

Assembling Instruction

Outward Connector Cable Mount

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Electrical Rating: 1000V DC (TUV), DC 22A(2.5 sq-mm)/DC 25A (4.0 & 6.0 sq-mm)
Operation Temperature Range: -40°C ~ +90°C

Caution:

1. Connectors are to be used only to interconnect firmly fixed cables.
2. Do not disconnect under load!
3. To protect against shock, ensure that conductors and their associated connectors are separated from opposite polarity components.
4. Any kind of pollution (dust, moisture, and so on...) during the assembly process can degrade contact and connector performance; especially, to the seals and connector terminals. A clean environment for assembling is therefore essential.

Preparation:

Special tools are required for assemble the connector housing and crimping connector terminals with cable (See Photos below).



**Multi Functional Tool for Assembling
Connector Housing**



Crimping Pliers



Cable Striper



**Disconnecting Tool
(For Firm Grip Type Only)**

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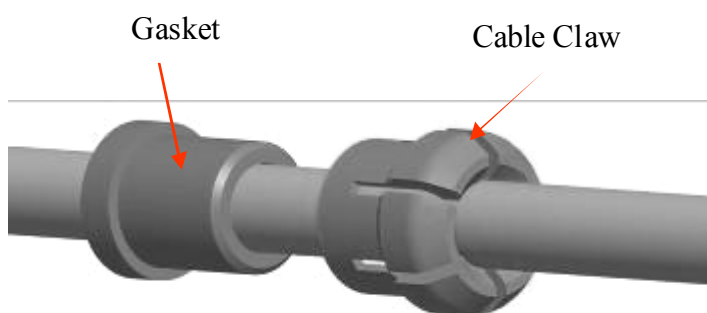
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1. Suitable Cable Wire Gauge

Connector terminals are available with different crimping contacts for different cable cross sections, 2.5, 4.0, and 6.50 sq-mm or wire gauge 14, 12, 10 AWG. Make sure you are choosing terminal with right size for crimping with cable.

2. Selection of Gasket and Pinch Ring

Please select the right part number of gasket and cable claw for different cable outer diameter to ensure the water tightness after assemble.



Cable OD.	Gasket P/N	Cable Claw P/N
4.70~5.20mm	P418-A.329F0	P418-B410F0
5.40~5.70 mm	P418-A.327A0	P418-B410A0
5.80~6.20 mm	P418-A.326B0	P418-B410B0
6.30~6.70 mm	P418-A.325C0	P418-B410C0
6.80~7.20 mm	P418-A.324D0	P418-B410D0
7.30~7.80 mm	P418-A.328E0	P418-B410E0

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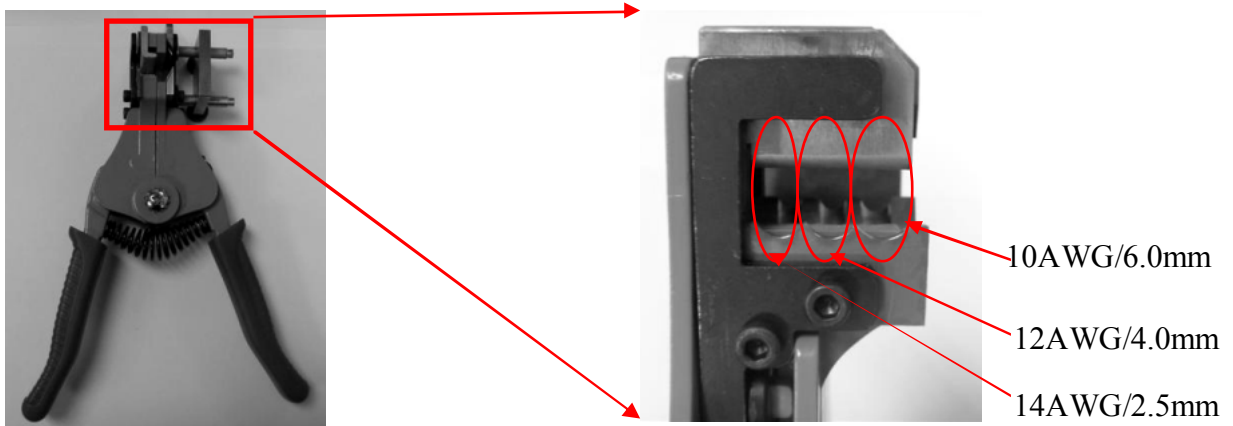
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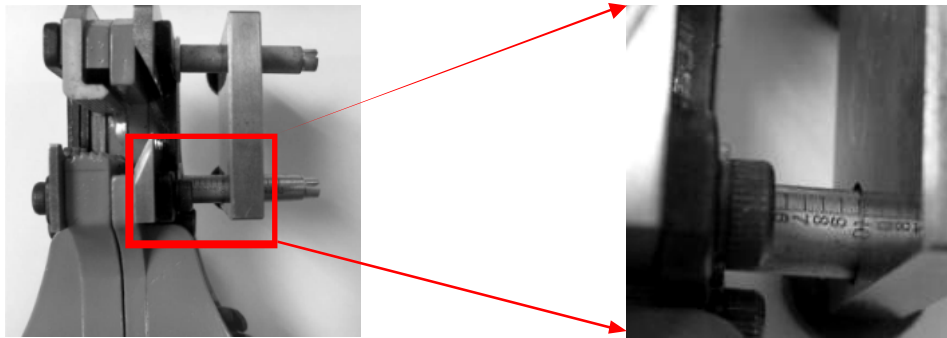
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3. Strip cable with stripping tool

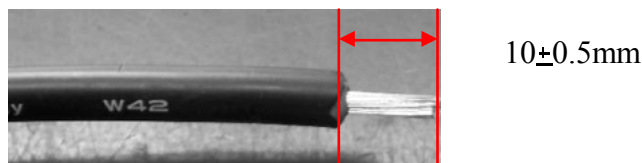
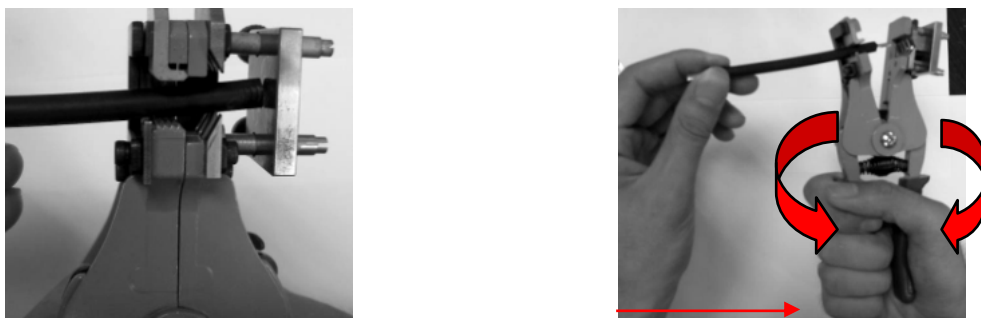
Sunbolts provides the specific hand tool to strip Sunbolts PV cable.



3.1. Adjust cable stopper to the scale 10.



3.2. Insert the cable into the right cross section on the stripping tool and press the handle bar to have cable stripped.



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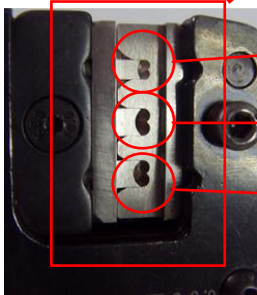
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4. Crimp Terminal with Cable

Only use Sunbolts specific hand tool for terminal crimping. This specific hand tool available with 2 types, 1 for 12/14 AWG (4.0 sq-mm/2.5 sq-mm); and the other for 10 AWG (6.0 sq-mm)



- 12/4.0mm&14AWG/2.5 mm(O)
- 12AWG/4.0mm 14AWG/2.5mm(M/F)
- 10AWG/6.0mm



Female (F)



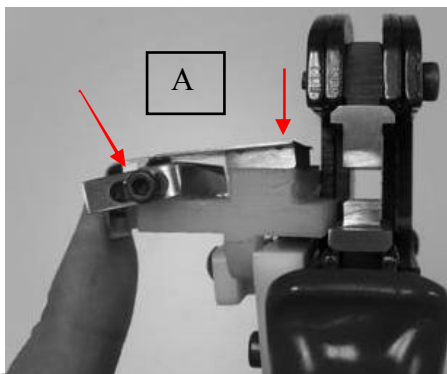
Male (M)



Outer Drum Contact (O)

4.1. Open and hold clamping clip(A) and insert terminal in the right cross-section range on the crimping insert.

Turn the terminal till crimping tab faces the top, and then release clamping clip(A). The terminal is secured now.



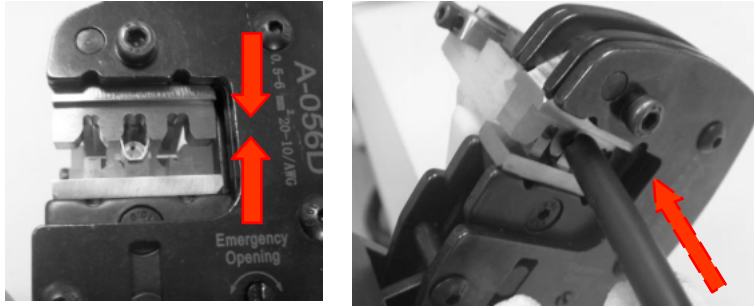
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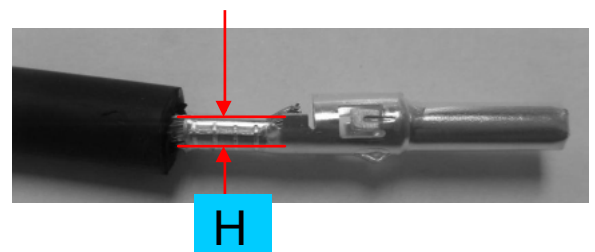
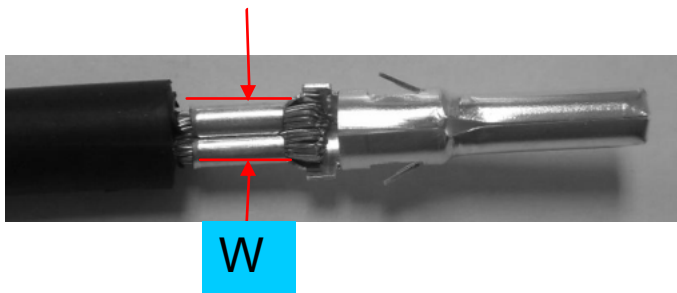
4.2 **Pre-Crimp**-Slightly press the pliers together so that the crimping tabs lie securely within the crimping insert. Insert the stripped cable until the insulation comes into contact with the crimping insert.



4.3 **Crimp the terminal** - Press the bar of crimping tool to the end.



4.4 **Finish**– Take out the cable with crimped terminal after finish. The result can be inspected by measuring the crimping height and width as table below.

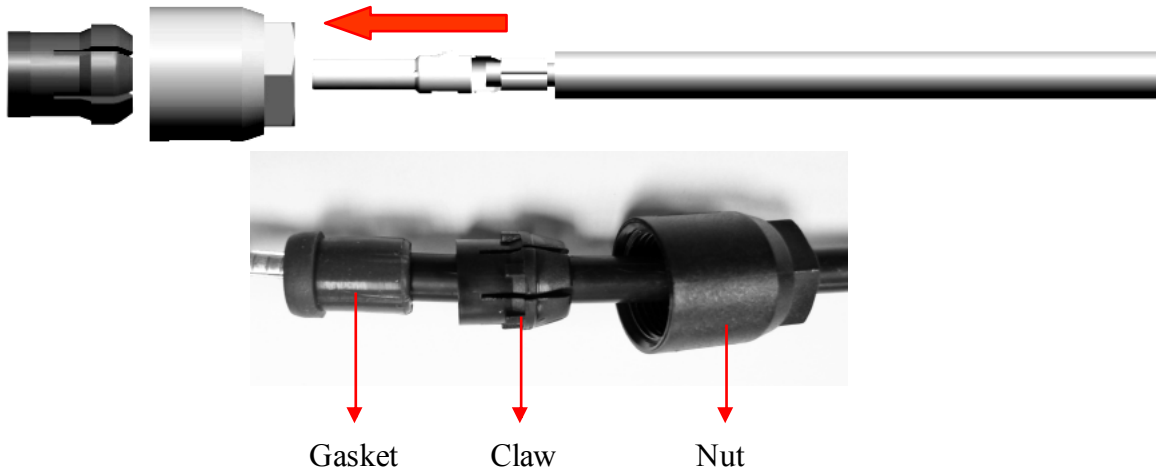


10AWG: $W=4.25 \pm 0.06\text{mm}$ $H=2.88 \pm 0.05\text{mm}$

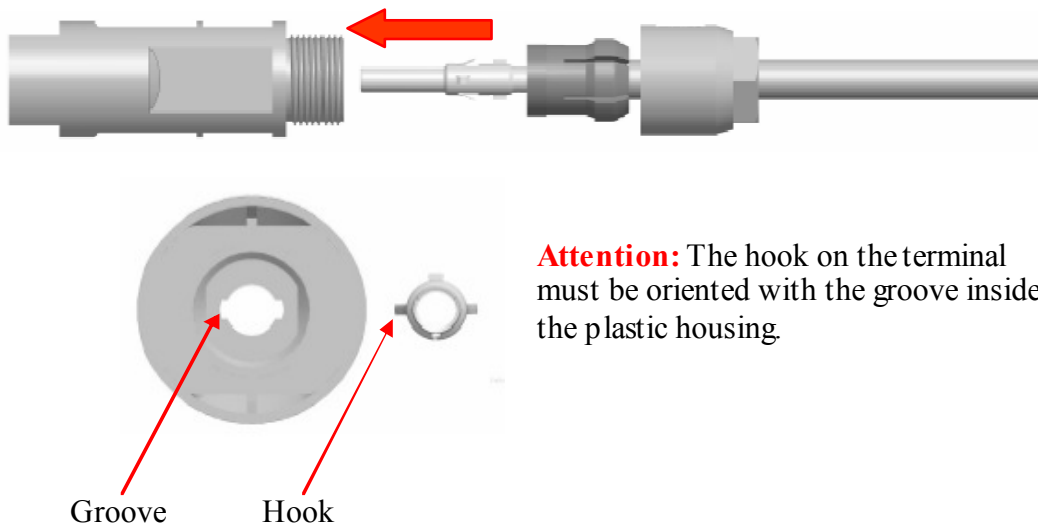
12/14AWG: $W=4.2 \pm 0.06\text{mm}$ $H=2.4 \pm 0.05\text{mm}$

5. Assembling the Cable Plug

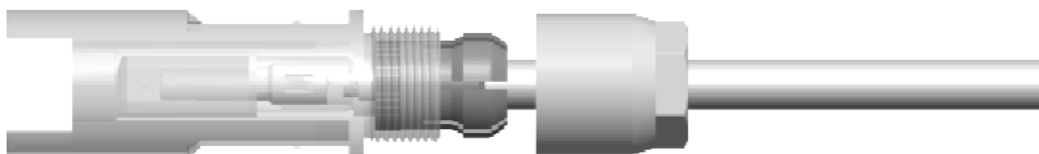
5.1. Assemble the connector nut, cable claw, and gasket to the cable with crimped terminal in order.



5.2 Insert the terminal into the plastic housing of cable plug.



5.3 Install the cable claw and gasket into the plastic housing of cable plug.



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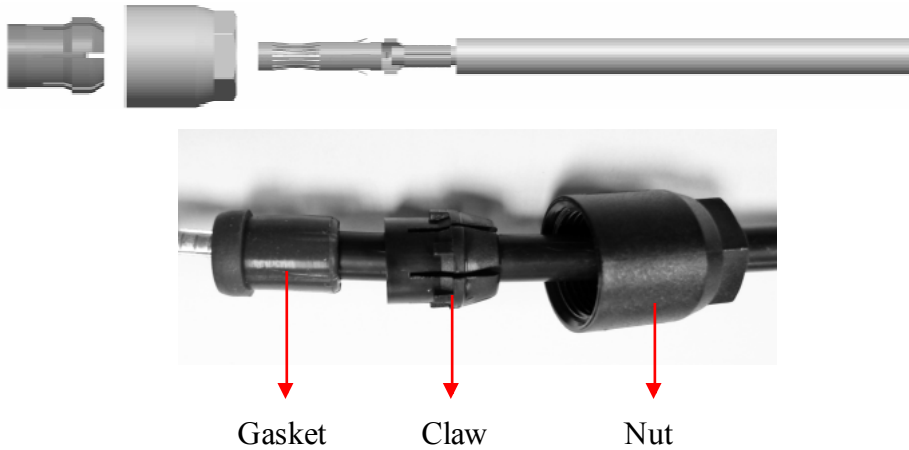
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5.4 Tighten the connector nut with multi functional hand tool. The applied torque force should not be larger than **0.85 N.M Max.**

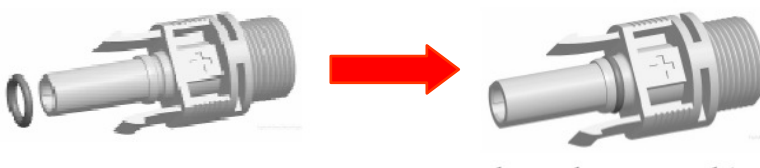


6. Assemble the Cable Socket

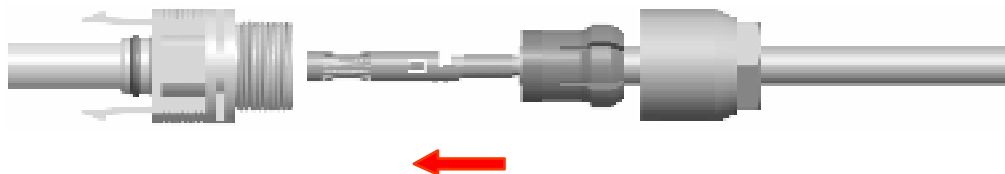
6.1 Assemble the connector nut, cable claw, and gasket to the cable with crimped terminal in order.



6.2 Assemble the waterproof o-ring on to the plastic housing of cable socket.



6.3 Insert the terminal into the to cable socket plastic housing.



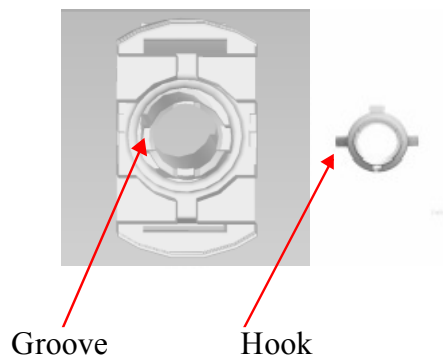
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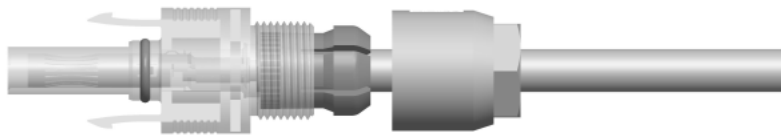
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Attention: The hook on the terminal must be oriented with the groove inside the plastic housing.

6.4 Install the gasket and cable claw into the cable socket plastic housing



6.5 Tighten the connector nut with multi functional hand tool. The applied torque force should not be larger than **0.85 N.M Max.**

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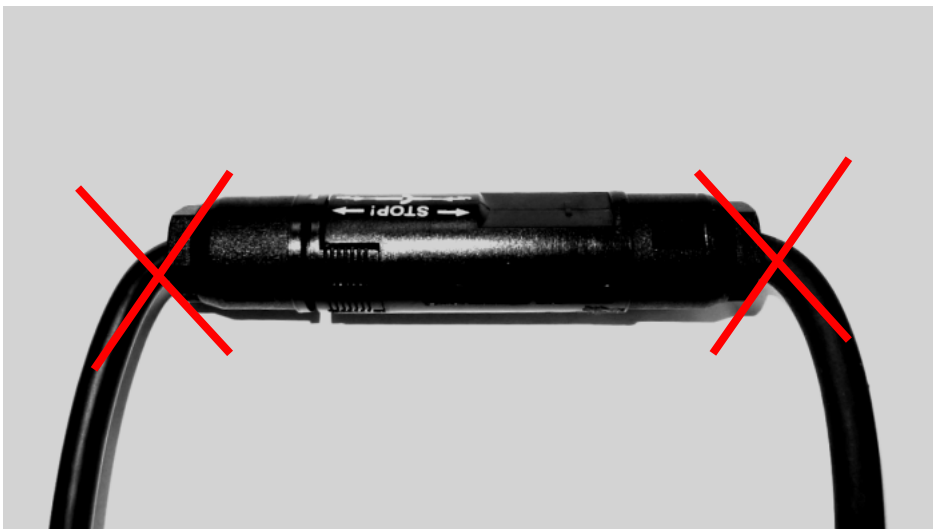
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Cable Routing



Correct Cable Routing



Wrong Cable Routing

* Refer to cable manufacture specification for minimum bending radius.

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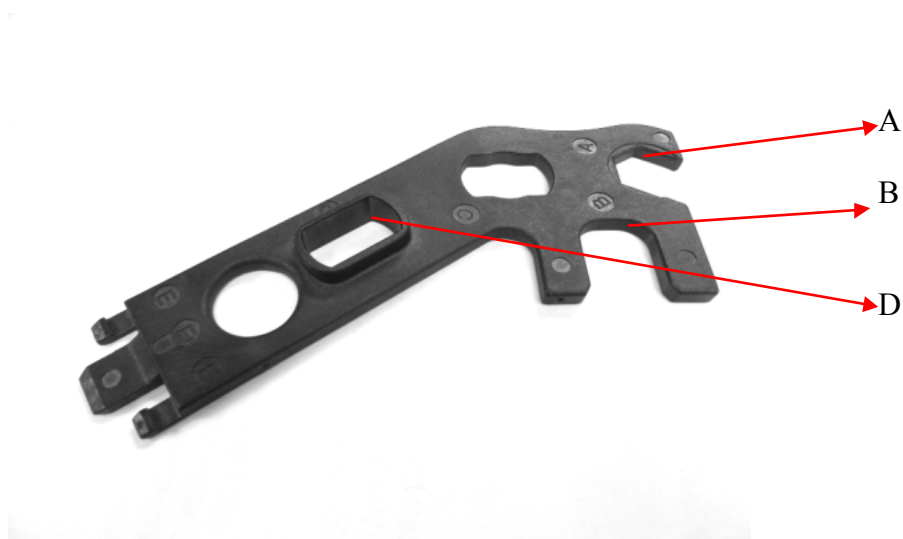
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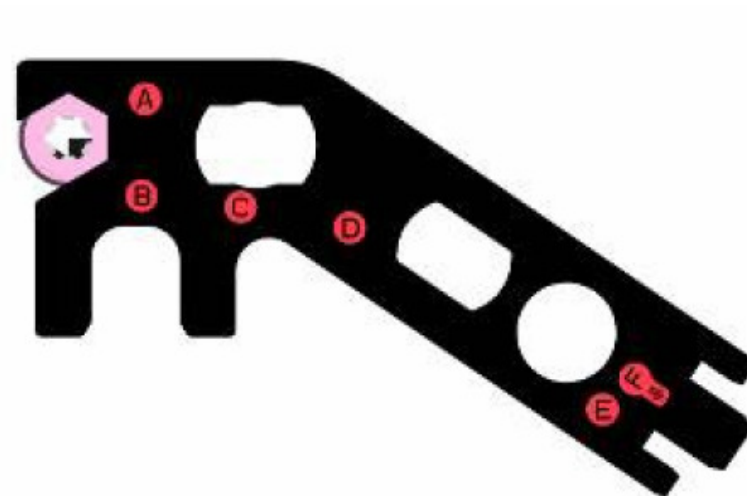
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7. Multi Functional Hand Tool Part Used for Connector Assembling



Part A– Tighten the nut.



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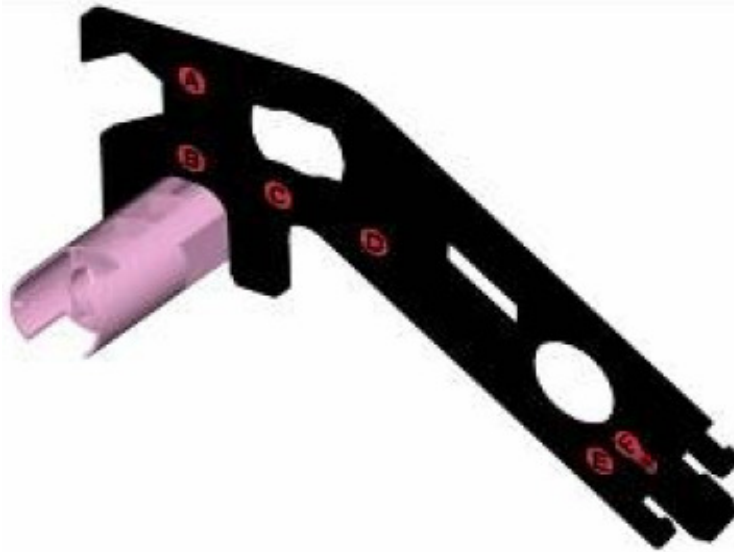
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Part B. Tighten the cable plug housing.



Part D. Tighten the cable socket housing.

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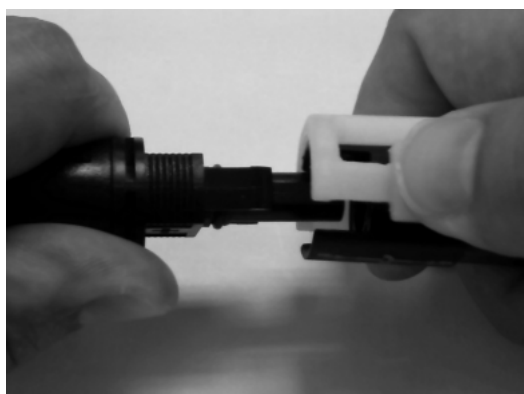
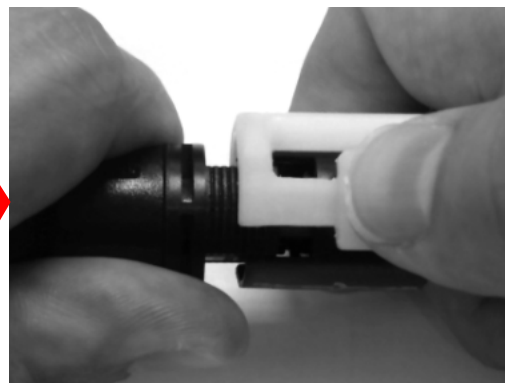
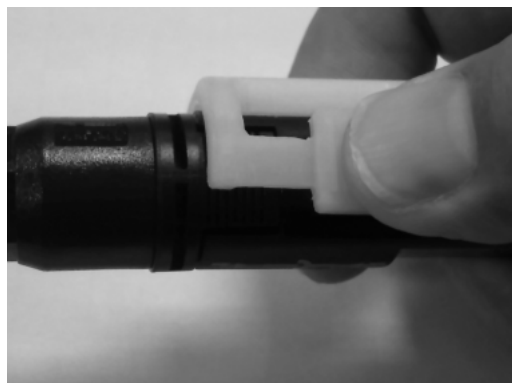
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8. Disconnect Firm Grip Type Connector with Disconnecting Tool

8.1 Match the disconnecting tool by the rib on the rib of firm grip cable plug.



8.2 Deep press the button of disconnecting tool and then separate the connector.

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