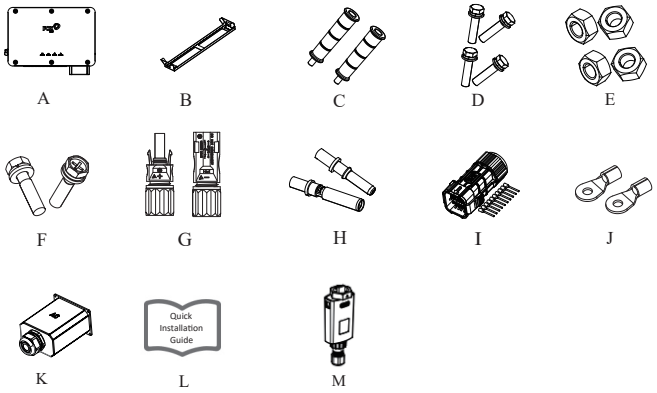
# Quick Installation Guide V Series & VL Series Inverter

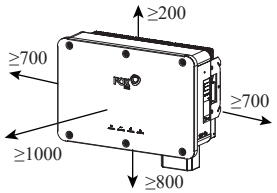
## 1.Packaging List




| Object | Quantity | Description | Object | Quantity | Description |
|---|---|---|---|---|---|
| A | 1 | Inverter | H | 8/12 | DC Connector (Positive*8/12, Negative*8/12) |
| B | 1 | Hanging Plate | I | 1 | Communication Connector *1 (Terminal*10) |
| C | 2 | Screw-in Type Handle | J | 2 | Ground Terminal |
| D | 4 | M10*45 Bolt Assembly | K | 1 | AC Wiring Protective Cover |
| E | 4 | M10 Hexagon Nut | L | 1 | Quick Installation Guide |
| F | 2 | M6*25 Bolt Assembly | M | 1 | Monitoring Module (Optional) |
| G | 8/12 | DC Pin Plug (Positive*8/12, Negative*8/12) | | | |

## 2.Inverter Installation

Please make sure the inverter will be installed with a proper distance as shown below.

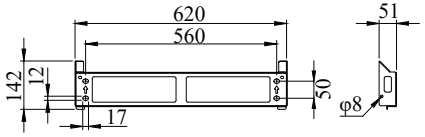



| Position | Min Size |
|---|---|
| Left | 700 mm |
| Right | 700 mm |
| Top | 200 mm |
| Bottom | 800 mm |
| Front | 1000 mm |

**Step 1: Bracket-mounted Installation or Wall-mounted**

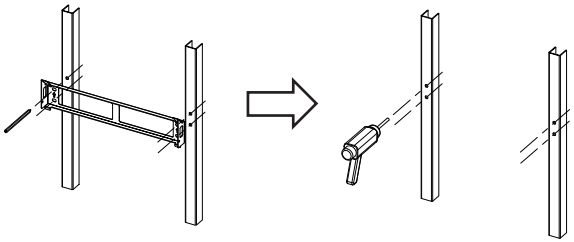
Install the Inverter on a bracket or wall by means of the hanging plate. The size of the hanging plate is shown as below:



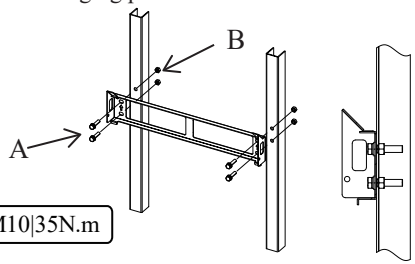



**Method 1: Bracket-mounted Installation**

1. Place the assembled hanging plate on PV brackets, adjust the angle with a level, mark drilling positions, and drill holes with an electric drill (with a φ12 drill bit). It is recommended to adopt two side columns way to install PV brackets.



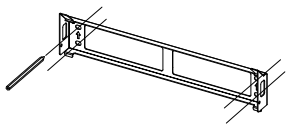
2. Fix the hanging plate with bolts.



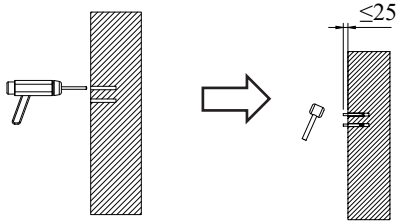

A: 4 PCS of M10*45 hexagon bolts
B: 4 PCS of hexagon nuts

**Method 2: Wall-mounted Installation**

1.Place the hanging plate at the installation site, adjust the angle with a level, and mark drilling positions.

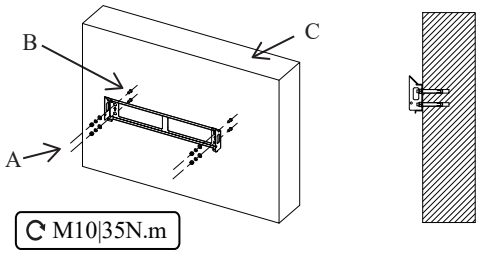


2.Drill holes with a hammer drill (with a φ12 drill bit), clear holes, insert 4 PCS of expansion bolts (by client, M10*95 is recommended) into holes, and fix them with a rubber hammer.





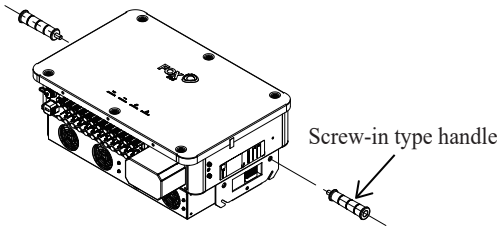

3.Fix the hanging plate with expansion bolts.



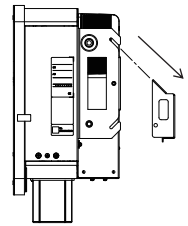

A: 4 PCS of M10 hexagon nuts
B: 4 PCS of expansion bolts (M10) C: Wall

**Step 2: Inverter Installation**

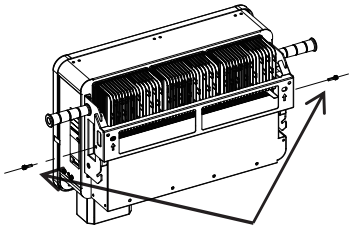
1.Lift the inverter from the package box with 2 PCS of screw-in type handles.




2.Install the inverter on the hanging plate, and ensure that slots of the inverter are properly matched with the hanging plate.



3.Secure the inverter with bolts.

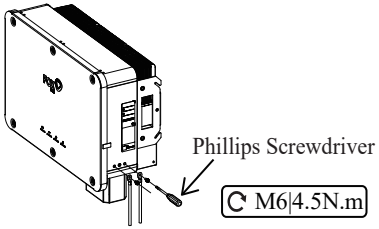


## 3.Electrical Connection

**Step 1: Secondary Ground Connection**

Lock crimped ground cables to ground holes with screw locks on the inverter case, and paint the ground screws and ground terminals to improve anti-corrosion characteristics.

The ground cable should be outdoor copper core cable. The conductor sectional area of each ground cable should be not less than 4mm² (10~16 mm² is recommended).

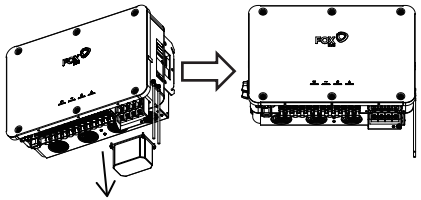



**Step 2: AC Side Connection**

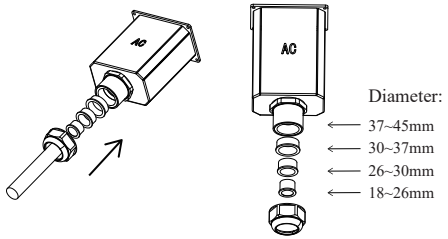
Recommended Specification:

| Cable Type | Outer Diameter (mm) | Conductor Sectional Area (mm²) |
|---|---|---|
| AC Cable | 18~44 | L1,L2,L3,(N) cables:<br>35~50 (outdoor copper core cable)<br>40~50 (outdoor aluminum core cable)<br>PE: S/2 (S is a sectional area of AC phase cable) |

1.Open the AC breaker and prevent its accidental reclose. Open the AC side wiring pre-installed protective cover with a phillips screwdriver. Properly place the removed 4PCS screws for subsequent wiring reuse.

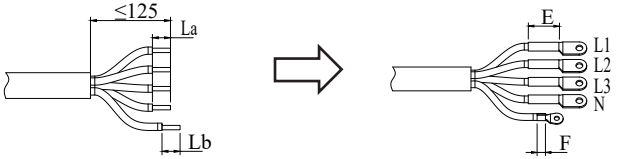


2.Unscrew the lock nut of the waterproof connector and take out multilayer sealing rings. Select the sealing ring based on the cable outer diameter. Route the cable through the lock nut and sealing ring.

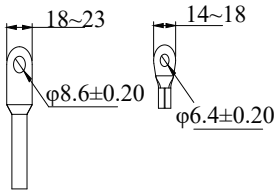




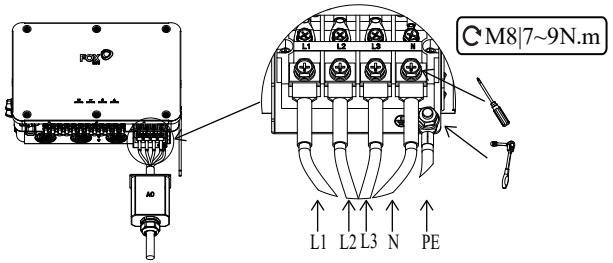

3.Crimp the cold-pressed terminals. To ensure insulation between the terminals, please sleeve the crimped section of the cold-pressed terminals with heat shrink tubing and heat it for tight fitting to prevent the tubing from loosening.

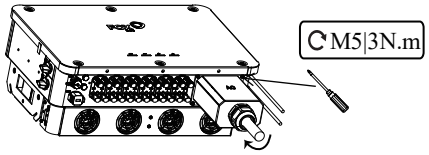



La=E+2~3, E: Inner Diameter Depth of DT Terminal Crimping Slot;
Lb=F+2~3, F: Inner Diameter Depth of OT Terminal Crimping Slot;
Dimension of the cold-pressed terminals:




4.Use a phillips screwdriver or a 10mm hexagon socket wrench to secure the L1, L2, L3, and N AC cables to the corresponding terminals on the inverter. Use a 13mm hexagon socket wrench to secure the PE cable to the corresponding grounding bolt on the inverter. Use a phillips screwdriver to install the AC wiring protective cover and tighten the AC cable locking nut to ensure sealing.



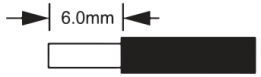

**Step 3: DC Side Connection**

1.Turn off the DC switch.

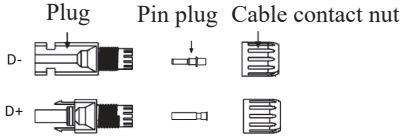
2.It is recommended that the DC cable dedicated to photovoltaics (2.5~4 mm²) be used to connect the PV module.



3.Trim about 6mm of insulation from the cable end.

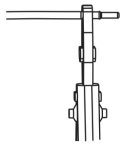



4.Separate the DC connector as below.

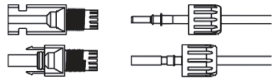



5.Insert multiple cables connected to the PV module into the pin plug and ensure all strands are captured in the pin plug.

6.Crimp the pin plug with a crimping plier.



7.Route the crimped cable through the nut into the plug. When you hear a “click”, the pin plug is properly clamped in the plug.



8.Remove the sealing plug from the DC terminal on the inverter, and insert the crimped DC terminals into the corresponding DC terminals on the inverter. Check whether it is inserted properly, and seal the unconnected DC terminals with plugs to ensure the sealing of the inverter.

## 4.Startup Procedure

- After checking all connections are proper, turn on the external DC/AC breakers.
- Turn the DC switch to “ON”.
- The inverter will start automatically when PV panels generate enough energy, and the LED will turn blue.

After-sales Service Mail: service@fox-ess.com

V1.1
10-500-20186-01