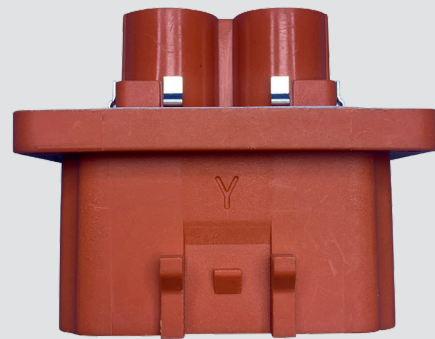


CABLE ASSEMBLY WORK INSTRUCTION

# ePower-lite 5.7mm 2 port Connector



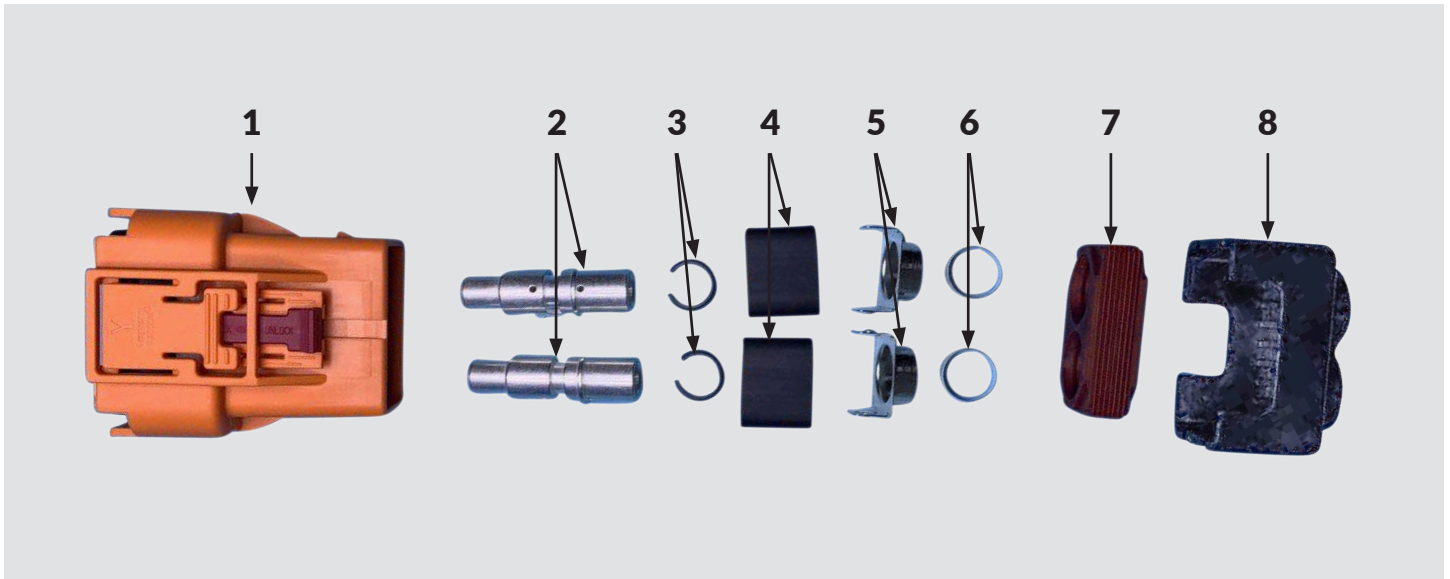
**Part Numbers:**  
C10-738986-2XS1  
C10-738986-2XS2



**Part Numbers:**  
C10-738985-2XP1  
C10-738985-2XP2

Revision	Description	Issue Date
A	Initial release	2016/03/10
B	Change the assembly method of shielding	2019/05/06
C	Update picture detail	2020/05/13

# Part 1: Plug Package Contents



## 1. Package Contents

- 1:** Housing shell assembly (1PCS)
- 2:** Contact assembly (2PCS)
- 3:** Collar (2PCS)
- 4:** Heat shrink tubing (2PCS)
- 5:** Rear shield shell (2PCS)
- 6:** Rear shield ring (2PCS)
- 7:** Rear grommet (1PCS)
- 8:** Rear cover (1PCS)

## 2. Recommended shielded wire specification

Wire Size	Insulation Diameter (mm)	Shield Wire Diameter (mm)	Cable Jacket Diameter (mm)	Recommended Min. Cable Pullout Force (N)
16 mm <sup>2</sup>	8.1±0.2	0.12	11.2±0.3	1500
25 mm <sup>2</sup>	10.2±0.2	0.12	13.9±0.3	1900

# Part 2: Plug Assembly

**Step 1:** Shielded wire stripping the jacket.



Item	Cutting Length
L1	21±0.5mm

**Step 2:** Assembly the rear shield ring (Part 6).



**Step 3:** Cutting shield wire.

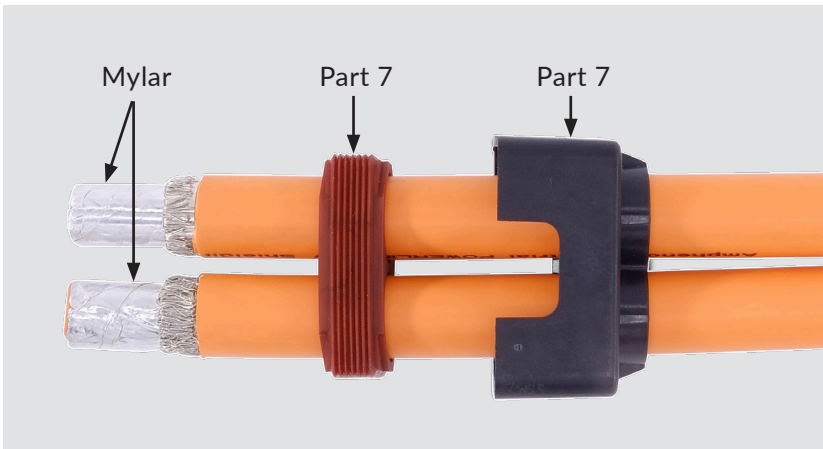


Item	Cutting Length
L2	9±0.5mm

**Step 4:** Fold back shielding wires onto the rear shield ring.



**Step 5:** Install the Rear Cover (Part 8) and the Rear Grommet (Part 7) in sequence.

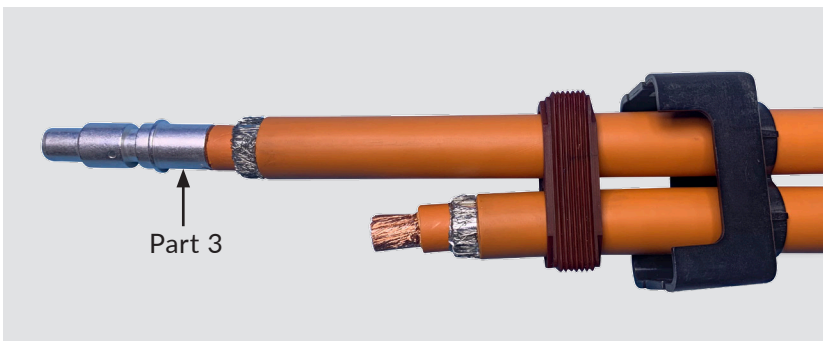


**Step 6:** Remove film layer, stripping insulation.

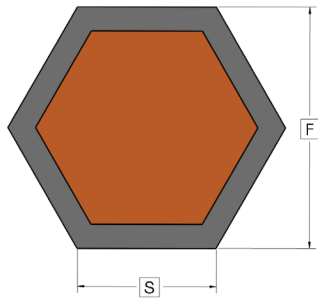


Item	Cutting Length
L3	10.5±0.5mm

**Step 7:** Pull one of the wires to make a misplacement with another wire, then assemble contact assembly (part 3).



**Step 8:** Crimp plug contact assembly (Part 3).



Cable Size	Recommended crimp length of Side S	Recommended crimp dist across Flats F	Recommended Min. Cable Pullout Force (N)
16 mm <sup>2</sup>	6.0	7.0±0.1mm	1500
25 mm <sup>2</sup>	6.0	7.5±0.1mm	1900

**Notes:** The recommended crimp sizes are only for reference. The customer should adjust them according to cable specification and crimp tool and test results including temperature rise and metallographic analysis and pullout force.

**Recommended crimping tool:** Manual hydraulic crimping

**Die:** 25mm<sup>2</sup> die for 25mm<sup>2</sup> cable

**Die:** 16mm<sup>2</sup> die for 16mm<sup>2</sup> cable



**Step 9:** Install heat shrink tubing to the area where crimping contact and wire.



**Notes:** Don't let the shrink tubing cover the braid wire

**Tooling:** Heat gun as shown in picture

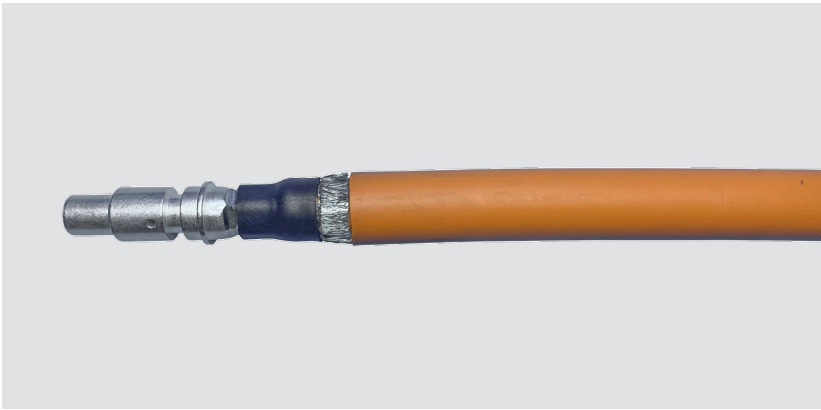
**Recommended heat shrink tubing spec:** Without hot melt adhesive  
Excellent sealing and insulation properties

**Shrink ratio:** 2:1

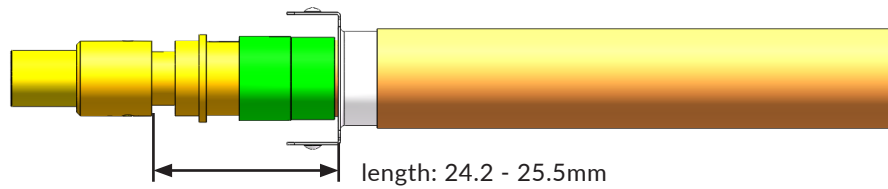
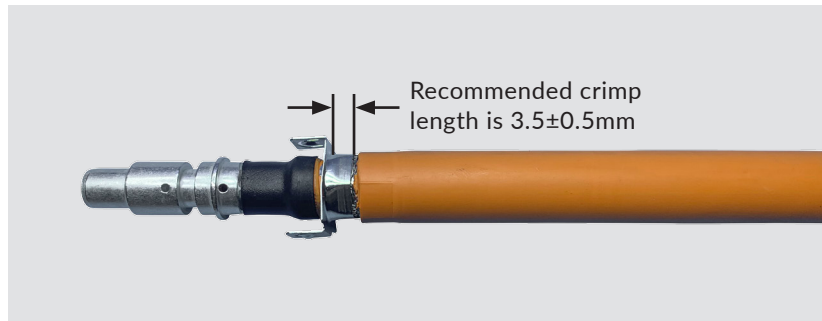
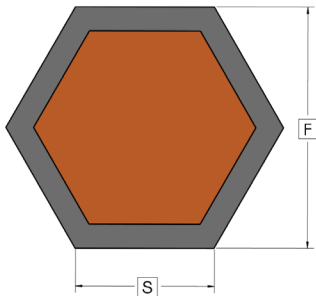
**Operating temperature:** -55~125°C



**Step 10:** Repeat steps 7 and 8 and 9 to assemble another contact assembly.



**Step 11:** Pull one of the wires out and load. Crimp the Rear Shield (Part 5).



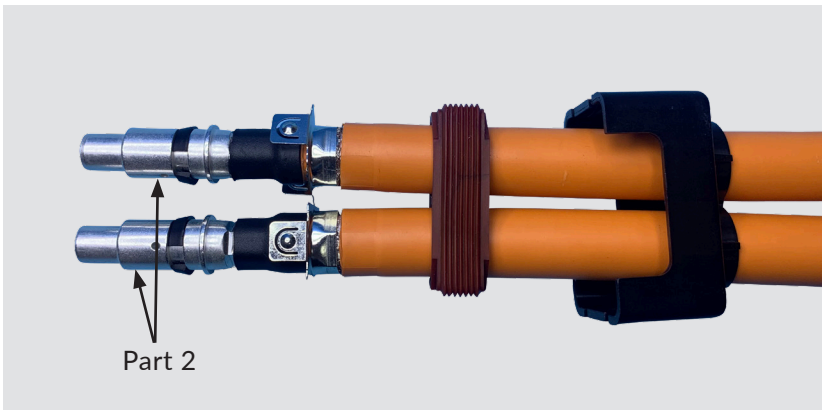
Cable Size	Recommended crimp length of Side S	Recommended crimp dist across Flats F	Recommended Min. Cable Pullout Force (N)
16 mm <sup>2</sup>	6.0	11.5±0.1mm	150
25 mm <sup>2</sup>	6.0	11.5±0.1mm	150

**Notes:** The recommended crimp sizes are only for reference. The customer should adjust them according to cable specification and crimp tool and test results including contact resistance and pullout force.

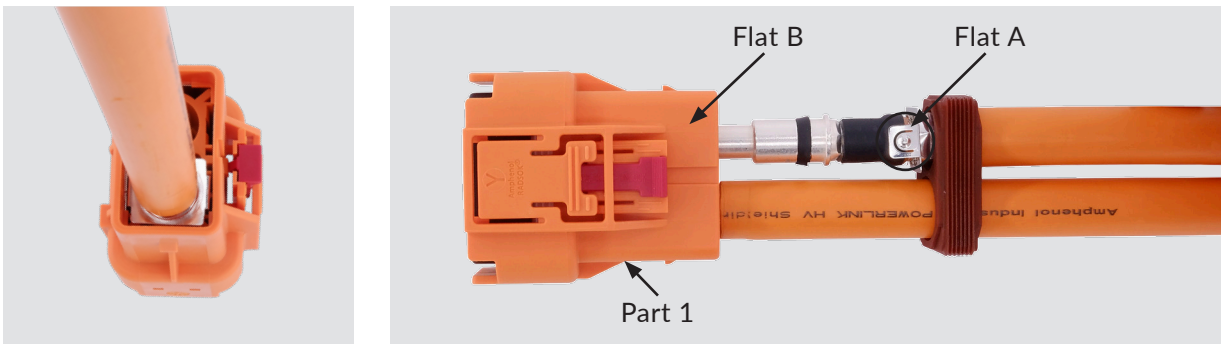
**Crimping tool:** Hydraulic press

**Step 12:** Repeat step 11 to assemble another Rear Shield.

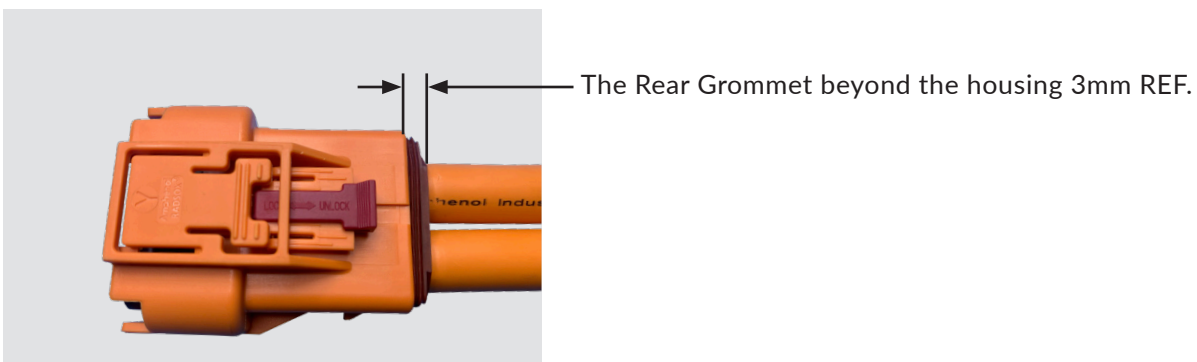
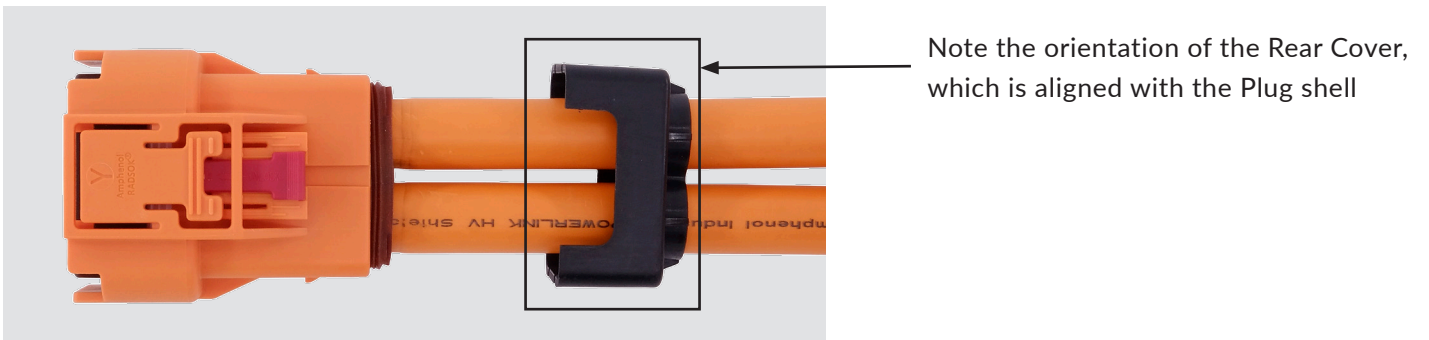
**Step 13:** Assembling Collar (part 2) , and Straighten two cable.



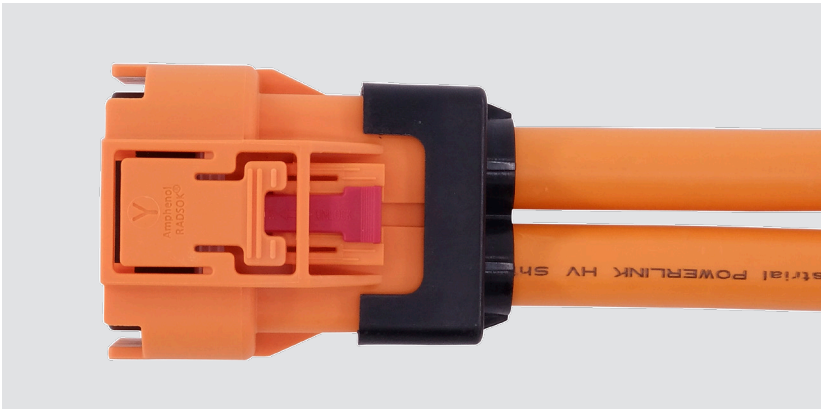
**Step 14:** Insert the crimped terminal into the Plug shell assembly ( Part 1) one by one. Note that the plane A of the shield and the plane B of the shell are parallel.



**Step 15:** Install the Rear Grommet (Part 7).



**Step 16:** Install the Rear Cover (Part 8). The rear cover buckle should snap-fit with the main housing shell.



**Step 17:** Requirements for electrical performance testing.

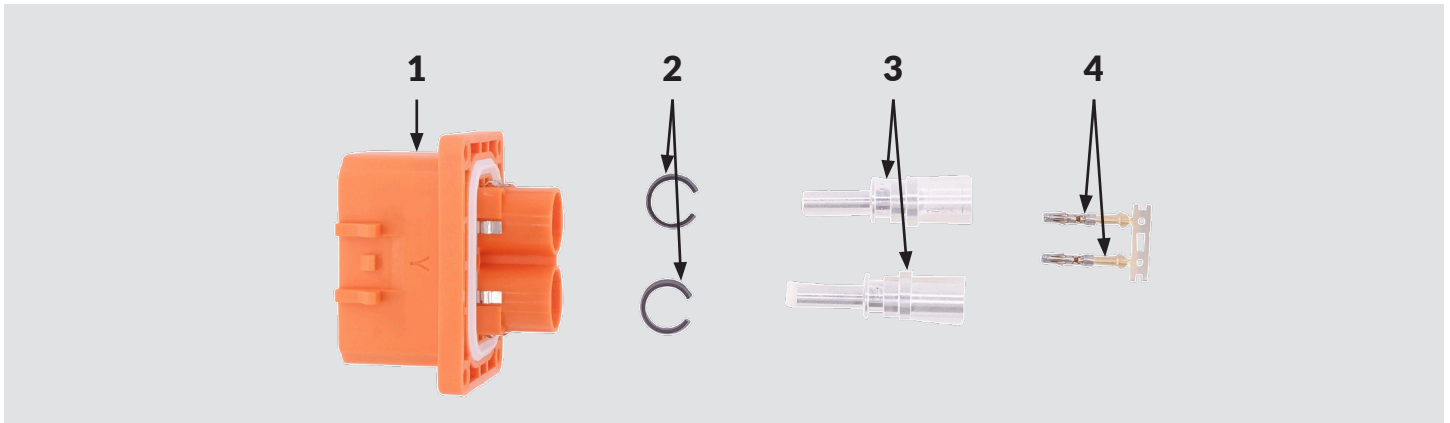
**Notes:** Need to do Insulation Resistance and DWV test after cable assembly

**Insulation Resistance test:** 850V DC, 100M $\Omega$  Min, 60s

**DWV test:** 2500V AC, leakage current  $\leq$  5mA, 60s



# Part 3: Receptacle Package Contents



## 1. Package Contents

- 1: Receptacle shell assembly (1PCS)
- 2: Collar (2PCS)
- 3: Pin contact assembly (2PCS)
- 4: HVIL socket contact (2PCS)

## 2. Recommended unshielded wire specification

Wire Size	Insulation Diameter (mm)	Recommended Min. Cable Pullout Force (N)
16 mm <sup>2</sup>	8.1±0.2	1400
25 mm <sup>2</sup>	10.2±0.2	1900

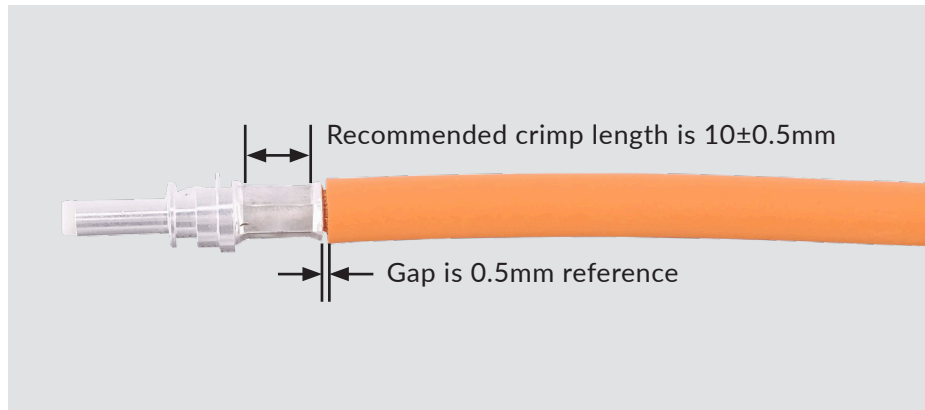
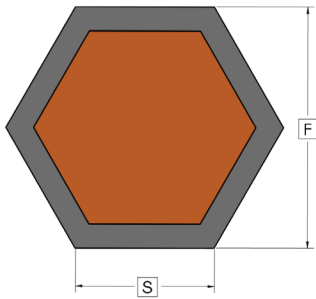
# Part 4: Receptacle Assembly

## Step 1: Wire cutting and stripping jacket.



Item	Cutting Length
L1	11.5±0.5mm

**Step 2:** Crimp pin contact assembly (Part 3).



Cable Size	Recommended crimp length of Side S	Recommended crimp dist across Flats F	Recommended Min. Cable Pullout Force (N)
16 mm <sup>2</sup>	6.0	7.0±0.1mm	1500
25 mm <sup>2</sup>	6.0	7.8±0.1mm	1900

**Notes:** The recommended crimp sizes are only for reference. The customer should adjust them according to cable specification and crimp tool and test results including temperature rise and metallographic analysis and pullout force.

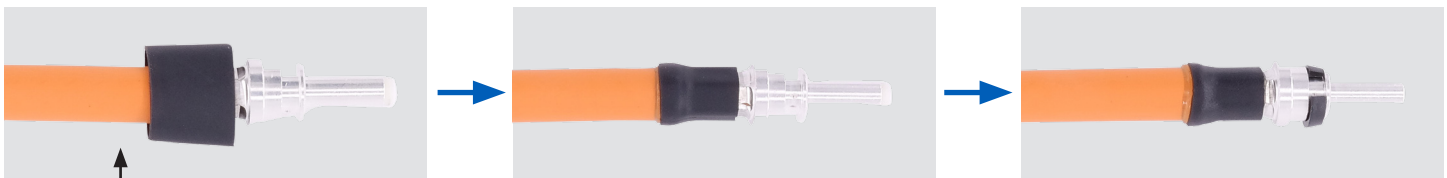
**Recommended crimping tool:** Manual hydraulic crimping



**Die:** 25mm<sup>2</sup> die for 25mm<sup>2</sup> cable

**Die:** 16mm<sup>2</sup> die for 16mm<sup>2</sup> cable

**Step 3:** Install heat shrink tubing to the area where crimping contact and wire, Then assemble the Collar.



Amphenol P/N: CH53X-O05-09A

**Tooling:** Heat gun as shown in picture

**Recommended heat shrink tubing spec:** With hot melt adhesive

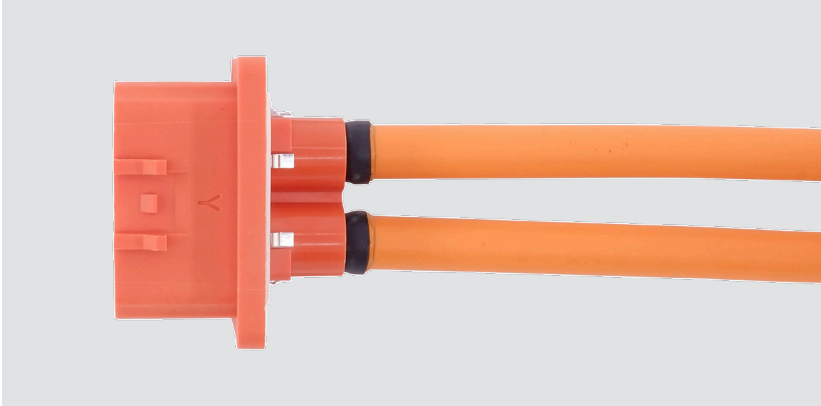
Excellent sealing and insulation properties

**Shrink ratio:** 2:1

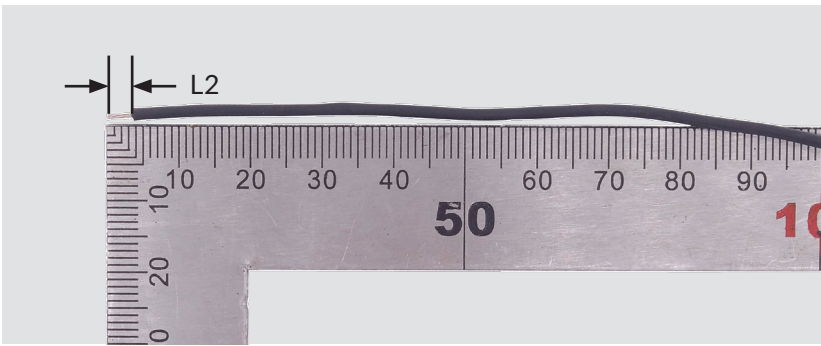
**Operating temperature:** -55~150°C



**Step 4:** Insert the contact with cable assembled into the plug shell, the collar snapped into the shoulder of the hole. Repeat step 1-4 for another port.



**Step 5:** HVIL wire cutting and stripping the jacket(Recommended use the 20AWG cable).



Item	Cutting Length
L2	3.5±0.5mm

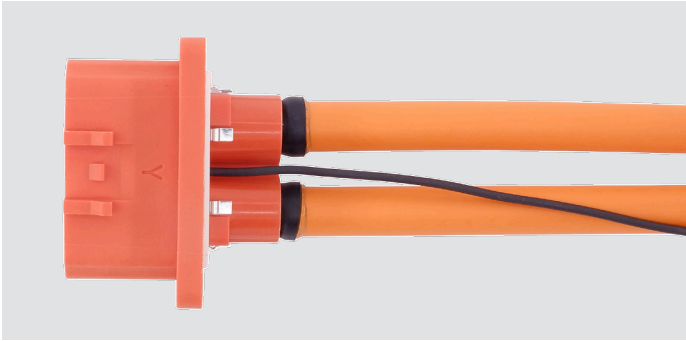
**Step 6:** Insert conductor into hole of socket and crimping use right crimping tool.



Recommended Crimping tool as below:



**Step 7:** Insert the HVIL contact and cable assembly into the plug shell assembly.



**Step 8:** Repeat step 6-8 for another port.

