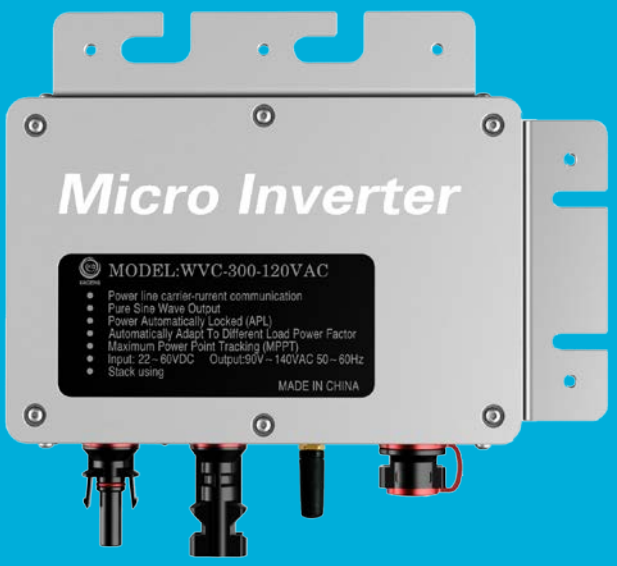
Green Energy
Smart Inverter **Expert**

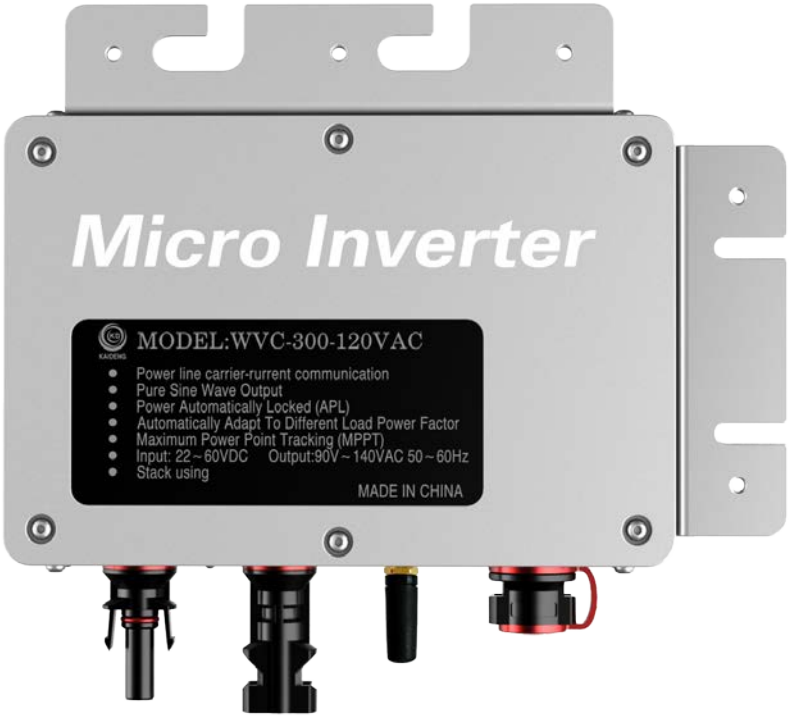
Smart Inverter WVC-300 (Wireless) Description



WVC-300 (Wireless)

WVC -300 (WIRELESS)（433/462MHz Wireless）

Smart Inverter



WVC-300 (Wireless) Using IP65 waterproof streamline design, Can effectively prevent rainwater on the surface erosion, Built-in high-performance Maximum Power Point Tracking（MPPT）Function，Better able to track changes in the solar luminosity and control different output power, Effectively capture and collect sunlight. AC electric power transmission using the reverse transmission technology, Is one of our patented technology, The inverter output power can provide load priority use, Extra electricity to the grid, Efficient use of the inverter to the power emitted, Electricity transmission rate of up to 99%.

Communication using two modes, Between the inverter and Collector Using power line carrier communication signals, Collector with a PC or other devices to communicate Using RS232 serial port/ WIFI wireless communication. Intelligent monitoring systems, The inverter can collect real-time data, Inverter can be controlled startup / shutdown / power regulation.

Features：

- High performance maximum power point tracking (MPPT)
- Reverse power transmission
- Intelligent monitoring management
- Input /output is fully isolated to protect the electrical safety
- Multiple parallel stacking
- Digital control system
- Simplify maintenance (user serviceable)
- Operation and maintenance costs low
- Flexible installation
- Use the wireless 433 / 462MHz communication mode

WVC-300 (Wireless)

WVC-300 (Wireless) Parameters

Input Data	KD-WVC-300 (Wireless)-120VAC/230VAC
Maximum input power	300Watt
Recommended using solar panels	Power300W, open circuit voltage 36-50VOC
Solar panel open circuit voltage range	36-50VOC
Peak power tracking voltage	22-50V
Min / Max start voltage	22-50V
Maximum DC short current	20A
Maximum Input Current	13A

Output Data	@120VAC	@230VAC
Peak power output	260Watt	260Watt
Rated output power	250Watt	250Watt
Rated output current	2.08A	1.08A
Rated voltage range	80-160VAC	180-260VAC
Rated frequency range	47-52.5Hz/57-62.5Hz	47-52.5Hz/57-62.5Hz
Power factor	>99%	>99%
Maximum units per branch circuit	6PCS（Single-phase）	12PCS（Single-phase）

Output Efficiency	@120VAC	@230VAC
Static MPPT efficiency	99.5%	99.5%
Maximum output efficiency	92.5%	93.5%
Night time power consumption	<1W	<1W
THD	<5%	<5%

Exterior	
Operating temperature range	-40℃ to +60℃
Dimensions (WxHxD)	192mm×176mm×38mm
N.W.	0.9kg
Waterproof level	IP65
Cooling	Self-cooling
Communication Mode	Wireless 433/462MHz
Power transmission mode	Reverse transfer, load priority
Monitoring System	Lifetime free
Electromagnetic compatibility	EN50081.part1 EN50082.part1
Grid disturbance	EN61000-3-2 Safety EN62109
Grid detection	DIN VDE 1026 UL1741
Certificate	CEC, CE National patent technology

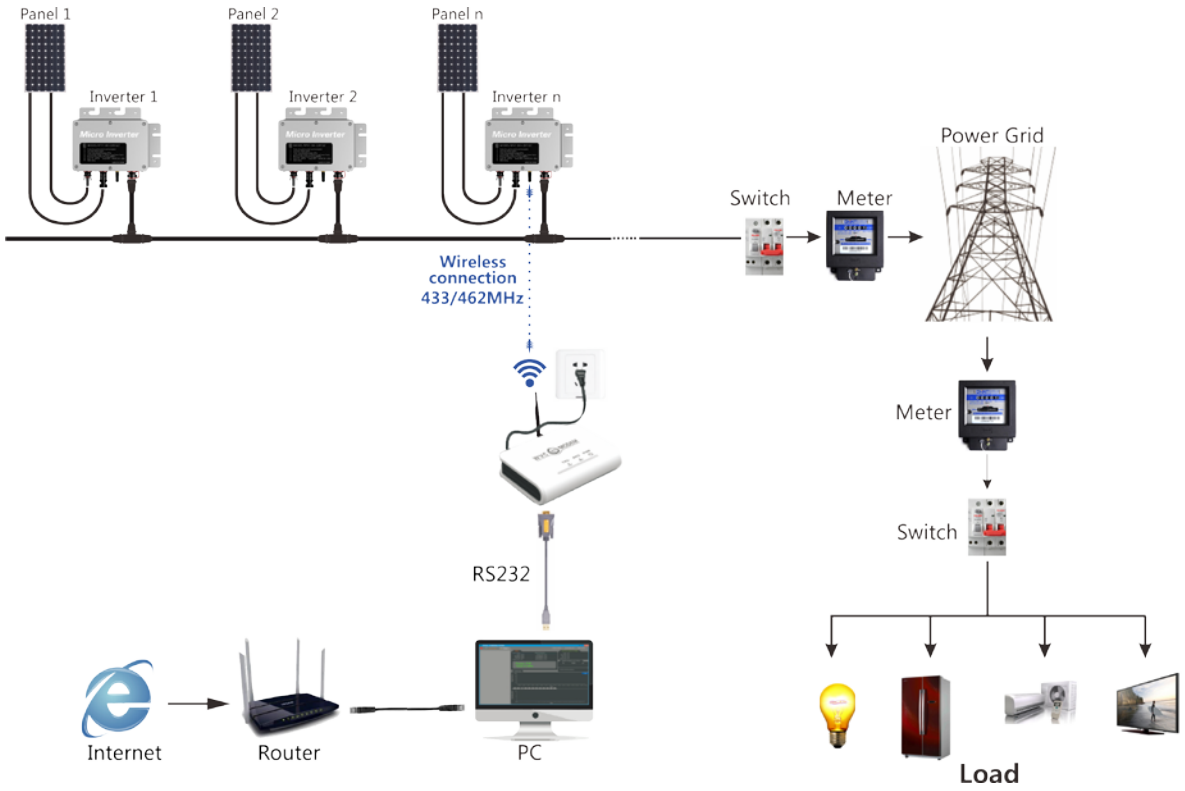
Package weight		
Sepcification	Single(packing)	Whole(12PCS)
G.W.	1.07Kg	14.34Kg
Dimensions	245×202×60mm	430×395×345

* Note: Each data collector can monitor 100 inverters

WVC-300 (Wireless)

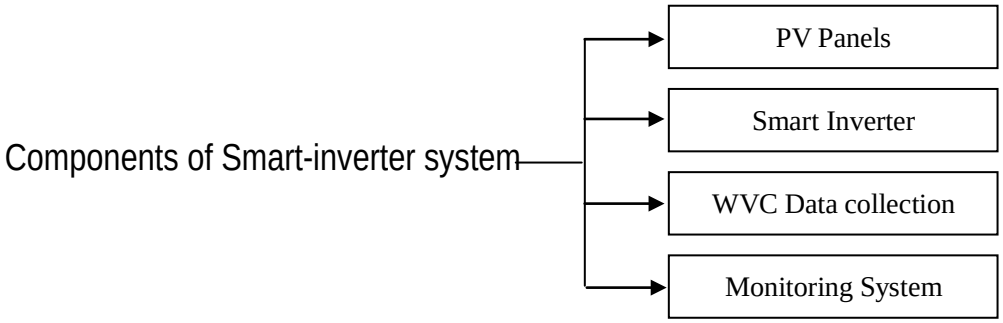
PV Smart-inverter system components

System Block Diagram



System Description

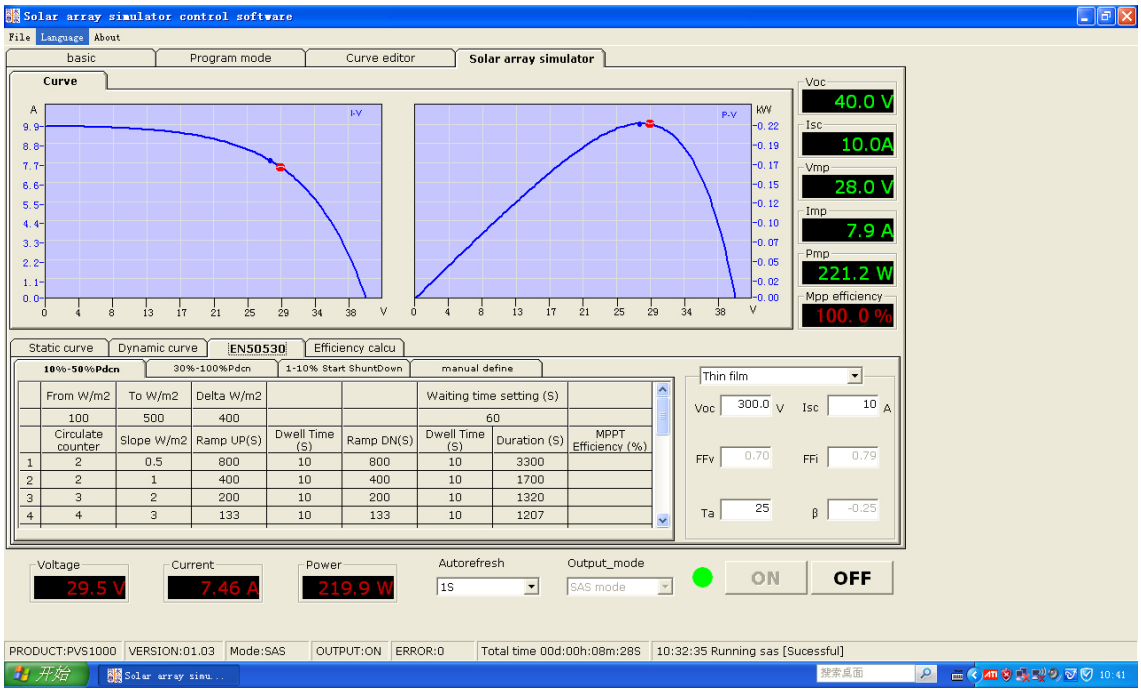
Smart-grid inverter system components



In summary, Smart-inverter system is simpler, more convenient installation.

High performance maximum power point tracking (MPPT)

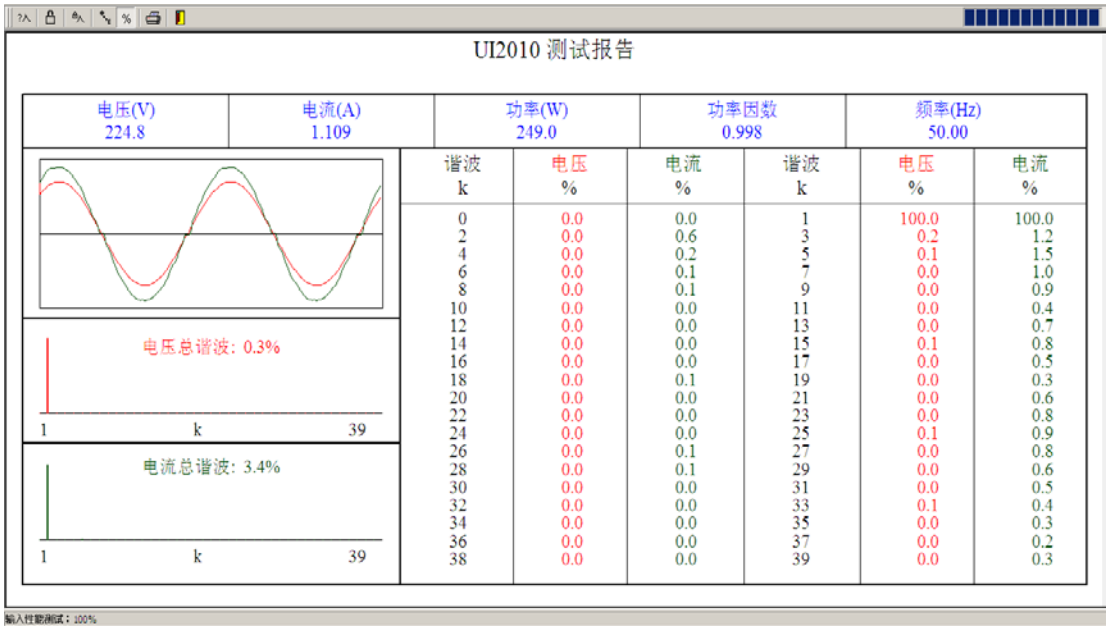
Powerful MPPT algorithm， Optimize the power from the solar panels to collect， Accurately capture and lock the maximum output power point， A substantial increase in output power greater than 25% or more.



MPPT

Power Output:（Reverse power transmission）

Reverse efficient power transmission technology， Patented technology， The inverter power transmission in the reverse direction，Automatic detection circuit load and using priority，Additional power transmitted to the grid，Power transmission rate up to 99.9%.Higher output efficiency in photovoltaic application system manipulation.



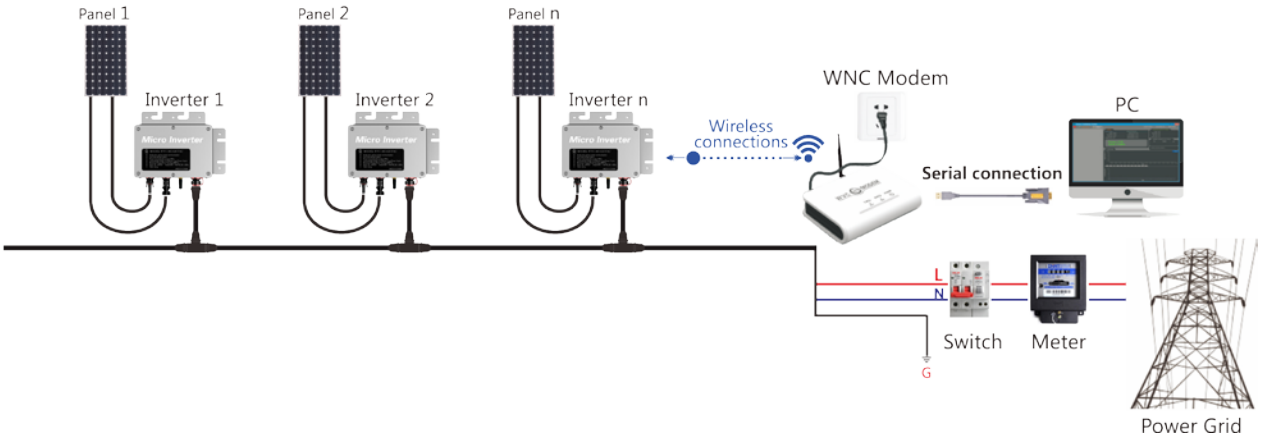
谐波 k	电压 %	电流 %	谐波 k	电压 %	电流 %
0	0.0	0.0	1	100.0	100.0
2	0.0	0.6	3	0.2	1.2
4	0.0	0.2	5	0.1	1.5
6	0.0	0.1	7	0.0	1.0
8	0.0	0.1	9	0.0	0.9
10	0.0	0.0	11	0.0	0.4
12	0.0	0.0	13	0.0	0.7
14	0.0	0.0	15	0.1	0.8
16	0.0	0.0	17	0.0	0.5
18	0.0	0.1	19	0.0	0.3
20	0.0	0.0	21	0.0	0.6
22	0.0	0.0	23	0.0	0.8
24	0.0	0.0	25	0.1	0.9
26	0.0	0.1	27	0.0	0.8
28	0.0	0.1	29	0.0	0.6
30	0.0	0.0	31	0.0	0.5
32	0.0	0.0	33	0.1	0.4
34	0.0	0.0	35	0.0	0.3
36	0.0	0.0	37	0.0	0.2
38	0.0	0.0	39	0.0	0.3

THD

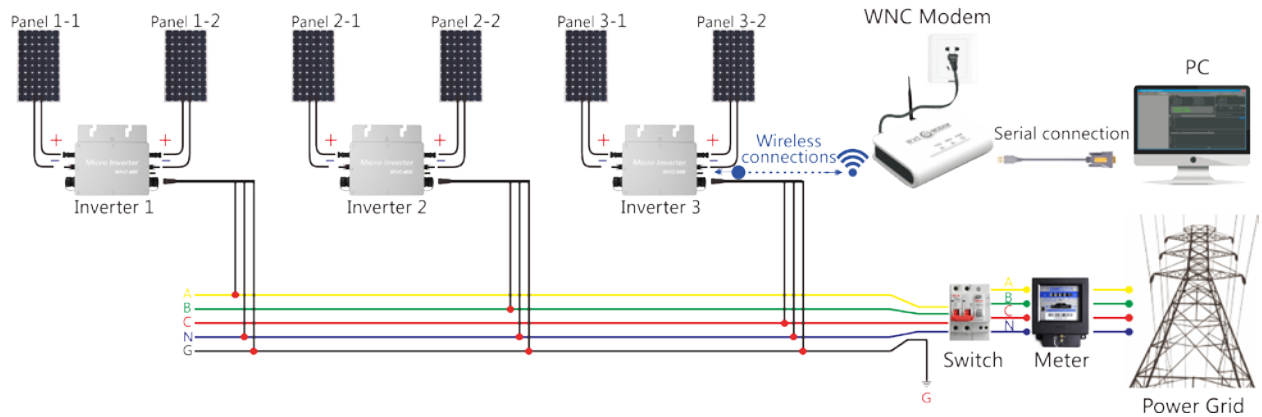
WVC-300 (Wireless)

Electrical schematics

Single-phase electrical schematics



Three-phase electrical schematics



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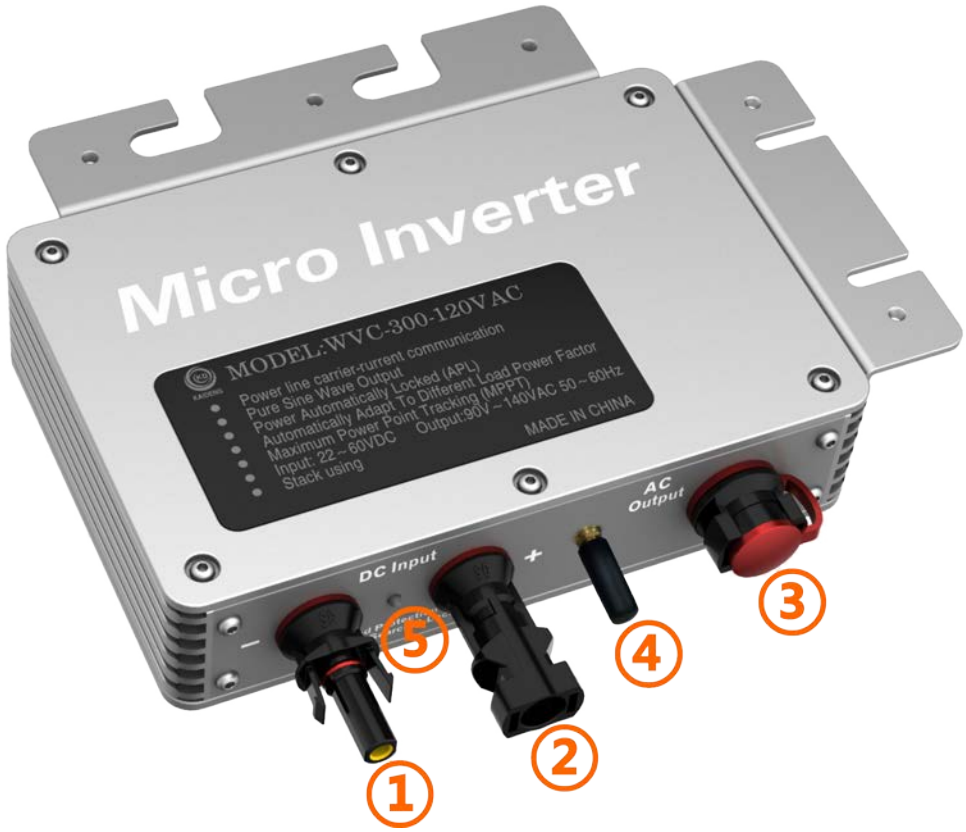


①DC Input “−”

②DC Input “+”

③AC Output

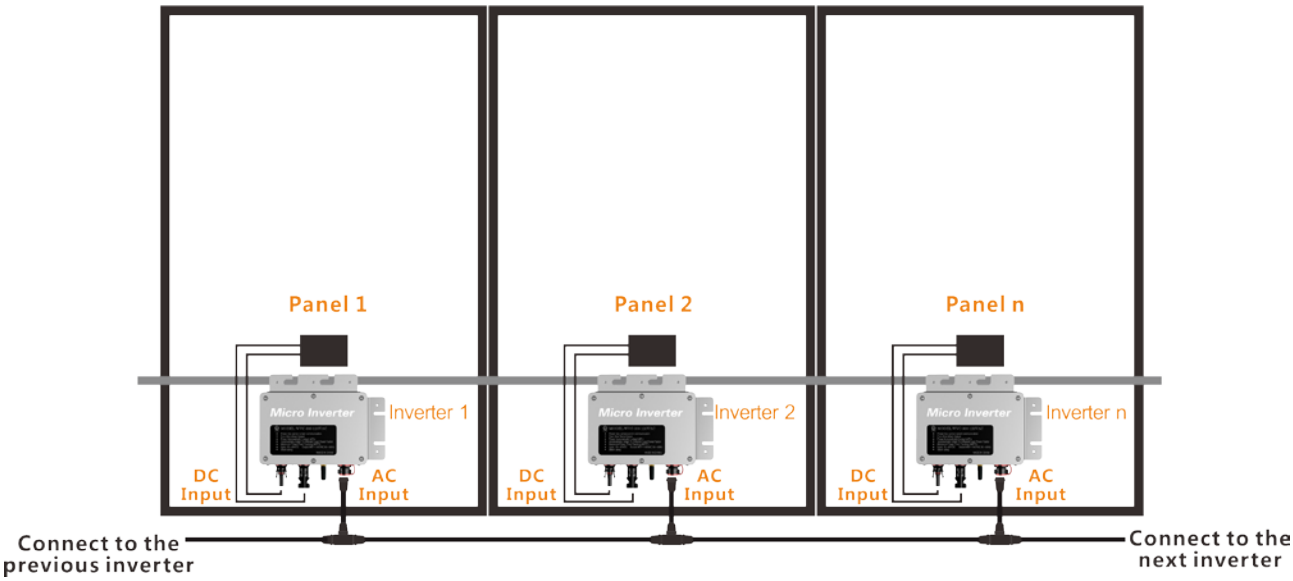
④433/462MHz antenna

⑤LED Display

WVC-300 (Wireless)

Installation and connection

WVC-300 Series Solar Inverter very easy to install, No need for project professionals can also install. Whether installation or maintenance are very simple, No maintenance。



Monitoring System

The Monitoring System KDM is KaiDeng Energy Technology Co., Ltd. have complete independent intellectual property developed intelligent monitoring systems, It is a product designed specifically for WVC