

User Manual

EPS 3PH-4Unit

In order to prevent improper operation before use, please carefully read this manual.

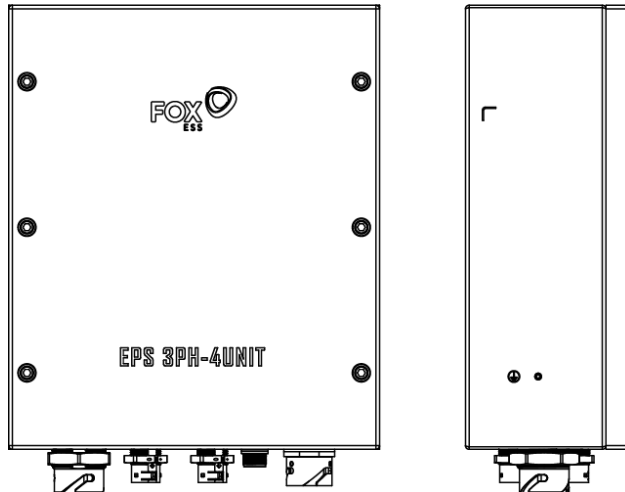
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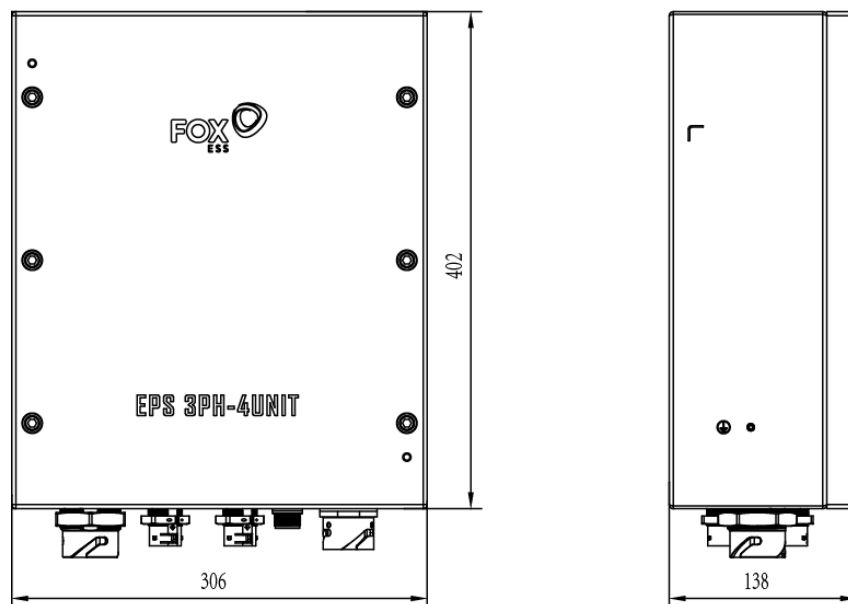
1. Introduction

1.1 Basic Features

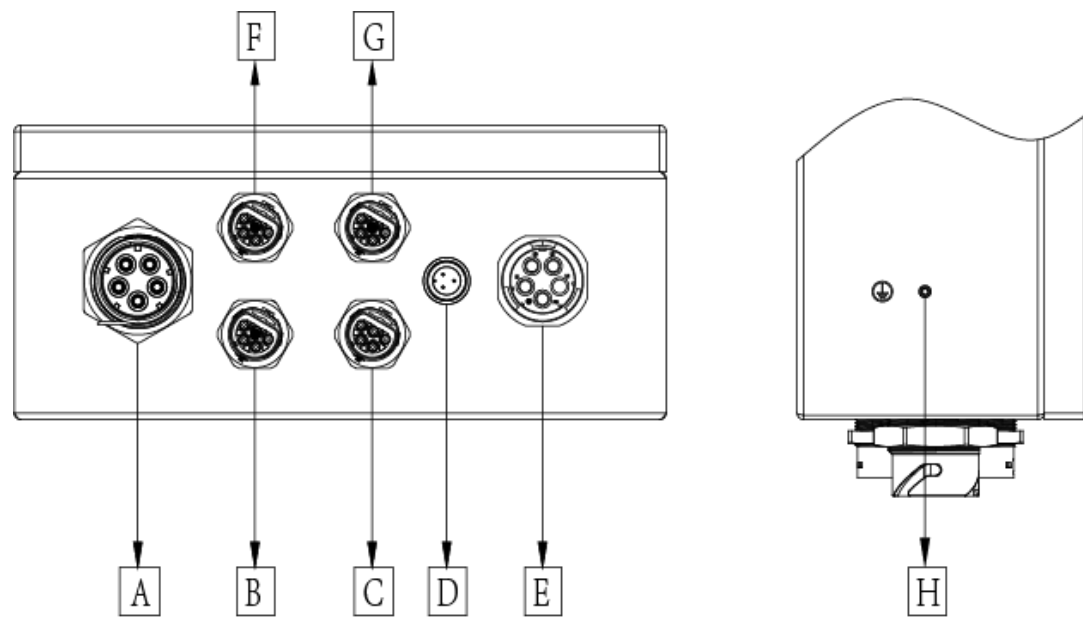
EPS 3PH-4Unit is an accessory product of AIO H3/H3, mainly used for off-grid parallel function of up to 4 three-phase energy storage machines. External connection to the grid, the eps output interface of 4 AIO H3/H3 and a communication interface enables the off-grid parallelization of 4 units.



1.2 Dimensions



1.3 Terminals of EPS 3PH-4Unit

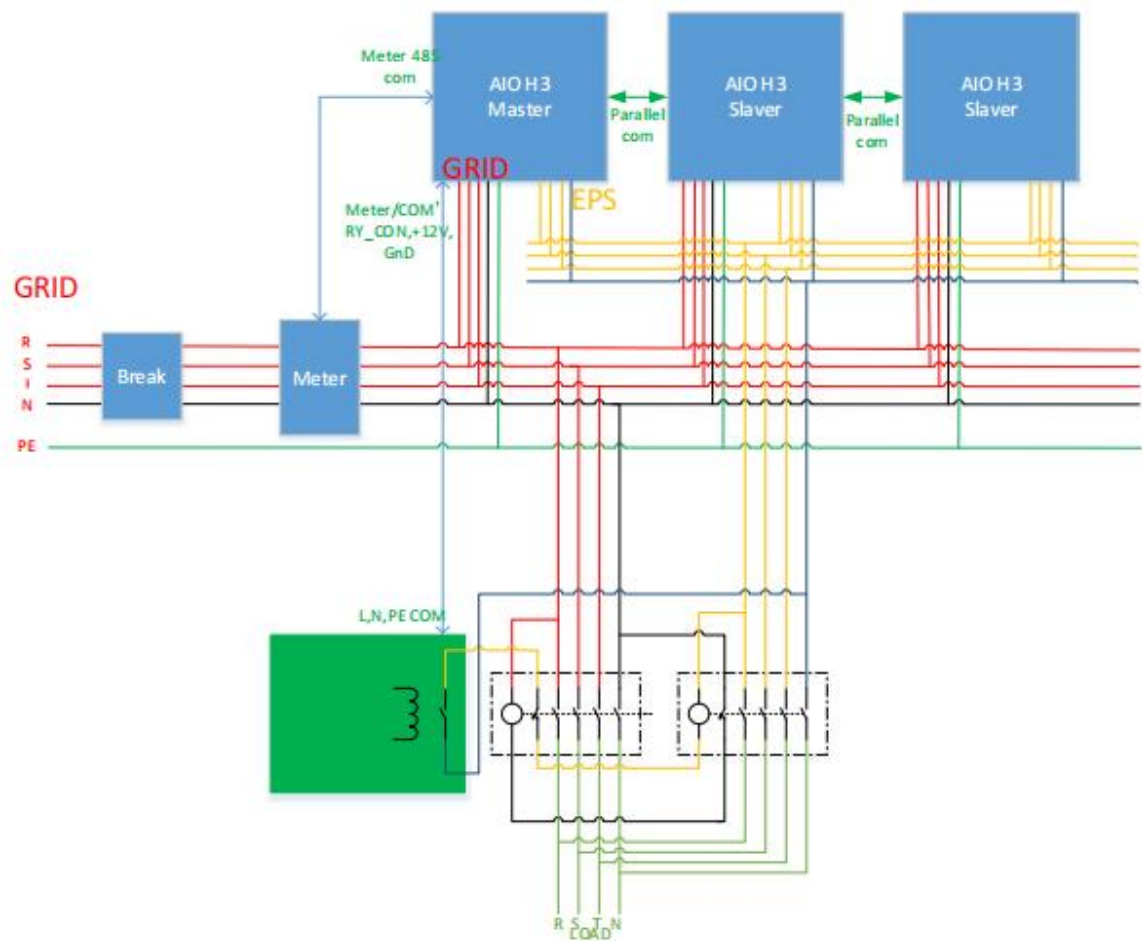


Item	Description	Item	Description
A	Load	E	GRID
B	EPS-3	F	EPS-1
C	EPS-4	G	EPS-2
D	COM	H	Grounding Screw

Note: Only authorized personnel are permitted to set the connection.

1.4 Wiring Diagram

The following is the wiring diagram for the use of the three-phase parallel box, which can realize the parallel and off-grid switching of up to four machines. The parallel connection of each machine is connected for communication firstly, then the off-grid of each machine is connected to the off-grid terminal of the parallel box and connected to the grid, and the communication of the host machine is connected to the parallel box, then when the machine is working, it can be the automatic switching of the parallel and off-grid in the parallel machine.



2. Installation

2.1 Check for Physical Damage

Make sure the EPS 3PH-4Unit is intact during transportation. If there is any visible damage, such as cracks, please contact your dealer immediately.

2.2 Packing List

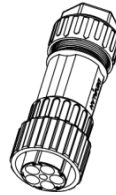
Open the package and take out the product, please check the accessories first. The packing list shown as below.



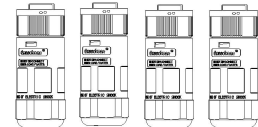
A



B



C



D



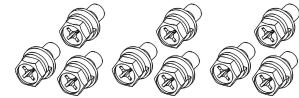
E



F



G



H



I



J

Object	Quantity	Description	Object	Quantity	Description
A	1	EPS 3PH-4Unit	F	1	GRID
B	4	Brackets	G	1	Expansion tubes & Expansion screws
C	1	Load	H	9	Hexagonal screws
D	4	EPS	I	1	Earth terminal
E	1	COM	J	1	Product manual

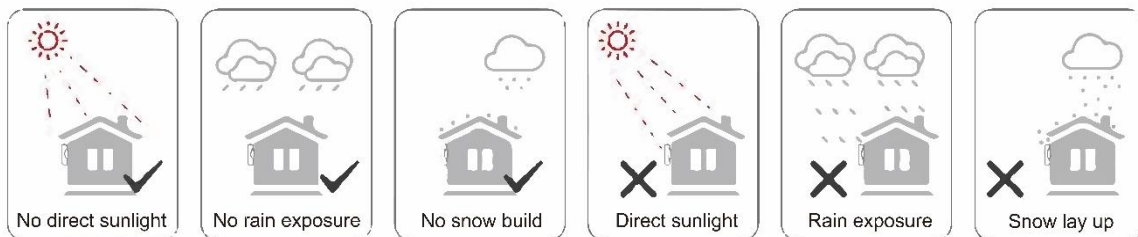
2.3 Mounting

- Installation Precaution

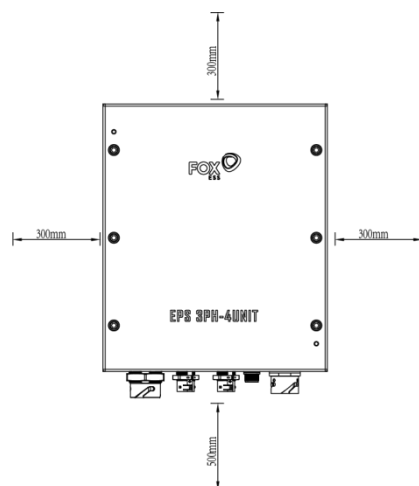
Make sure the installation site meets the following conditions:

- Not in direct sunlight.
- Not in areas where highly flammable materials are stored.
- Not in potential explosive areas.
- Not in the cool air directly.
- Not near the television antenna or antenna cable.
- Not higher than altitude of about 2000m above sea level.
- Not in environment of precipitation or humidity (> 95%).
- Under good ventilation condition.
- The ambient temperature in the range of -25°C to +60°C.
- The slope of the wall should be within +5°.
- The wall hanging the EPS 3PH-4Unit should meet conditions below:
 - Solid brick/concrete, or strength equivalent mounting surface;
 - EPS 3PH-4Unit must be supported or strengthened if the wall's strength isn't enough (such as wooden wall, the wall covered by thick layer of decoration).

Please avoid direct sunlight, rain exposure, snow laying up during installation and operation.



- Space Requirement



Position	Min Distance
Left	300mm
Right	300mm
Top	300mm
Bottom	500mm

- Mounting Steps

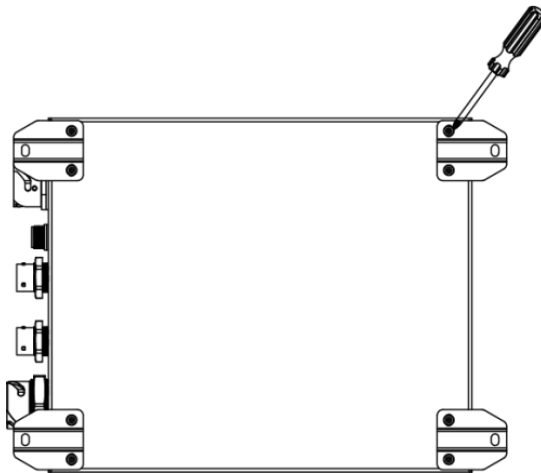
Tools required for installation:

- Marker pen;
- Electric drill (drill bit set 8mm);
- Crimping pliers;
- Stripping pliers;
- Screwdriver.

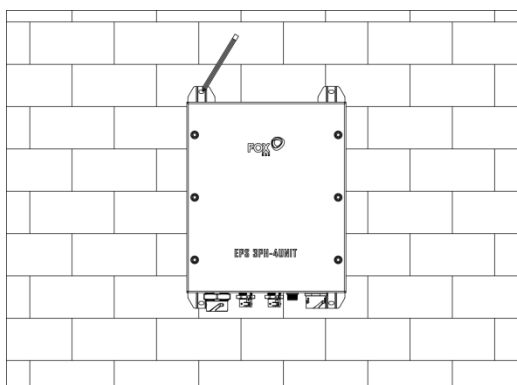


1. Fix the EPS 3PH-4Unit on the wall

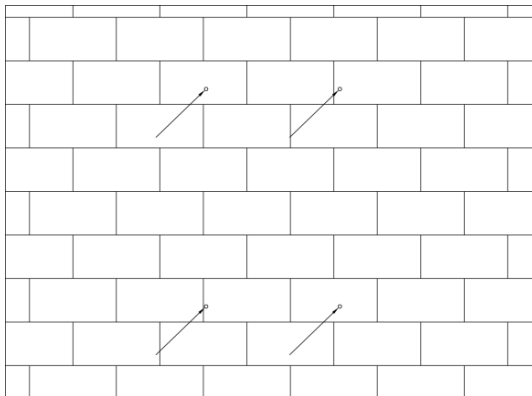
Step 1: Install the four brackets on EPS 3PH-4Unit with self-tapping screws.



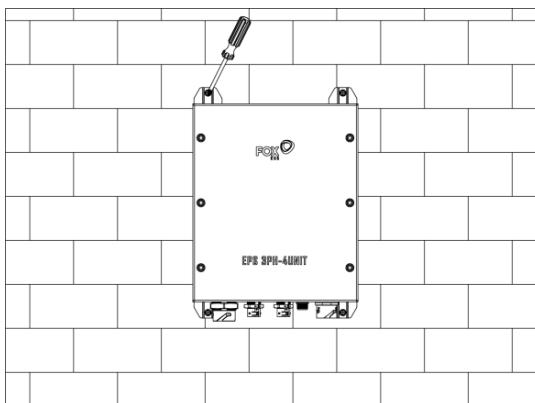
Step 2: Use EPS 3PH-4Unit with brackets as a template to mark the four holes position on the wall with marker pen.



Step 3: Drill holes with electric drill, make sure the holes are at least 50mm deep and 8mm wide, and then tighten the expansion tubes.



Step 4: Install the expansion screws with screwdriver to fix the EPS 3PH-4Unit.

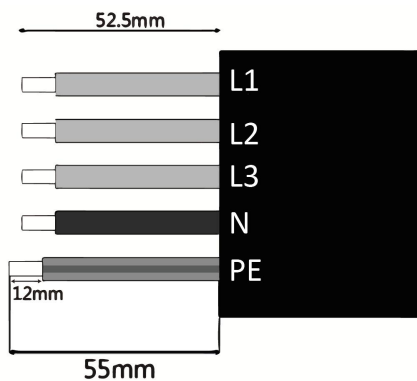


3. Electrical Connection

3.1 Wiring Connection

Step 1: LOAD Wiring

- Check the grid voltage and compare with the permitted voltage range (refer to technical data).
- Disconnect the circuit-breaker from all the phases and secure against re-connection.
- Trim the wires:
 - Trim all the wires to 52.5mm and the PE wire to 55mm.
 - Use the crimping pliers to trim 12mm of insulation from all wire ends as below.



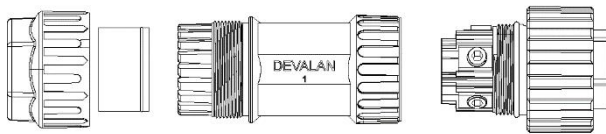
L1/L2/L3: Brown/Red/Green or Yellow Wire

N: Blue/Black Wire

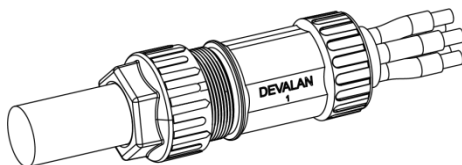
PE: Yellow & Green Wire

Note: Please refer to local cable type and color for actual installation.

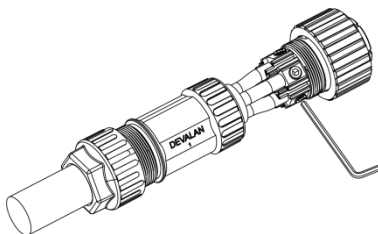
- Separate the Load plug into 4 parts as below.



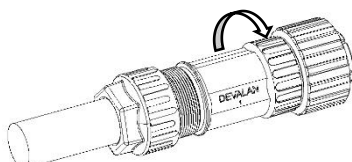
- Insert the sleeve assembly into the cable.



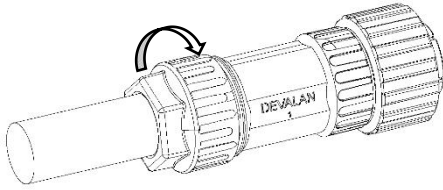
- Install the copper wire into the plug terminal and lock the screw.



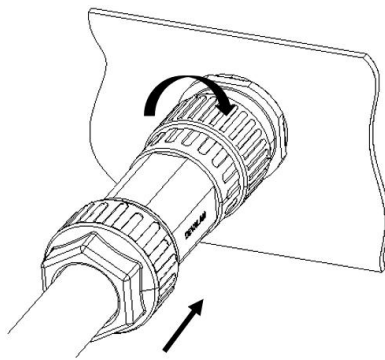
- Lock the sleeve and the plug (1.5~1.7N·M).



- Lock the lock nut and the sleeve (3~5N·M),

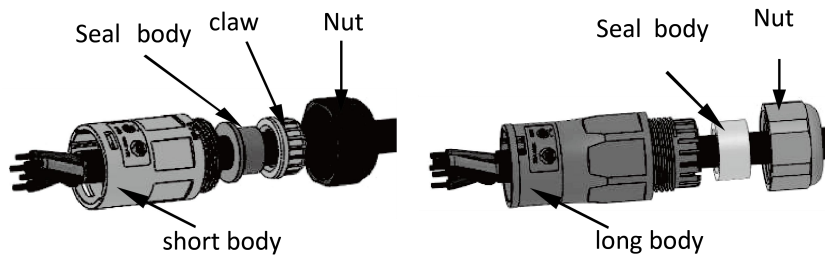


- Insert the plug assembly into the socket (EPS 3PH-4Unit end) and lock each other by the coupling twist.

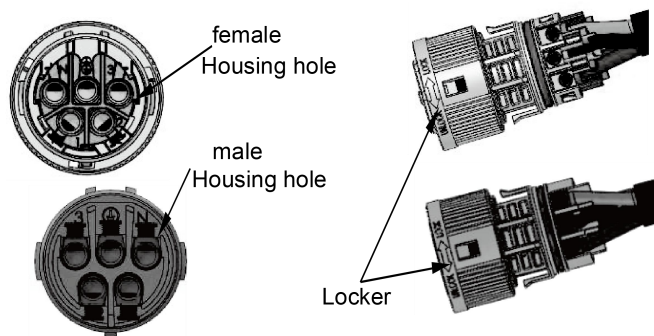


Step 2: EPS Wiring

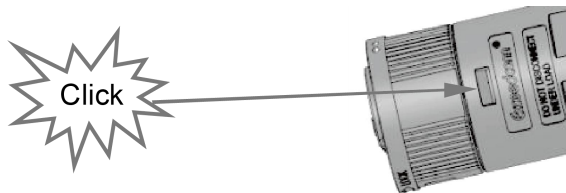
- Set the parts on the cable.



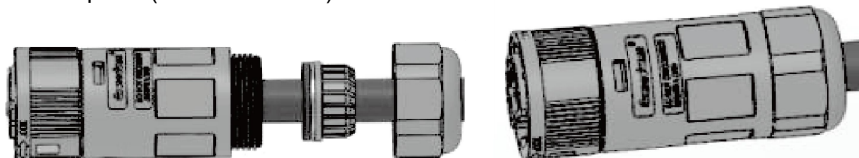
- Crimp wires, screw twisting torque $0.8 \pm 0.1 \text{ N}\cdot\text{m}$.



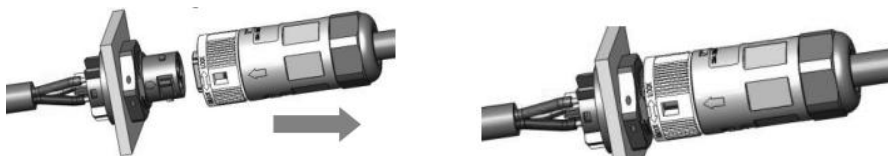
- Push Housing into Body.



- Put the sealing body and yarn trapper into the main body, screw the lock nut into the main body, and the torque is $(2.5 \pm 0.5 \text{ N}\cdot\text{m})$.



- Insert the male end into the female end. For the rotation direction of the lock, please refer to the LOCK mark on the assembly.

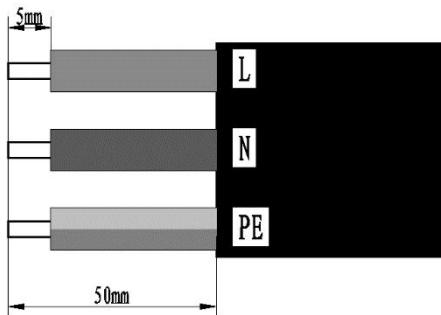


- Remove the EPS connector: Press the bayonet with a small screwdriver or the unlock tool. Rotate the sleeve referring to the UNLOCK mark on the assembly, then pull it out.



Step 3: COM Wiring

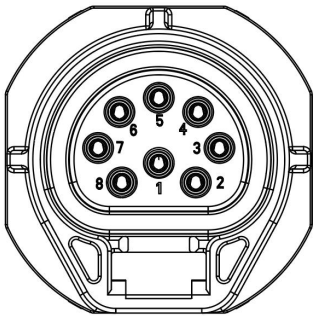
- Trim the wires:
- Trim all the wires to 50mm.
- Use the crimping pliers to trim 5mm of insulation from all wire ends as below.



L: RY_CON
N: +12V
PE: GND
RY_CON,+12v, GND comes from the meter port of H3

- **Meter/RS485**

The PIN definitions of Meter/485 interface are as below.



PIN	1	2	3	4	5	6	7	8
Definition	485A	485B	Meter485B	Meter485A	GND	GND	RY_ CON	+12V

H3 Meter

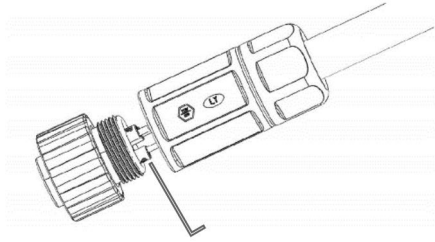
↕
PE

↕
L

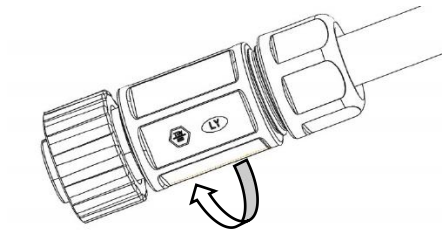
↕
N

EPS 3PH-4Unit

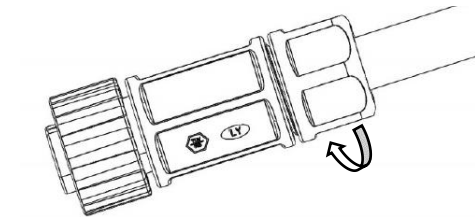
- Put the cable into the main assembly and lock the screw with hexagonal wrench (recommended locking torque 0.1~0.2N.m).



- Screw the main body into the rubber core, the recommended tightening torque is $1.0 \pm 0.2 \text{ N.m}$.

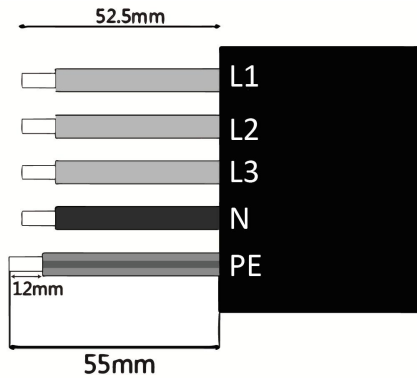


- Lock the nut to the body (recommended locking torque $1.5 \pm 0.3 \text{ N.m}$).



Step 4: AC Wiring

- Check the grid voltage and compare with the permitted voltage range (refer to technical data).
- Disconnect the circuit-breaker from all the phases and secure against re-connection.
- Trim the wires:
 - Trim all the wires to 52.5mm and the PE wire to 55mm.
 - Use the crimping pliers to trim 12mm of insulation from all wire ends as below.



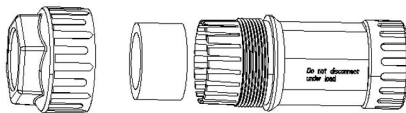
L1/L2/L3: Brown/Red/Green or Yellow Wire

N: Blue/Black Wire

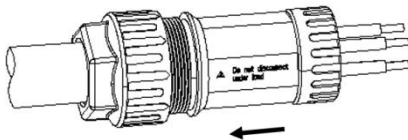
PE: Yellow & Green Wire

Note: Please refer to local cable type and color for actual installation.

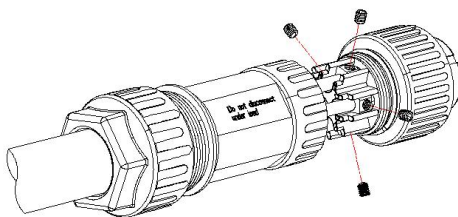
- Separate the AC plug into three parts as below.



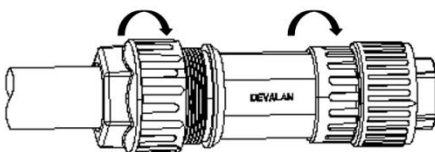
- Insert the sleeve assembly into the cable.



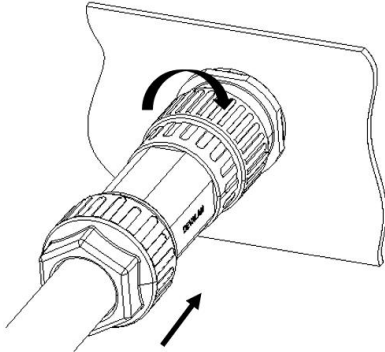
- Install the copper wire into the plug terminal and lock the screw.



- Lock the lock nut and the sleeve ($3\sim 5\text{N}\cdot\text{M}$), lock the sleeve and the plug ($1.5\sim 1.7\text{N}\cdot\text{M}$).

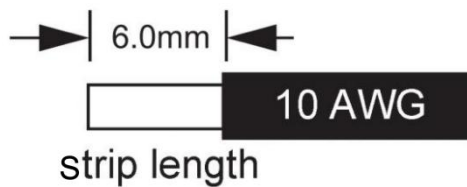


- Insert the plug assembly into the socket (EPS 3PH-4Unit end) and lock each other by the coupling twist.

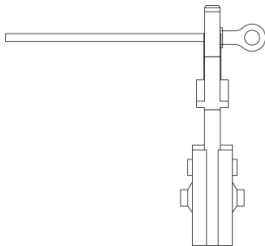


3.2 Earth Connection

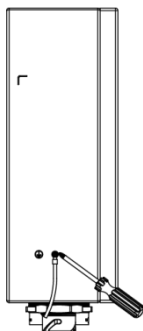
Trim 6mm of insulation from the wire end.



- Insert striped cable into earth terminal and ensure all conductor strands are captured in the earth terminal.
- Crimp earth terminal by using a crimping plier. Put the earth terminal with striped cable into the corresponding crimping pliers and crimp the contact.



Use the crimping pliers to press the ground cable into the ground terminal, screw the ground screw with screwdriver as shown below:



4. Technical Data

EPS 3PH-4Unit specification	
Model	EPS 3PH-4Unit
Grid Input	
Rated voltage	220/380VAC, 230/400VAC, 3L/N/PE
AC frequency	50/60Hz
Max. input current (per phase)	80A
EPS Input	
Rated voltage	220/380VAC, 230/400VAC, 3L/N/PE
AC frequency	50/60Hz
Max. input current (per phase)	20A(*4PCS)
EPS Load	
Rated voltage	220/380VAC, 230/400VAC, 3L/N/PE
AC frequency	50/60Hz
Max. output current (per phase)	80A
General Data	
Cooling concept	Natural
Installation	Wall-mounted
Operating temperature range	-25 ~ +50°C
Dimensions(W*H*D)(mm)	402*306*138
Demensions of packing(W*H*D)(mm)	445*350*233
Net Weight(Kg)	2.8
Gross Weight(Kg)	3.45
Ingress protection	IP65

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