Envertech-EVT500 Quick Installation Guide

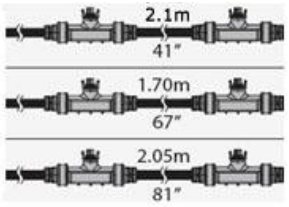
In addition to what is explained below, the safety and installation information provided in the installation manual must be read and followed. The technical documentation and the interface and management software for the product are available at the website: http://www.envertec.com

Components comprised in system

Envertech-EVT500: the microinverter

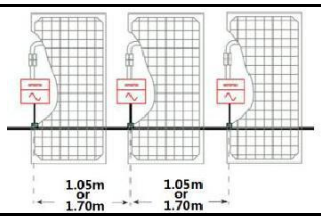
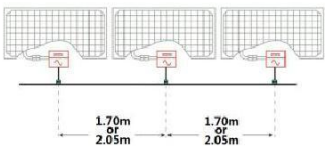
EnverBridge: monitoring and protecting

Envertech cloud server: http://www.enverportal.com

AC BUS Cable	AC BUS cable with 3 conductors (4 mm²); distance between connectors: ① 2.1m/41” ② **1.70m/67”** ③ 2.05m/81”	
AC Extension Cable (Opttional)	Connection between AC junction box and EnverBridge with 3 conductors(4 mm2),also can be used as grid cable.	
AC Trunk Plug Cap	Insulated cap for AC BUS cable connectors	
AC Trunk End Cap	Terminate the unused end of AC BUS cable	
AC Trunk Unlock Tool	Tool for releasing connection between AC BUS cable and the Microinverter	

Selecting cable type

The AC BUS cable is installed by simply rolling out the desired length of cable and cutting it size. One end is wired directly into the junction box and the head of the branch circuit, eliminating the need for a separate AC interconnect cable. The other end is seal from the environment using an AC trunk end cap. The type of AC BUS cable is decided by the PV modules installation orientation. Envertech suggests select cable type as following description:

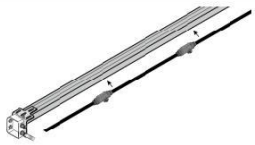
Portrait Orientation	Landscape Orientation
	

Installing Envertech-EVT500 Microinverter System

The installation must be carried out with the equipment disconnected from the grid and with the photovoltaic panels shaded or isolated.

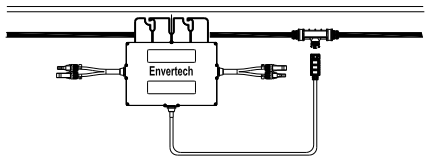
1. Position AC BUS cable

Make sure no more than 8 Microinverters be connected to each branch of AC BUS.

Run the AC BUS cable along the frame structure provided for installing the photovoltaic modules.	

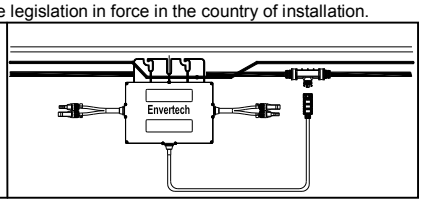
2. Fix Microinverter to photovoltaic module frame

In order to facilitate positioning, it could be useful to mark the approximate centre of each photovoltaic module on the frame.

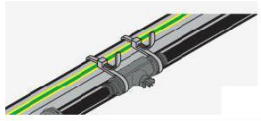
Mount all the Microinverter under the PV module, away from rain and sun and with logo side facing downwards.	

3. Ground the Microinverter and PV panels

Microinverter and photovoltaic panels must be connected to an equipment grounding conductor in accordance with the legislation in force in the country of installation.

The inverter can be earthed using the correct clamp secured to the chassis and an adequately sized conductor.	

4. Fasten AC BUS cables

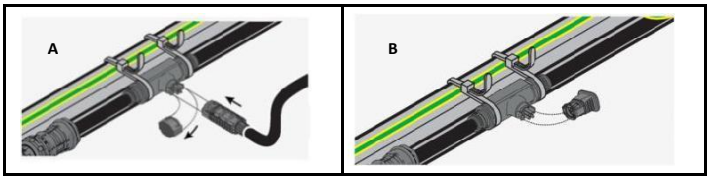
Fasten the AC BUS cable and grounding wire to the frame with cable ties.	

Note: Be aware to keep the connectors in a position accessible to the AC cable coming from the Microinverter.

5. Connect AC cables

A. Remove the temporary cap from AC BUS cable connectors and then connect Microinverters;

B. Protect any unused connectors by fitting AC trunk plug caps on them to keep them watertight.



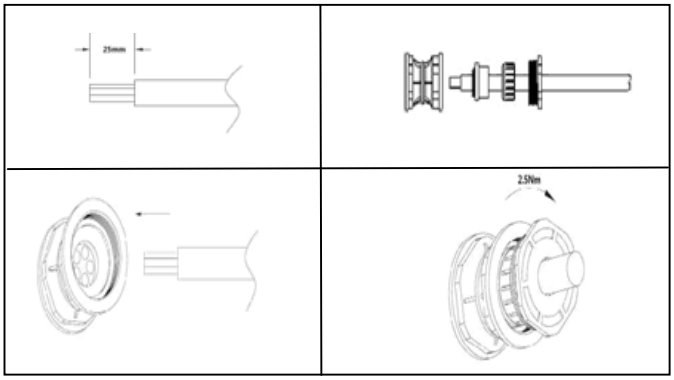
6. Terminate the unused end of AC BUS cable

A. Remove about 25mm(1.0’’) of the cable sheath from the conductors;

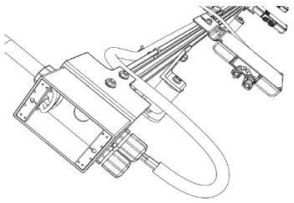
B. Check that all connector parts are present, slide nut onto the cable and insert the cable end through clamp ring and sealing ring;

C. Insert every cable end to the hole with cable clamp of sealing cap tightly to make them insulted;

D. Screw nut to sealing cap with torque about 2.5Nm.

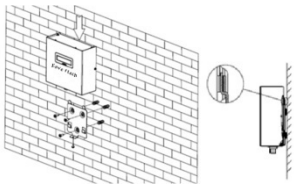
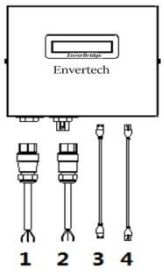


7. Connect AC BUS cable to the AC junction box

Connect AC BUS cable into the AC branch junction box.	

8. Mount EnverBridge

EnverBridge is an IP40 device and need to be installed indoor. Find a place near to router and distribution panel to install EnverBridge.

Mount bracket with 3 screws and expansion tubes. Hang EnverBridge to the hook of bracket slightly.	
Connect EnverBridge to router with network cable. ①Connect AC BUS cable ②Connect to distribution panel of grid ③Connect USB for debug ④Connect RJ45 for plant monitoring	

9. Prepare Extension cable connector for EnverBridge

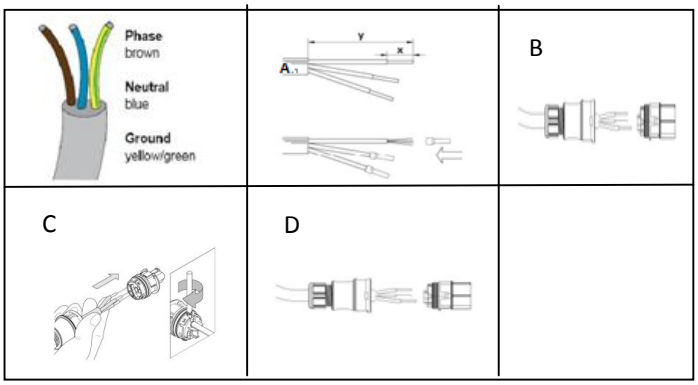
Extension cable can be ordered from Envertech and customer can also buy it from other place, 14AWG, 12AWG or 10AWG cables are suggested. Male connector is for "AC BUS" of EnverBridge and female is for "GRID" of EnverBridge.

A. Remove length "y" about 40mm(1.57'') sheath of one side of extension cable and length "x" about 14mm(0.55'') of the inner wrapper, then dress the conductor terminals with ferrules;

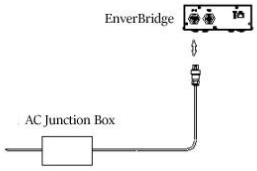
B. Check that all AC connector parts for EnverBridge are present, slide hex nut onto the cable and insert the cable end through clamp ring;

C. Insert the conductor terminal to the appointed holes, use a cross screwdriver to tighten it with torque about 1Nm;

D. Insert the connector to clamp ring with two click sound and then tighten the hex nut with torque about 4Nm.



10. Connect AC junction box to EnverBridge

Connect AC junction box fixed at frame side and "AC BUS" of EnverBridge with AC extension cable.	

11. Prepare grid cable connector

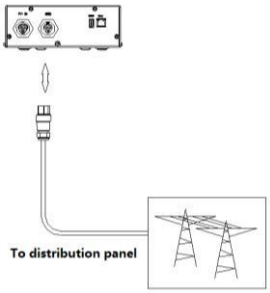
Extension cable can be ordered from Envertech and customer can also buy it from other place, 14AWG, 12AWG or 10AWG cables are suggested. Male connector is for "AC BUS" of EnverBridge and female is for "GRID" of EnverBridge.

The method is same as **step "9"**.

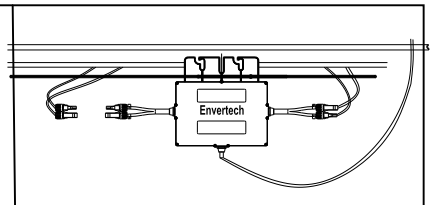
12. Connect EnverBridge to distribution grid

The breaker in distribution panel for PV system must to be kept "OFF" until the whole system is completed.

Make sure the performance of distribution panel satisfy the requirement of PV system, for example it can flow 16A current.

With the breaker "OFF", connect grid cable to EnverBridge and then connect to distribution panel.	

13. Connect PV panels to the Microinverters

Mount the PV modules above The Microinverters; Connect each PV module to the DC input of The Microinverter.	

14. Turn on the breaker for PV system

Make sure all the connections are completed and then turn on the breaker.

15. Monitor the plants

A. Click "**Register Now**" to register a new account;

B. Fill the register information;

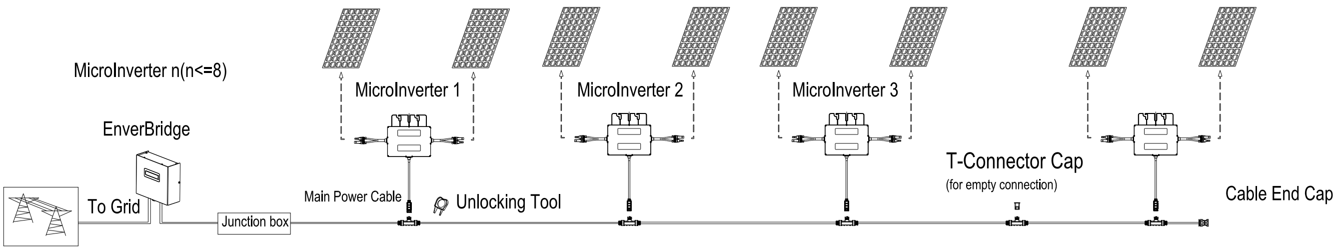
C. Click my site and fill into the EnverBridge information

D. The plants is in the list and you can click everyone to find more information.

The more information can be found in EnverBridge user manual.

Appendix:

1. For single phase:



2. For three phase: