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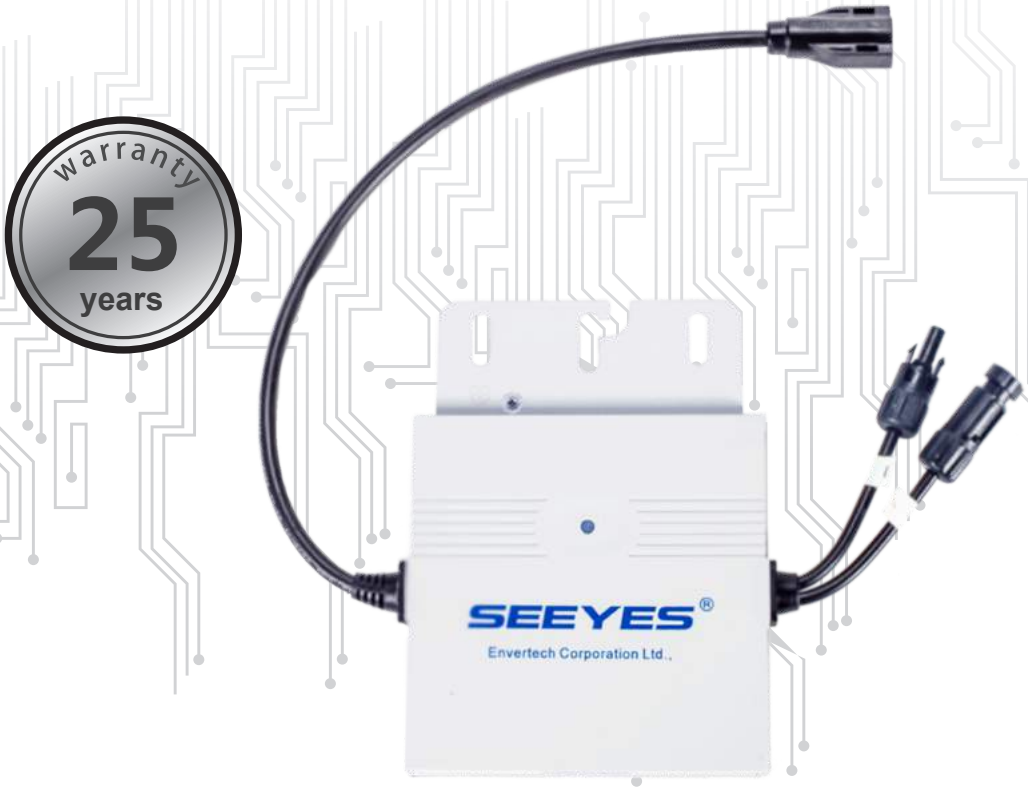

Microinverter
Model EVT248

Highlights

- High-quality energy harvest with high MPPT accuracy
- Concentrated reliability and stability
- No single-point failure
- Improved safety with integrated complete set of protection functions
- Lifetime free remote monitoring at solar panel' s level
- Flexibly adapted to almost all 60-cell or 72-cell panels
- Easy installation
- Long life time

The EVT248 Microinverter as a cutting-edge spokesman for the microinverters in the new era, has full sincerity and devotion to stability, details and more advanced tech. EVT248 seeks to enable best improved solar energy harvest, highest possible reliability, much simplified installation and most efficient management of solar power systems.

Each EVT248 is individually connected to one solar panel with every MPPT(Maximum Power Point Tracking) respectively for every panel. This unique configuration minimizes the negative impact from environment such as shading, dust, orientation or panel aging and eliminates the possibility of single-point failure, thus improving the system's harvest to largest extent.

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Microinverter Model EVT248

Microinverter Datasheet

Model	EVT248
Input Data (DC)	
Recommended maximum input power (STC)	300W
Maximum input DC voltage	54V
Start voltage	22V
Peak power tracking range	24V~42V
Operating range	18V~54V
Maximum DC short circuit current	15A
Maximum input current	9.5A
Output Data (AC)	
Rated output power	248W
Maximum output current	1.07A
Nominal voltage/range	220V/230V240V
Nominal frequency/range	50Hz/60Hz
Power factor	>0.99
Total Harmonic Distortion	<3%
Maximum units per branch	15
Efficiency	
Peak inverter efficiency	95.6%
EURO weighted efficiency	95%(according to the EN50530)
Nighttime power consumption	100mW
Mechanical Data	
Enclosure environmental rating	IP65
Operating temperature range	-40℃~+65℃
Dimensions (WxHxD)	163mm*163mm*27mm(Without bracket) 163mm*216mm*27mm(With bracket)
Weight	1.5Kg
Features	
Communication	PLCC (Power Line Carrier Communication)
Compliance	VDE-AR-N-4105, VDE 0126-1-1, G83/2, UTE C15-712-1, AS4777, EN50438 EN62109, EN61000
Warranty	25 Years

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Product Manual

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Company Introduction

Zhejiang Envertech Corporation Limited is specialized in providing microinverter solutions. Our core research team is made up of excellent R&D engineers who have long rich experience in the microinverter industry with either doctor or master degree in power electronics, computer information engineering, semiconductor technology, automatic control, communications, etc. Envertech majors in grid-tied solar microinverters, and will further expand onto off-grid microinverters, intelligent energy storage system and smart home system to establish a more comprehensive green tech enterprise.

Envertech microinverter has been certified globally and obtained certificates including G83/2, VDE 0126-1-1, VDE 4105, AS 4777, EN 50438, UTE C15-712-1, etc. covering all major markets in the whole Europe, Oceania, South and Southeast. Envertech microinveter technology has been applied in thousands of installations and projects all over the world, and the average failure rate over the past 3 years is testified to be less than one thousandth, winning trust and adherents from more than 20 countries.

Certificates






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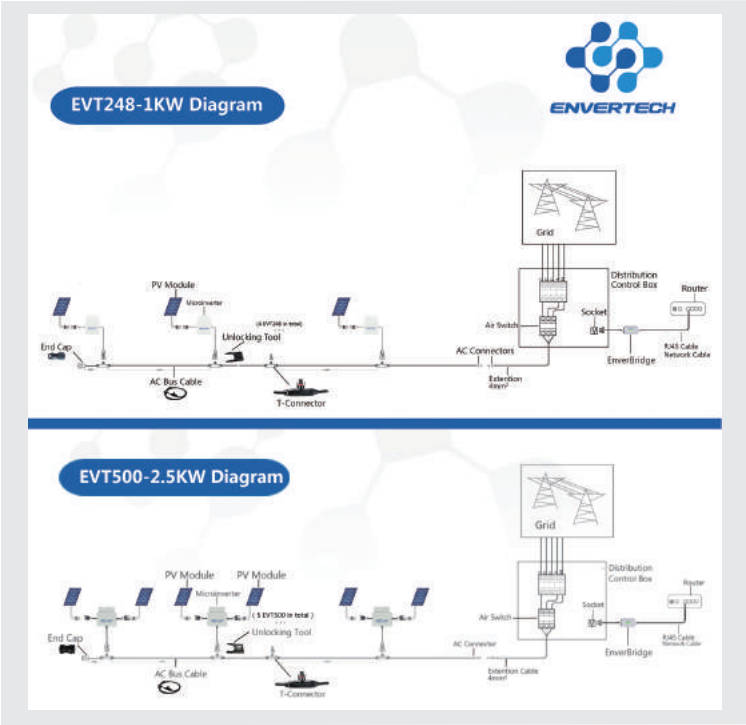
The Whole System Diagram

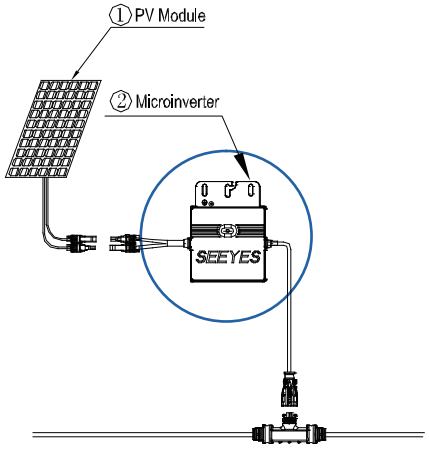


Product Catalogue

No.	Name	Description
①	EVT248	Microinverter with output power rated 248W
②	EVT500	Microinverter with output power rated 500W
③	EnverBridge	Monitoring Device
④	LCF	BRF filter
⑤	AC Bus Cable	AC Bus Cable with T-connectors
⑥	Wieland Connectors	AC Connector
⑦	AC Trunk End Cap	To Protect the end cut of bus cable
⑧	AC Trunk Unlock Tool	To unplug the branch cable from the T-Connector and bus cable.
⑨	Junction Box 1	Single Phase

1. Name: EVT248

Detailed diagram:

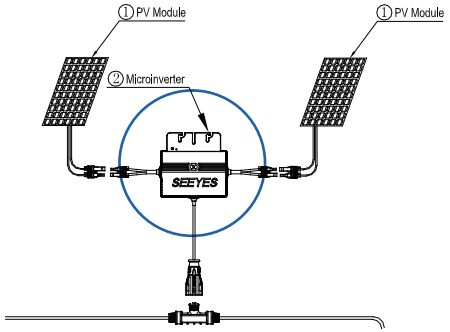


How to install:

After fixing the microinverter on the rack, connect the AC output end of microinveter to the T-connector of AC BUS cable and finally connect the right positive and negative poles of microinverter to the PV module.

2. Name: EVT500

Detailed diagram:

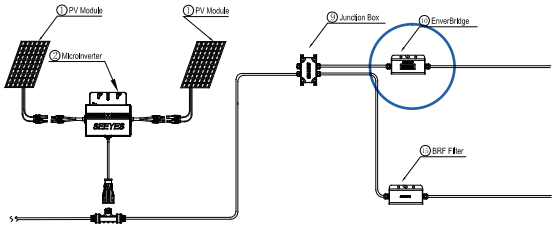


How to install:

After fixing the microinverter on the rack, connect the AC output end of microinveter to the T-connector of AC BUS cable and finally connect the right positive and negative poles of microinverter to the PV module.

3. Name: EnverBridge

Detailed diagram:

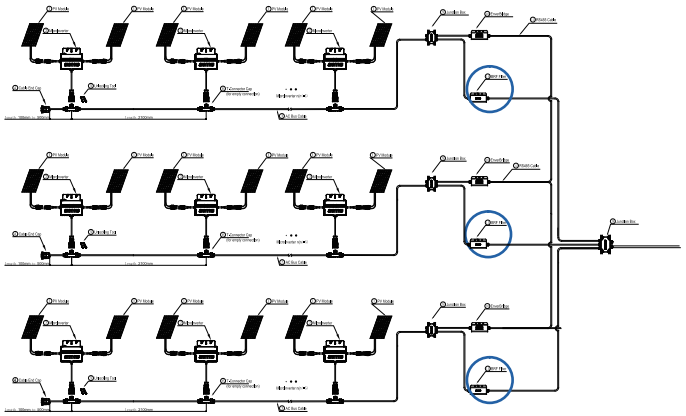


Function:

EnverBridge acts as the communication interface which offers the network access to the solar arrays for monitoring an Envertech microinverter system. The real-time energy harvest for every Envertech microinverter can be collected by EnverBridge and transmitted to EnverPortal for the overall real-time monitoring via computers or mobile phones.

4.Name: LCF

Detailed diagram:

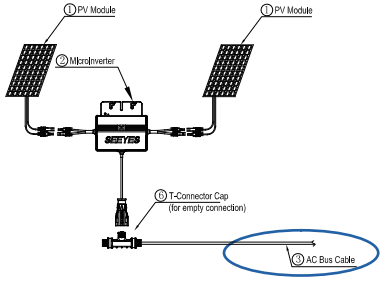


Function:

LCF (Powerline carrier communication Filter) is installed between the end of AC BUS cable and the national gird ， aiming at eliminating the residual carrier signal generated from the power line carrier communication process, and preventing the residual carrier signal from affecting other adjacent Enverbridge.

5. Name: AC Bus Cable

Detailed diagram:



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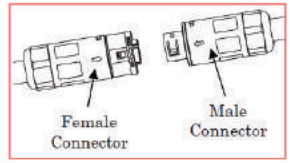
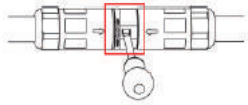
Function:

AC BUS cable is the cable which leads the electricity flowing out from Envertech Microinverter into the national grid. It is composed of a three-core cable including live wire (brown), neutral line (blue), earth wire (yellow). T-connectors are designed for easily plugging or releasing. Generally, there are two types of AC BUS cable. One is 1.05m for EVT248 system, and the other is 2.1m for EVT500 system.

6.Name: Wieland Connectors

Detailed diagram:

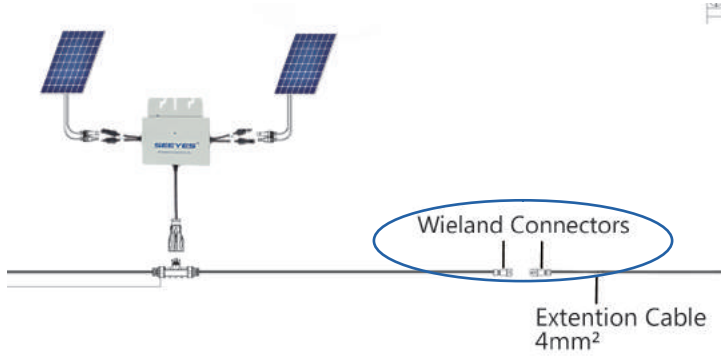




Function:

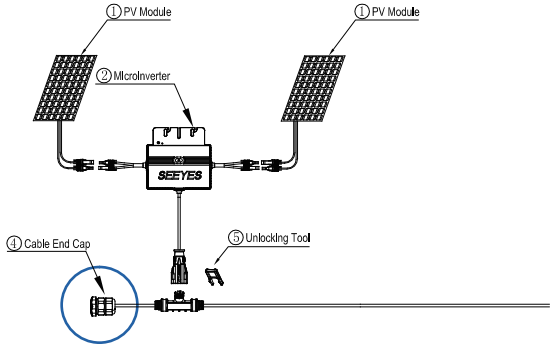
Wieland connectors are composed of Female and Male connectors. When AC BUS cable is too short to connect to distribution control box, Wieland connectors are used to connect AC BUS cable and the AC extension cable to distribution control box, through which the electricity can be led to the distribution grid.

Where to set the Wieland connectors:



7. Name: AC Trunk End Cap

Detailed diagram:

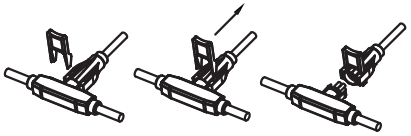


Function:

It acts as a protector to seal the unused end of the AC BUS cable to prevent moisture or dust from getting into the cable line.

8.Name: AC Trunk End Cap

Detailed diagram:



Function:

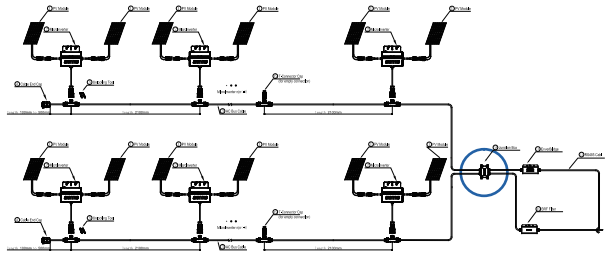
It is used to release connection between T-connector and AC branch cable.

Installation Guide:

Insert AC trunk unlock tool into the 2 holes on the T-connector using a downward force, and then try to pull out the connector using opposite force .

9. Name: Junction Box-Single Phase

Detailed diagram:



Function:

It is used to connect 2 or 3 parallel single phase Envertech Microinverter strings. After using junction box, current flows in and converges into one current, which is led by one cable to air-switch. In this way, it can save the use of cables and Wieland connectors.