

PV500 IP65 Series

Solar pump inverter



FRECON



ABOUT US

FRECON Electric (Shenzhen) Co., Ltd. is a national key high-tech enterprise, a dual-soft enterprise in Shenzhen, and a professional company in the fields of industrial automation, high efficiency and energy saving, and green new energy which was founded in 2013. We have more than 16 years of experience in the development and application of inverters, servo drives, energy-saving control cabinets, solar inverter systems etc.





Features



PV500 IP65 series solar pump inverter

- Applicable to AM, PMSM, etc.
- IP65 design, outdoor installation
- Support solar power DC/Power grid AC input, and DC/AC auto switch
- Advanced MPPT algorithms, efficiency reaches 99%
- Operating temperature range: - 10 ~ 60 °C
- All models support 4G/WIFI module for real-time remote monitoring and operation in APP & WEB. (optional)
- Larger water yield under same condition
- Inverter will entry dormancy mode and wake up automatically according to sunshine intensity
- Support over-current, over-voltage, phase loss, short circuit, over-temperature protection etc.

Demonstration of the type

PV500-4T-2.2B-IP65

Products series Number

PV: Solar Pump Inverter

Input voltage level

4T: Three phase 380V
2T: Three phase 220V
2S: Single phase 220V
1S: Single phase 110V

Braking Unit (Built-in)

Output power

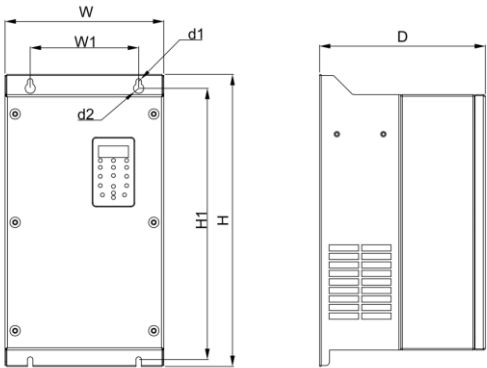
2.2kW

IP grade

IP65:IP65

Model	Recommended Solar Power (kW)	Maximum Input DC Current (A)	Rated Input AC Current (A)	Rated Output Current (A)	Adaptive Motor(kW)
PV500-4T-0.7B-IP65-H	1.0	10.6	3.4	2.5	0.75
PV500-4T-1.5B-IP65-H	2.0	10.6	5.0	4.2	1.5
PV500-4T-2.2B-IP65-H	2.9	10.6	5.8	5.5	2.2
PV500-4T-4.0B-IP65-H	5.2	10.6	11.0	9.5	4.0
PV500-4T-5.5B-IP65-H	7.2	21.1	14.6	13.0	5.5
PV500-4T-7.5B-IP65-H	9.8	21.1	20.5	17.0	7.5
PV500-4T-011B-IP65-H	14.3	31.7	26.0	25.0	11.0
PV500-4T-015B-IP65-H	19.5	42.2	35.0	32.0	15.0
PV500-4T-018B-IP65-H	24.1	52.8	38.5	37.0	18.5
PV500-4T-022B-IP65-H	28.6	63.4	46.5	45.0	22.0

Product outline and mounting dimensions and weight



Dimension Drawing

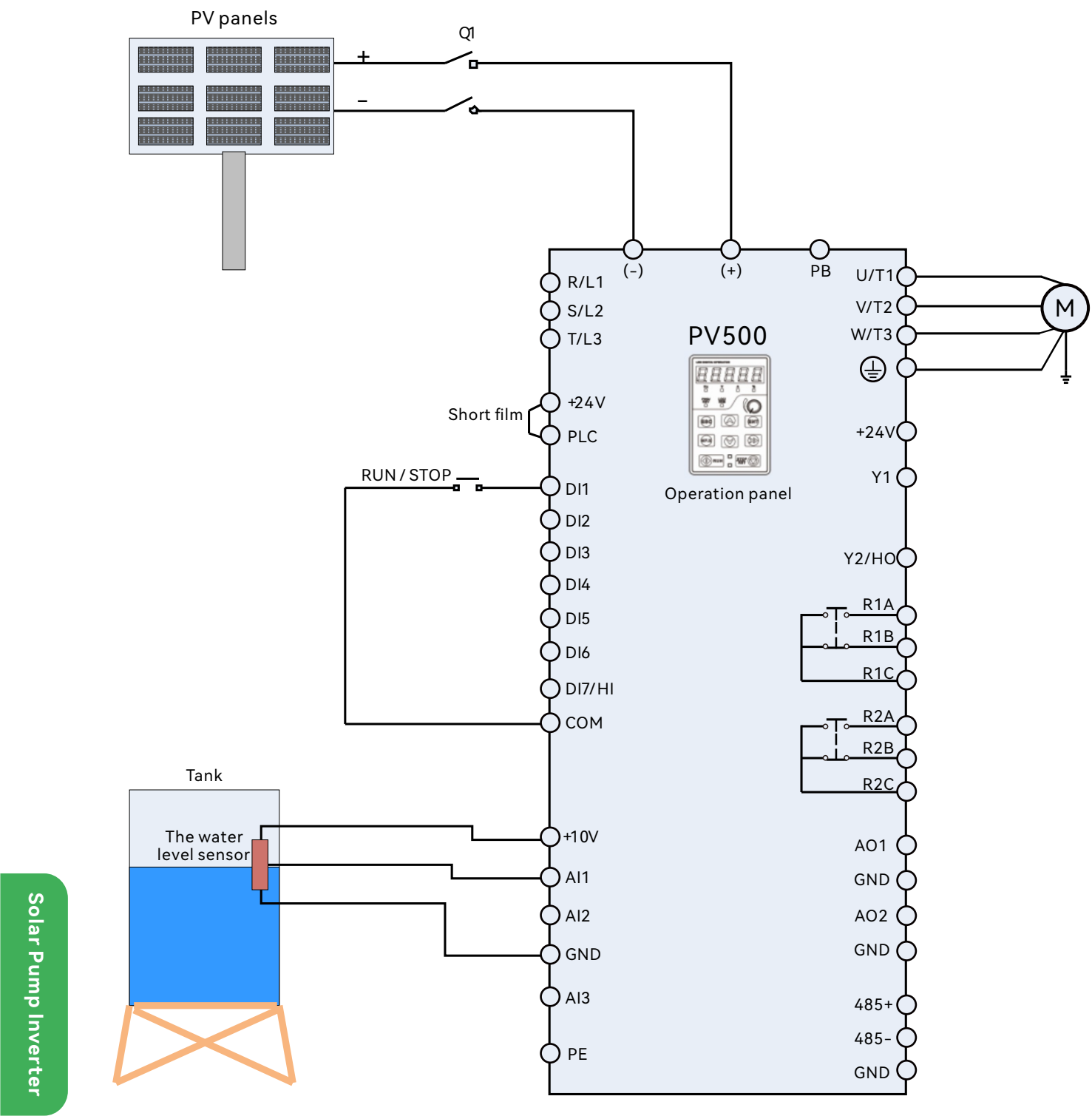
Model	External and installation dimensions (mm)							
	W	W1	H	H1	D	d1	d2	Weight(KG)
PV500-4T-0.7B-IP65-H	178	110	340	323	189	7	13	5.4
PV500-4T-1.5B-IP65-H								
PV500-4T-2.2B-IP65-H								
PV500-4T-4.0B-IP65-H								
PV500-4T-5.5B-IP65-H	205	140	378	359	215	7	13	7.2
PV500-4T-7.5B-IP65-H								
PV500-4T-011B-IP65-H								
PV500-4T-015B-IP65-H	250	180	428	409	220	7	13	10.8
PV500-4T-018B-IP65-H								
PV500-4T-022B-IP65-H								

Solar Pump Inverter

specification

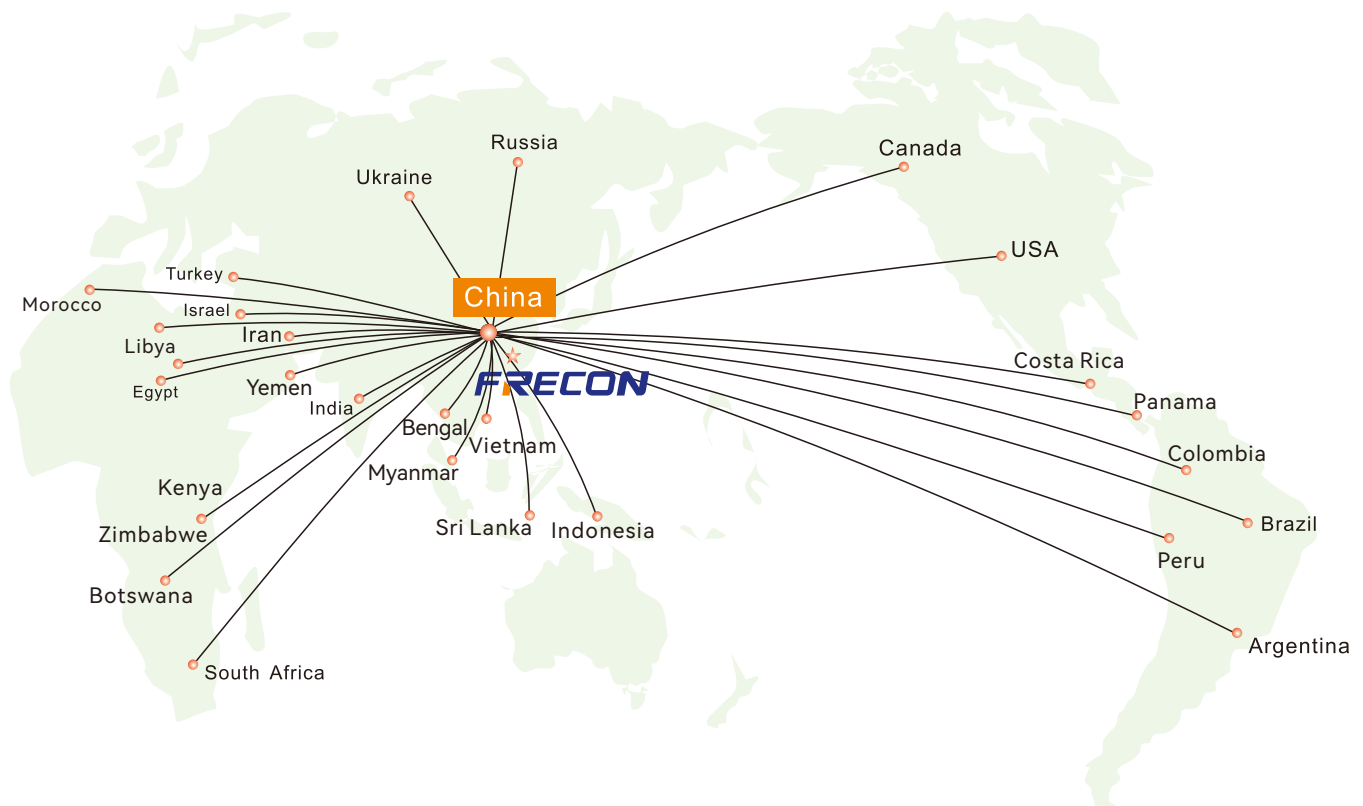
Input specification	
PV Input	
Maximum Input DC Voltage	900VDC
Recommended Voc Range	550 ~ 850VDC
Recommended MPPT Voltage Range	450 ~ 600VDC
Working DC Voltage Of Inverter	230 ~ 900VDC
Max MPPT Efficiency	99%
Grid or backup generator input	
Input Voltage	3PH 380V(-15% ~ 30%)
Output specification	
Rated output voltage	3PH 380V
Output frequency	0 ~ 600.00Hz (Default 0 ~ 50.00Hz)
Overload capability	150% Rated Current 60s, 180% Rated Current 10s, 200% Rated Current 1s.
Protection	
Built-in Protection	Lighting Protection, over-current, overvoltage, output phase-lose, under-load, under-voltage, short circuit, overheating, water pump run dry etc.
General Parameters	
Application Site	No direct sunshine, no dust, corrosive gas, combustible gas, oil mist, steam, dripping or salinity etc.
Altitude	0 ~ 2000 m Derated use above 1000m,per 100m, the rated output current decrease 1%.
Environment Temperature	-10℃ ~ 60℃ (Environment Temperature above 40℃, Per 1℃, the rated output current decrease 1.5%)
Humidity	5 ~ 95%,non-condensation
Vibration	less than 5.9 m/s ² (0.6g)
Storage Temperature	-20℃ ~ +70℃
Efficiency	Rated Power Run≥93%
Installation	Wall mounting
Protection Grade	IP65
Cooling	Forced Air Cooling

Wiring diagram

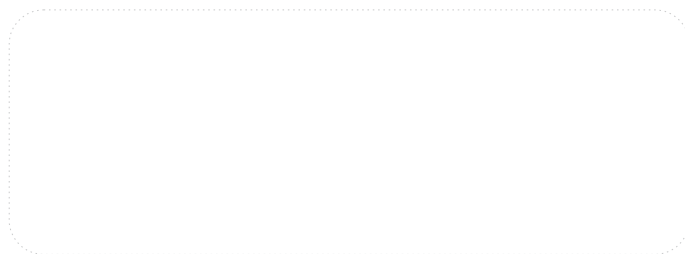


Control Circuit Terminal

Category	Terminal Symbol	Terminal Name	Description
Power	+10V-GND	+ 10V Power Supply	Output +10V Power Supply, Maximum Output Current: 10mA. Generally use for power supply of external potentiometer, resistance range of potentiometer: 1 ~ 5kΩ
	+24V-COM	24V Power Supply	Output +24V power supply, generally use for power supply of digital input/output terminal and external sensor, maximum output current: 200mA.
	PLC	External Power Input Terminal	Factory default in connection with +24V, when using an external signal to drive DI1~DI7, PLC need to be connected to external power, and disconnected with +24V power terminal.
Analog Input	AI1-GND	Analog Input Terminal 1	Input Range: DC 0 ~ 10V/0 ~ 20mA, selected by AI1、 AI2 toggle switches on control board. Input Impedance: 250kΩ for voltage input, 250Ω for current input.
	AI2-GND	Analog Input Terminal 2	
Digital Input	DI1- COM	Digital Input Terminal 1	Maximum input frequency: 200HzInput Impedance: 2.4kΩVoltage Range of level-input:9V ~ 30V
	DI2- COM	Digital Input Terminal 2	
	DI3- COM	Digital Input Terminal 3	
	DI4- COM	Digital Input Terminal 4	
	DI7/HI-COM	Digital Input Terminal 7 or high-speed pulse input	Besides the features of DI1~DI6, DI7 also can be the channel of high-speed pulse input. Maximum input frequency: 100kHz.
Analog Output	AO1-GND	Analog Output Terminal 1	Output range:DC 0 ~ 10V/0 ~ 20mA, selected by A01、 A02 toggle switches on control board. Impedance required≥10kΩ
	AO2-GND	Analog Output Terminal 2	
Digital Output	Y2/HO-COM	Open Collector Output 2or high-speed pulse output	Apart from Y1 characteristics, Y2 also can be the channel of high-speed pulse input. Maximum output frequency: 100kHz.
Relay Output	R1A-R1C	normal open terminal	Contact driving ability:AC250V, 3A, COSØ=0.4。 DC 30V, 1A
	R1B-R1C	normal close terminal	
	R2A-R2C	normal open terminal	
	R2B-R2C	normal close terminal	
RS485 Communication	485+-485-	485 Communication Terminals	Speed: 4800/9600/19200/38400/57600/115200bps.RS485 toggle switch on control board, setting the terminal matching-resister
	GND	485 Communication Shield Ground	
Shield	PE	485 Communication Shield Ground	It's use for grounding the shield of terminal-wire
Auxiliary interface		External Keyboard Interface	When connected to operation board, the longest communication distance is up to 50m, adopt the standard network cable (Rj45)



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