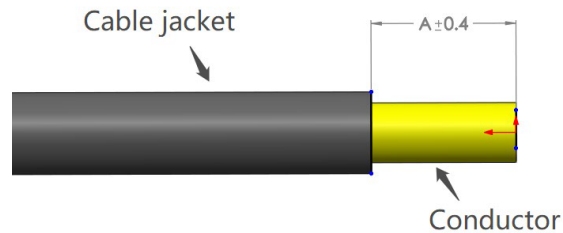


Figure 1

Step 2: Crimping contacts

Use the automatic crimp tool or manual crimp tool to crimp the terminal. The crimp width and height diameter of the terminal on the insulation layer shall not be larger than the aperture of the connector shell, as shown in Figure 2. (18-4 hole diameter 5.7mm, 18-11 hole diameter 4.5mm, 18-16 hole diameter 3.35mm)

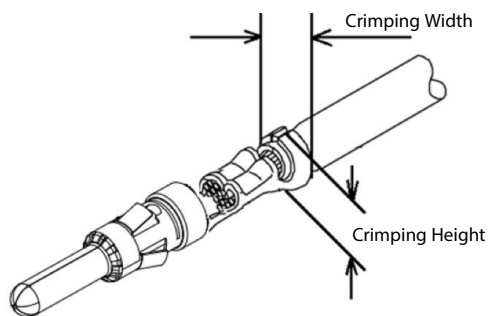


Figure 2

2: Product assembly continue

Step 3: Check after crimping

Check appearance and pulling force after crimping terminals. The appearance must not be deformed. For details, see IPC620. The pulling force should be measured according to the tension value corresponding to the actual wire diameter, which should not be lower than the requirement of tension value in Table 2.

Table 2

Conductor		Pulling force	
AWB	mm ²	Pounds	N
20AWG	0.519 mm ²	13	57.9
18AWG	0.823 mm ²	20	89.0
16AWG	1.31 mm ²	30	133.5
14AWG	2.08 mm ²	50	222.5
12AWG	3.31 mm ²	70	311.5
10AWG	5.261 mm ²	80	356.0

Step 4: Install contacts

As shown in Figure 3, insert the crimped terminal and cable from the end of the connector according to the holes required by the customer. If you hear a click, the terminal is installed in place. Gently pull the cable and ensure that the terminals are properly installed.

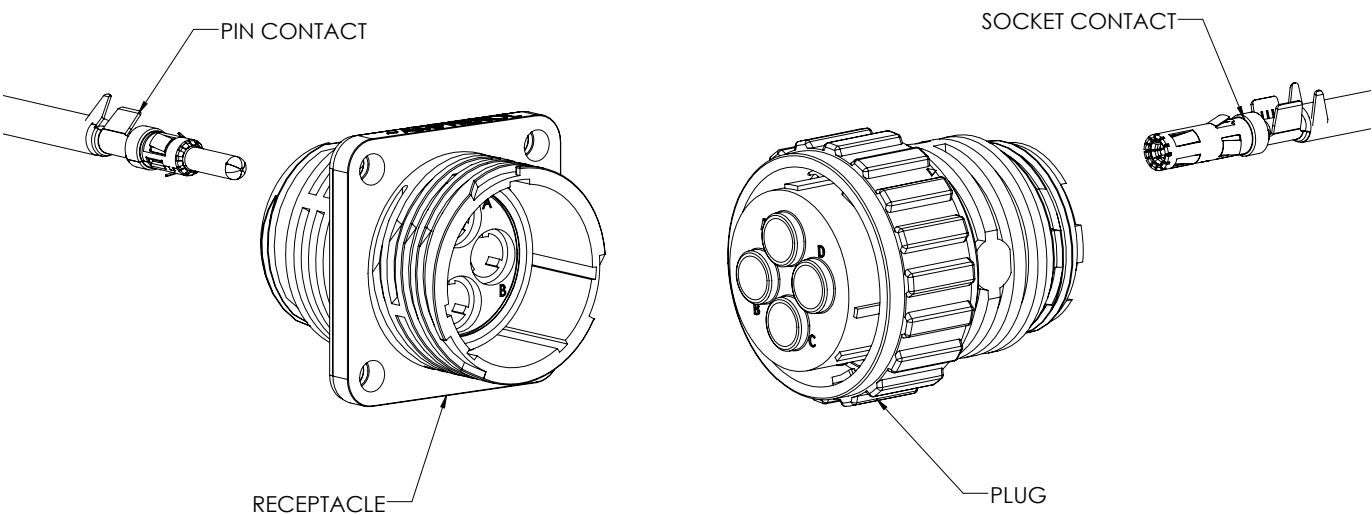


Figure 3

2: Product assembly continue

Step 5: Install receptacle

As shown in Figure 4, install the receptacle on the panel. Please select the appropriate size of the panel (as shown in Figure 5). The screw holes in the rear panel are through holes, and the screw holes in the front panel are threaded holes.

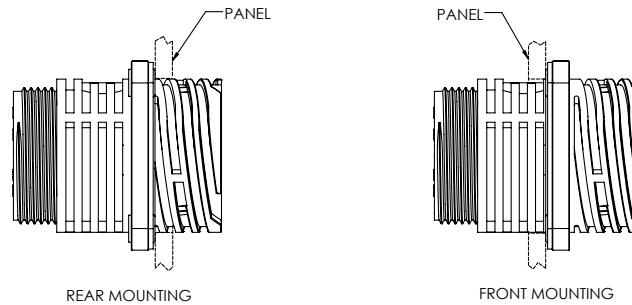
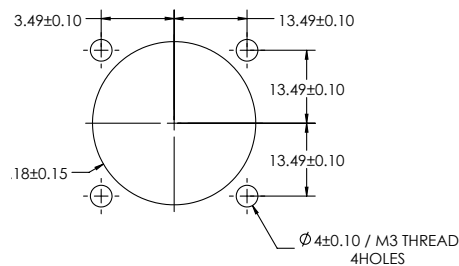


Figure 4



Size 18 Receptacle Panel cut-out (Rear-mounting/front-mounting)

Figure 5

Step 6: Mating plug and receptacle

Align the keys on the plug and receptacle and tighten the connecting nuts on the plugs to align them. When plug and receptacle are mated well, the triangle identifier on the coupling nut will align with the triangle identifier on the plug housing, as shown in Figure 6.

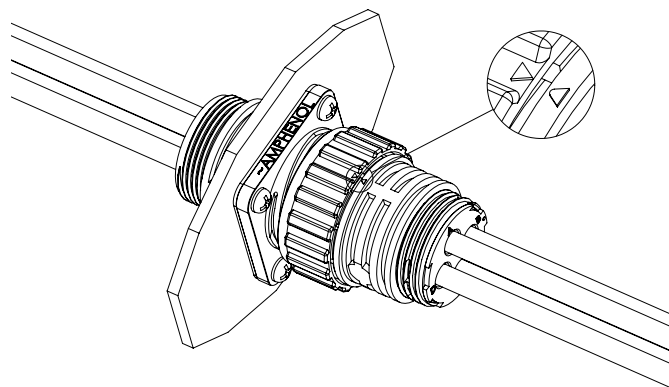
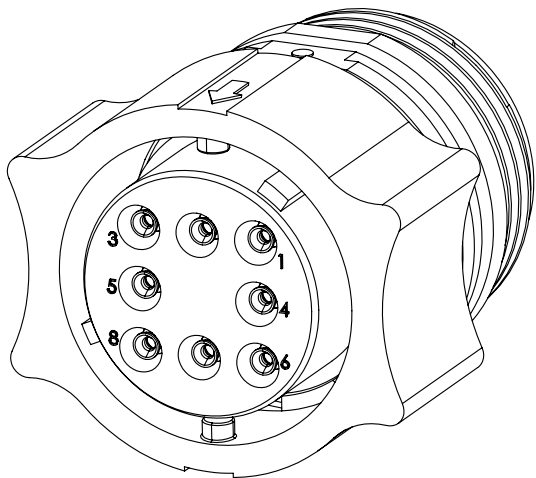
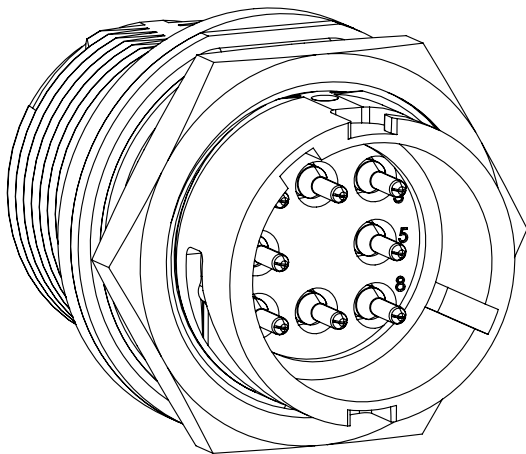
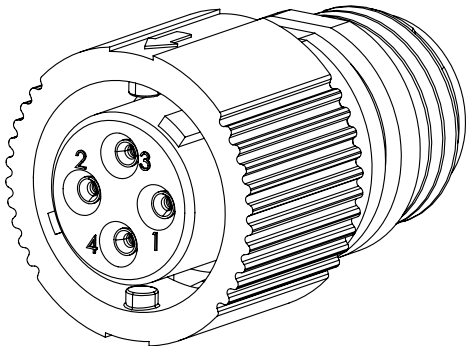
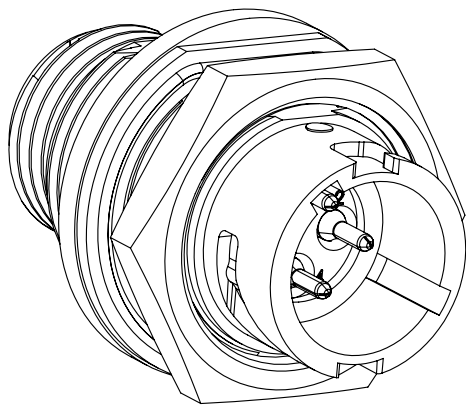


Figure 6

Mini APC series product installation



Revision	Date	Position	Description	Owner
A	2022/11/14	N/A	Initial release	Andy Zhang
B	2022/12/26	N/A	Update figures and add checking force after crimping	Andy Zhang

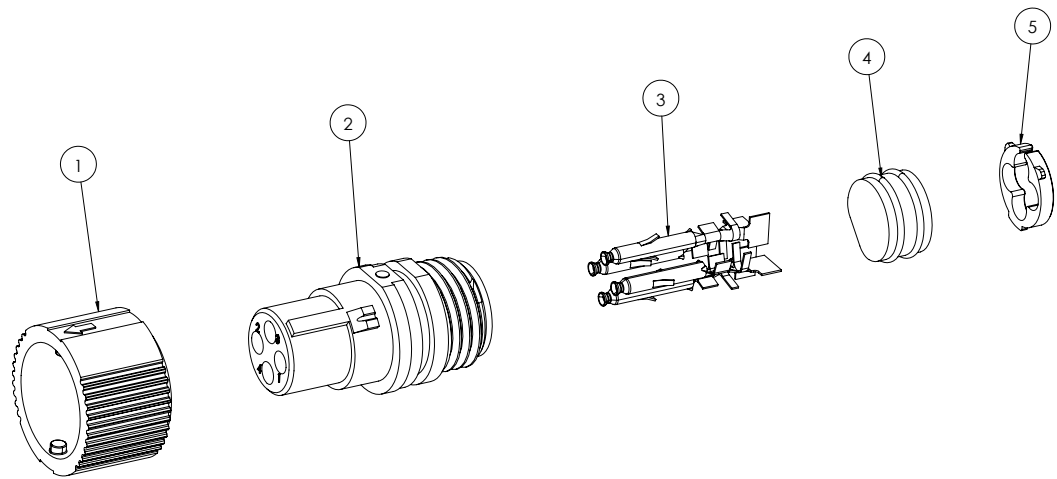
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 - Step 5: Install receptacle 12
 - Step 6: Mating plug and receptacle 13

1: Product composition

Note:Terminals need to be purchased separately and are not included in the connector part number.
The number of terminals varies according to the insert arrangement :
18-4 (4 terminals), 18-11 (5 terminals), and 18-15 (16 terminals).

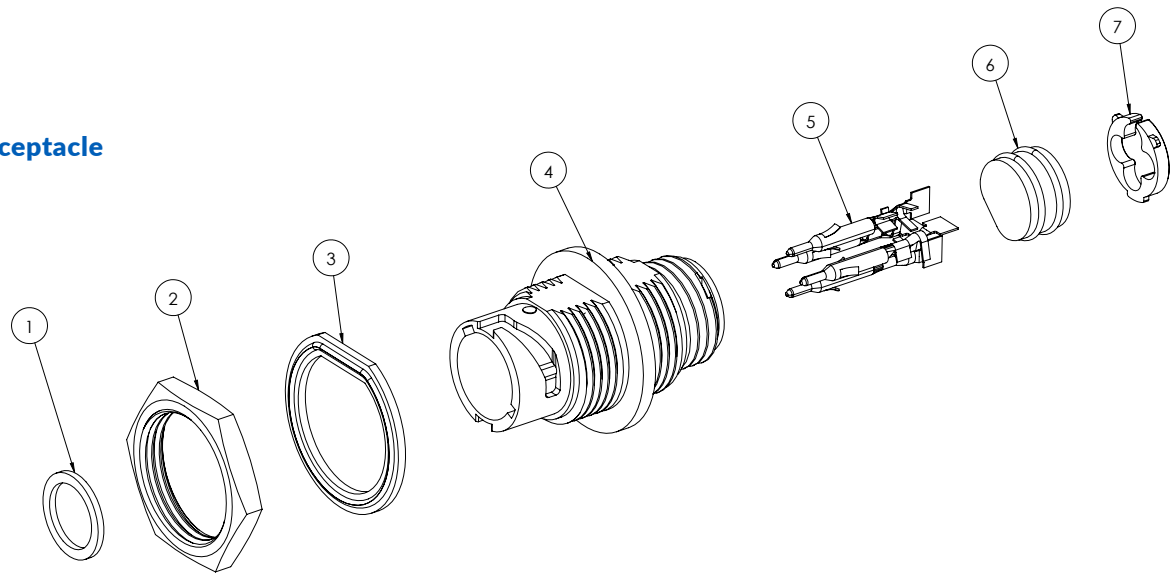
Plug



NO.	Description	QTY.
1	Coupling nut	1
2	Housing	1
3	Contact	4

NO.	Description	QTY.
4	Grommet	1
5	Cover	1
/	/	/

Receptacle



NO.	Description	QTY.
1	Coupling nut	1
2	Housing	1
3	Gasket	1
4	Housing	1

NO.	Description	QTY.
5	Contacts	4
6	Grommet	1
7	Cover	1
/	/	/

2: Product assembly

Step 1: Stripping wire

As shown in Figure 1, cut the wire. During cutting, ensure that the cut surface of the insulation layer is smooth, the wire is not damaged, and the cut surface of the wire is flush.

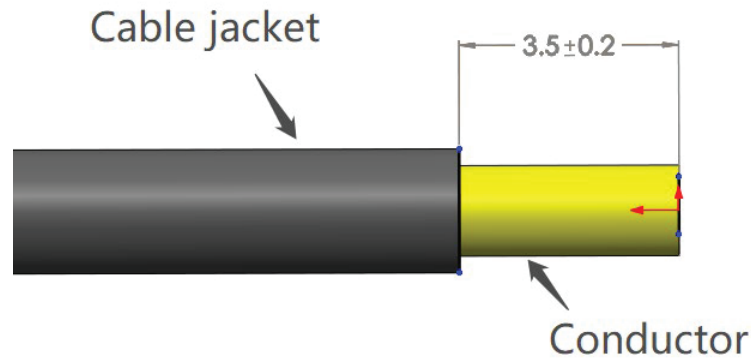


Figure 1

Step 2: Crimping contact

Use the automatic crimping tool or manual crimping tool to crimp the terminal. The width and height of the terminal on the insulation layer cannot be greater than 2.6mm, as shown in Figure 2.

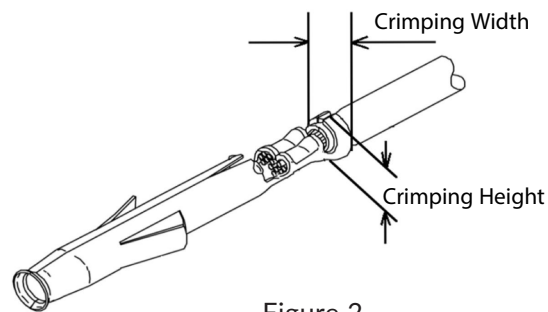


Figure 2

Step 3: Check after crimping

Check appearance and pulling force after crimping terminals. The appearance must not be deformed. For details, see IPC620. The pulling force should be measured according to the tension value corresponding to the actual wire diameter, which should not be lower than the requirement of tension value in Table 1.

Table 1

Conductor		Pulling force	
AWG	mm ²	Pounds	N
22 AWG	0.324 mm ²	8	35.6
20 AWG	0.519 mm ²	13	57.9
18 AWG	0.823 mm ²	20	89.0

2: Product assembly continues

Step 4: Install contacts

As shown in Figure 3, insert the crimped terminal and cable from the end of the connector according to the holes required by the customer. If you hear a click, the terminal is installed in place. Gently pull the cable and ensure that the terminals are properly installed.

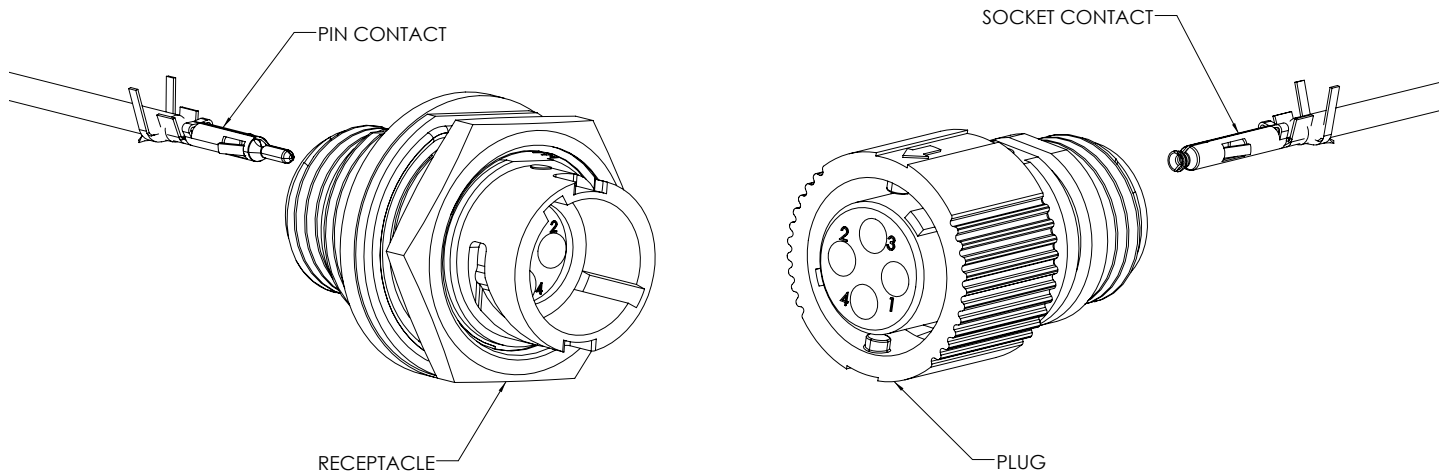


Figure 3

Step 5: Install receptacle

As shown in Figure 4, install the socket onto the panel, taking care to select a suitable panel size (as shown in Figure 5) to avoid installation errors or product failure.

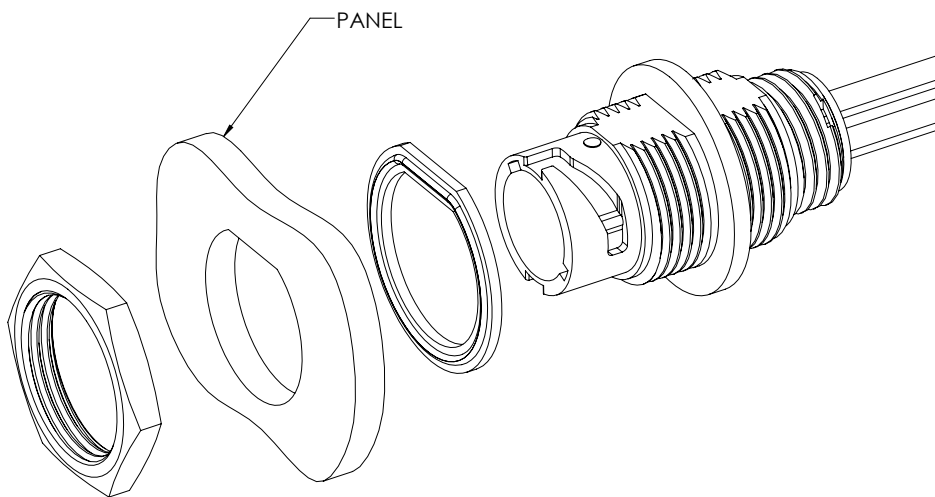


Figure 4

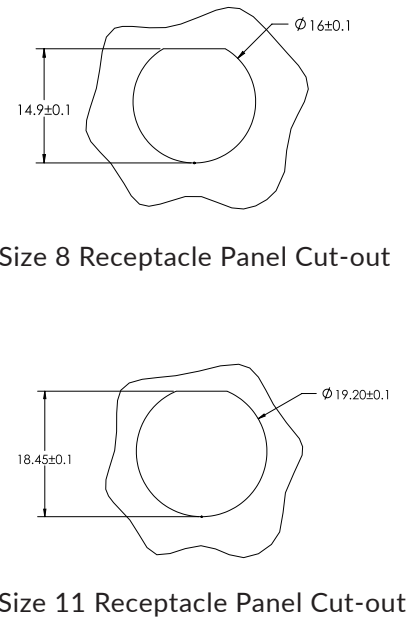


Figure 5

2: Product assembly continues

Step 6: Mating plug and receptacle

As shown in Figure 6, reset the plug first, align the arrow on the connecting nut with the mark on the plug housing, there will be an audible feedback when the reset is successful; Align the alignment marks on the plug and receptacle so that the terminals and connectors are not damaged when mating the plug and receptacle.

When you hear a click, the plug and receptacle are mated well.

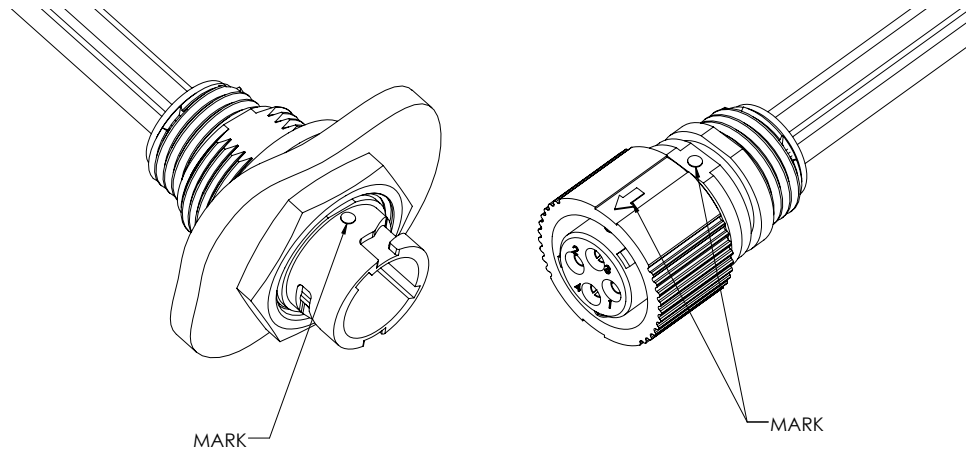


Figure 6