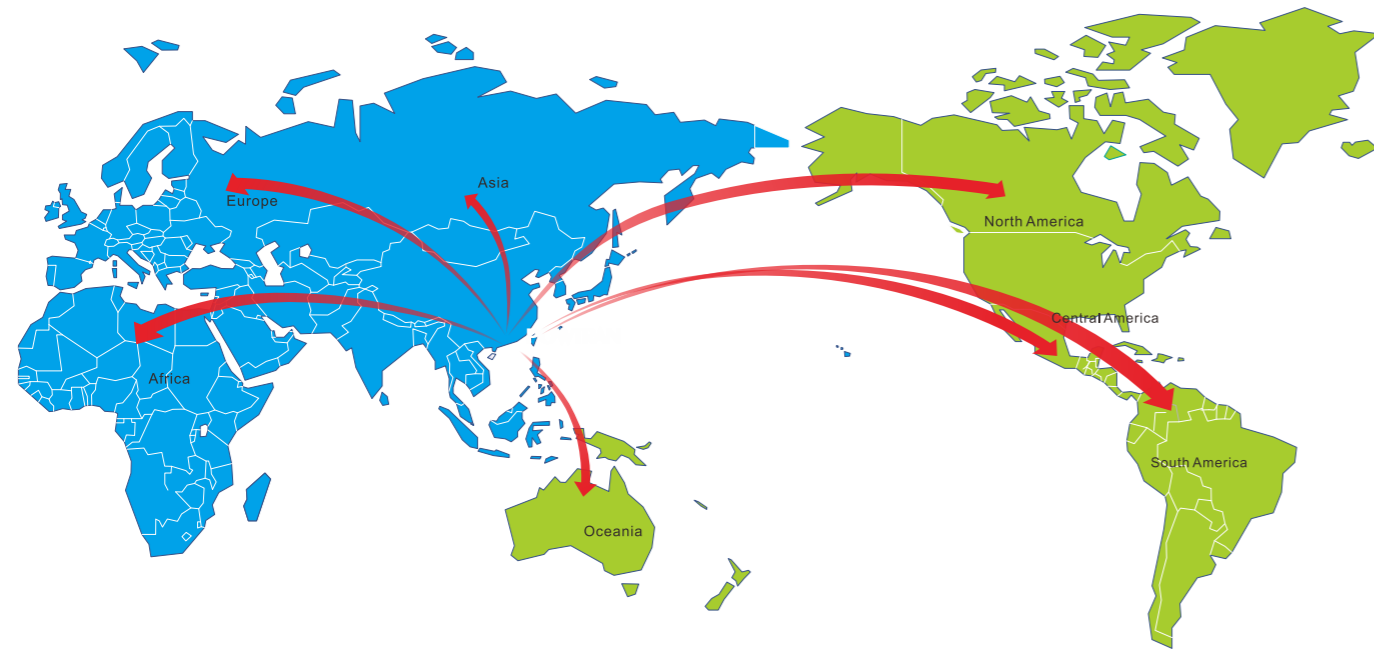


Service Network:



More valuable intelligent products and solutions ,  
well known band in the field of electrical drive and control

202408EV1.0

# PI550-S/PI550AI-S series



## Special Solar inverter for Water Pump



Due to the continuous upgrading of our products, the content is subject to change without prior notice

# Special Solar Inverter for Water Pump

# PI550-S/PI550A1-S series



### Brief introduction:

PI550-S/PI500A1-S series solar inverter special for PV water pump adopts the high accuracy fast MPPT algorithms, tracking the PV array output by the maximum power point, driving the pump motor as much as possible to meet various pumping applications. The solar inverter special for PV water pump can support AC input besides support PV array DC input. When the PV array can not drive the motor or does not have output, it can also accept the grid DC input or other AC motor to supply the power to meet various emergency needs. PI550-S/PI500A1-S series solar inverter special for PV water pump provides full protection, maximizing the life of motor and pump.

### Capacity range:

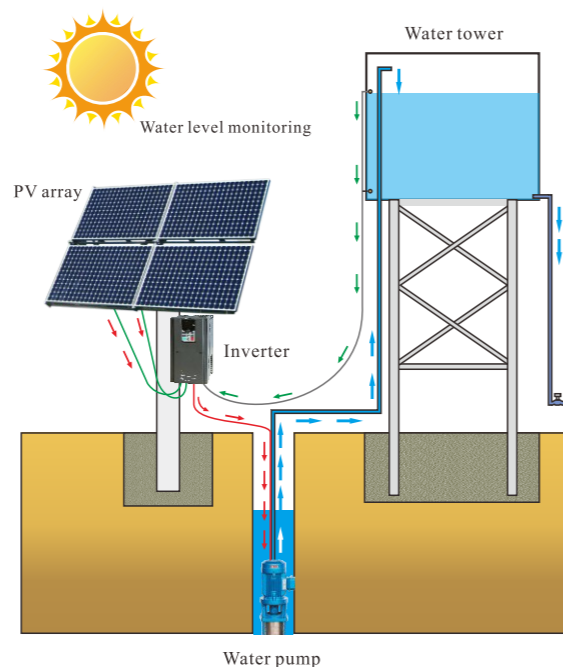
Power range: 0.4~400kW  
 Output frequency: 0~400Hz  
 Input voltage range:  
 1.DC150-450V, 1-phase AC220V  
 2.DC150-450V, 3-phase AC220V  
 3.DC250-800V, 3-phase AC380V  
 4.DC400-900V, 3-phase AC480V

### Technique Features:

- Built-in high precision PV array maximum power point tracking MPPT algorithms
- Dry running protection
- Tank water level control
- Accept DC/AC input
- LED displays the real time situation and the parameter of system
- Based on RS485 real time remote control system
- Fast installation design, no need extra maintenance
- Built-in full protection and diagnostic mechanism
- With AC-DC automatic witching function
- Auto switch between DC and AC can be realized through auto switcher for PI550-S and PI500A1-S solar inverters only.
- Built in communication function RS485
- External GPRS device optional for remote monitoring and parameter setting

### Application filed:

Agriculture irrigation, grassland animal husbandry, forest irrigation, municiple water, landscape fountain, fish pond, highway greening, coastal saltworks water supply and drainage, etc.



# PI550-S/PI550A1-S series

### Nameplate instruction:

POWTRAN Inverter model ← MODEL PI550-S 011G3

Output Power Spec. ← POWER 11kW

Input Source Spec. ← INPUT DC 250~800V/AC 3PH 380V

Output Spec. ← OUTPUT AC 3PH 0V ~ Vin 25A 0 ~ 400Hz

Bar code ←

Production Sequence No. ← ZPM1A17HB08G300001

Production Address ← GUANGDONG POWTRAN POWER ELECTRONICS CO.,LTD.

PI 550 -S 011 G 3

Input Voltage Level:  
 1.DC150-450V, 1-phase AC220V  
 2.DC150-450V, 3-phase AC220V  
 3.DC250-800V, 3-phase AC380V  
 4.DC400-900V, 3-phase AC480V

Product function code:  
 G:General Load  
 S:Solar pump

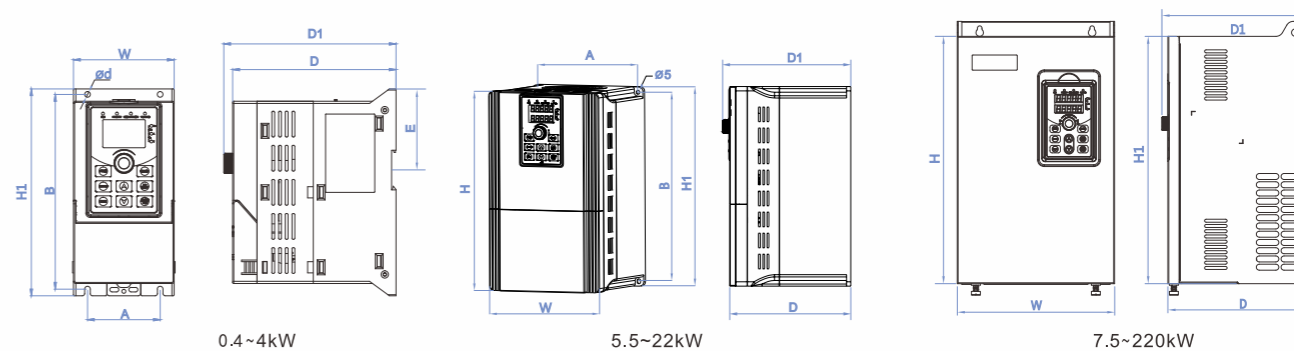
Rated output Power:  
 Example: 011:11kW  
 132:132kW

### Recommended solar array configuration:

Inverter Power (kW)	Max.DC input current (A)	Open-circuit voltage degree of solar module									
		20±3V		30±3V		36±3V		42±3V			
		Module Power +/-5Wp	Modules per string x strings	Module Power +/-5Wp	Modules per string x strings	Module Power +/-5Wp	Modules per string x strings	Module Power +/-5Wp	Modules per string x strings	Module Power +/-5Wp	Modules per string x strings
0.75	4.2	30	29*1	-	-	-	-	-	-	-	-
1.5	6.1	60	30*1	--	-	-	-	-	-	-	-
2.2	7.1	90	30*1	-	-	145	18*1	175	15*1	-	-
4	16.5	85	28*2	200	22*1	140	17*2	160	15*2	-	-
5.5	23.9	-	-	-	-	195	17*2	220	15*2	-	-
7.5	30.6	-	-	215	21*2	175	17*3	200	15*3	300	15*2
11	39.2	-	-	200	22*3	195	17*4	220	15*4	-	-
15	49	-	-	205	22*4	200	18*5	240	15*5	300	15*4

\*Recommended DC input power is about 1.2~1.5times of motor rated power(for 3 phase,380V inverters)

### Technical Specifications:



## Specification and size

Model	Power (kW)	Input Voltage (V)	Current (A)	Dimension (H1*W*D1mm)	Installation Dimension (A*B*dmm)	N.W (KG)	Base No.		
* PI550A1-S 0R4G1	0.4	DC150-450V 1-phase AC220V±10%	2.5	185/90/154	65/174/Ø5	1.6	F1		
* PI550A1-S 0R7G1	0.75		4						
* PI550A1-S 1R5G1	1.5		7						
* PI550A1-S 2R2G1	2.2		10						
* PI550A1-S 004G1	4		DC150-450V 3-phase AC220V±10%	16	185/90/174	65/174/Ø5	1.8	F2	
* PI550A1-S 5R5G1	5.5			25	260/120/190	90/250/Ø5	2.7	F3	
* PI550A1-S 7R5G1	7.5			32	290/170/201	155/276/Ø5	5.8	F4	
PI550-S 011G1	11			45	350/210/198	150/335/Ø6	9.5	F5	
PI550-S 015G1	15			60	400/240/223	180/385Ø7	13	F6	
PI550-S 018G1	18.5			75					
PI550-S 022G1	22			90	520/300/283	220/500/Ø10	42	F8	
* PI550A1-S 0R4G2	0.4			DC150-450V 3-phase AC220V±10%	2.5	185/90/154	65/174/Ø5	1.6	F1
* PI550A1-S 0R7G2	0.75				4				
* PI550A1-S 1R5G2	1.5				7				
* PI550A1-S 2R2G2	2.2	10							
* PI550A1-S 004G2	4	DC150-450V 3-phase AC220V±10%	16		185/90/174	65/174/Ø5	1.8	F2	
* PI550A1-S 5R5G2	5.5		25		260/120/190	90/250/Ø5	2.7	F3	
PI550A1-S 7R5G2	7.5		32		290/170/201	155/276/Ø5	5.8	F4	
PI550A1-S 011G2	11		45		400/240/223	180/385Ø7	13	F6	
PI550-S 015G2	15		60						
PI550-S 018G2	18.5		75		520/300/283	220/500/Ø10	42	F8	
PI550-S 022G2	22		90		575/355/328	250/555/Ø10	58	F9	
PI550-S 030G2	30		110						
PI550-S 037G2	37		152		720/400/368	300/700/Ø10	73	F10	
PI550-S 045G2	45		176		820/480/ 398	370/800/Ø11	108	F11	
PI550-S 055G2	55	210							
PI550-S 075G2	75	304	980/705/418	550/945/Ø13	190	F13			
PI550-S 093G2	93	380	520						
PI550-S 110G2	110	426							
PI550-S 132G2	132	465							
PI550-S 160G2	160	520							
* PI550A1-S 0R7G3	0.75	DC250-800V 3-phase AC380V±10%	2.5	185/90/154	65/174/Ø5	1.6	F1		
* PI550A1-S 1R5G3	1.5		3.8						
* PI550A1-S 2R2G3	2.2		5.1						
* PI550A1-S 004G3	4		9	185/90/174	65/174/Ø5	1.8	F2		
* PI550A1-S 5R5G3	5.5		13	260/120/190	90/250/Ø5	2.7	F3		
* PI550A1-S 7R5G3	7.5		17						

Model	Power (kW)	Input Voltage (V)	Current (A)	Dimension (H1*W*D1mm)	Installation Dimension (A*B*dmm)	N.W (KG)	Base No.
* PI550A1-S 011G3	11	DC250-800V 3-phase AC380V±10%	25	260/120/190	90/250/Ø5	2.7	F3
* PI550A1-S 015G3	15		32	290/170/201	155/276/Ø5	5.8	F4
* PI550A1-S 018G3	18.5		37				
* PI550A1-S 022G3	22		45				
PI550-S 030G3	30		60	400/240/223	180/385/Ø7	13	F6
PI550-S 037G3	37		75				
PI550-S 045G3	45		90	400/280/223	180/380/Ø7	14	F7
PI550-S 055G3	55		110	520/300/283	220/500/Ø10	42	F8
PI550-S 075G3	75		150				
PI550-S 093G3	93		176	575/355/328	250/555/Ø10	58	F9
PI550-S 110G3	110		210				
PI550-S 132G3	132		253	720/400/368	300/700/Ø10	73	F10
PI550-S 160G3	160		304	820/480/398	370/800/Ø11	108	F11
PI550-S 187G3	187		340				
PI550-S 200G3	200	380					
PI550-S 220G3	220	426					
* PI550A-S 0R7G4	0.75	DC400-900V 3-phase AC480V±10%	2.5	185/90/154	65/174/Ø5	1.6	F1
* PI550A1-S 1R5G4	1.5		3.7				
* PI550A1-S 2R2G4	2.2		5.0				
* PI550A1-S 004G4	4		8				
* PI550A1-S 5R5G4	5.5		11	260/120/190	90/250/Ø5	2.7	F3
* PI550A1-S 7R5G4	7.5		15				
* PI550A1-S 011G4	11		22	290/170/201	155/276/Ø5	5.8	F4
* PI550A1-S 015G4	15		27				
* PI550A1-S 018G4	18.5		34	400/240/223	180/385/Ø7	13	F6
* PI550A1-S 022G4	22		40				
PI550-S 030G4	30		55	400/280/223	180/385/Ø7	14	F7
PI550-S 037G4	37		65				
PI550-S 045G4	45		80	520/300/283	220/500/Ø10	42	F8
PI550-S 055G4	55		100				
PI550-S 075G4	75	130	575/355/328	250/555/Ø10	58	F9	
PI550-S 093G4	93	147					
PI550-S 110G4	110	180	720/400/368	300/700/Ø10	73	F10	
PI550-S 132G4	132	216					
PI550-S 160G4	160	259	820/480/398	370/800/Ø11	108	F11	
PI550-S 187G4	187	300					
PI550-S 200G4	200	328					
PI550-S 220G4	220	358					

Remark: PI550A1-S 0.4-22KW Plastic shell, Keyboard with single display, PI550-S 30KW-220kW Iron shell, Keyboard with double display.

### Specification and size

Model	Power (kW)	Input Voltage (V)	Current (A)	Dimension (H*W*D1mm)	Installation Dimension (A*B*dmm)	N.W (KG)	Base No.
* PI550A1-S 0R4G1S	0.4	DC150-450V 1-phase AC220V±10%	2.5	185/90/154	65/174/Ø5	1.6	F1
* PI550A1-S 0R7G1S	0.75		4				
* PI550A1-S 1R5G1S	1.5		7	185/90/174	65/174/Ø5	1.8	F2
* PI550A1-S 2R2G1S	2.2		10				
* PI550A1-S 004G1S	4		16	260/120/190	90/250/Ø5	2.7	F3
* PI550A1-S 5R5G1S	5.5		25	290/170/201	155/276/Ø5	5.8	F4
* PI550A1-S 7R5G1S	7.5		32				

Remark: PI550A1-S G1S series solar inverters are suitable for single phase AC220V water pumps.  
 Note: It is recommended that the power of solar cell modules is 1.2 times or more than the solar inverter power.



### Performance Feature

1. They are suitable for POWTRAN PI550A1-S and PI550-S solar inverter only;
2. There is no need to use electric switches, it can complete AC and DC automatic switching with our solar products;
3. There is no need to add interlock switches and contactors, help customer to save cost;
4. The switching voltage point can be adjusted by software parameter setting according to the actual situation on site, which is convenient for customer to use.



### Nameplate instruction:

Inverter model ← MODEL PV10-25-32

Output Power Spec. ← POWER 25A

Input Source Spec. ← INPUT DC 250~800V/AC 3PH 380V

Output Spec. ← OUTPUT 0~25A 0~400Hz

Bar code ←

Production Sequence No. ← ZPM1A17QA14G300001

Production Address ← GUANGDONG POWTRAN POWER ELECTRONICS CO.,LTD.

POWTRAN Solar switch module

Serial Code PV10 Series

Rated output current 25: 25A

PV 10 -25 -3 2

Product function code  
1:Single phase input  
2:Three phase input

Input Voltage Level:  
2:220V  
3:380V  
4:480V

### Specification and size

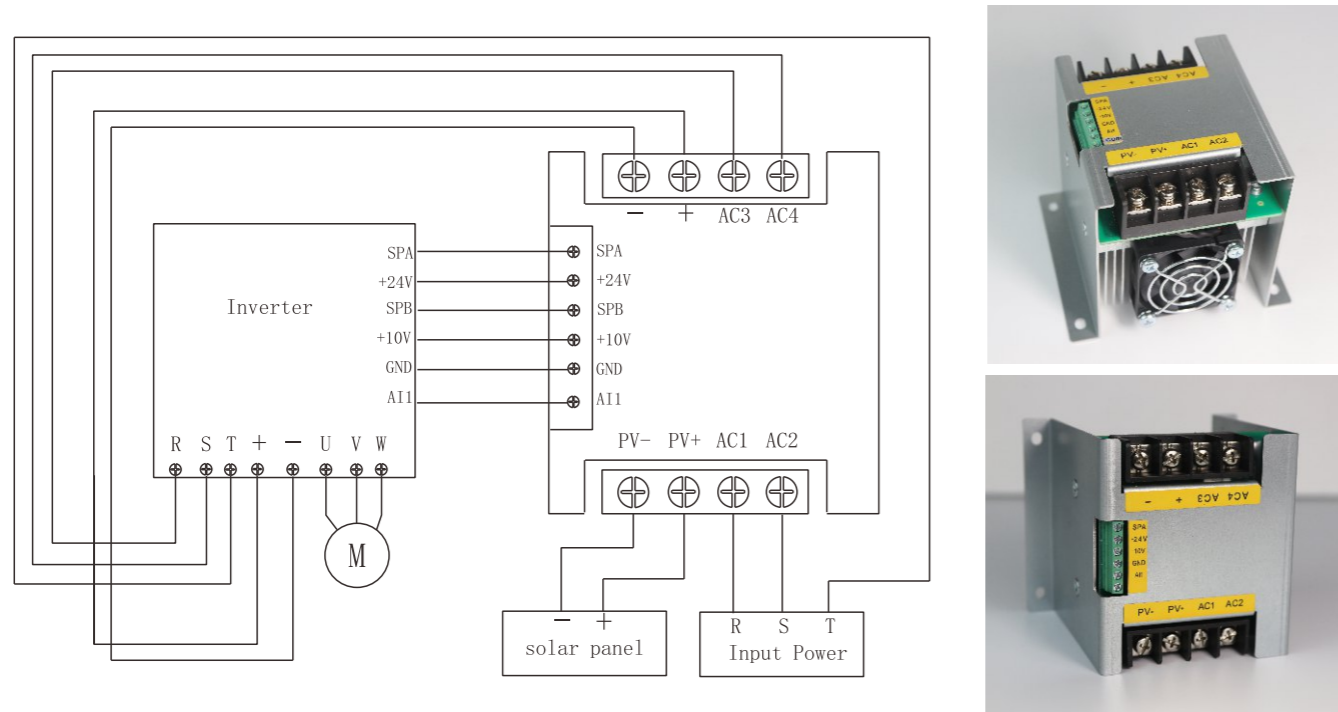
Solar switch module model	Rated output current (A)	Matching motor power (kW)	Inverter input current (A)
PV10-16-21	16	1.5	14
PV10-16-22	16	2.2	12
PV10-16-31	16	4	15
PV10-16-32	16	5.5	15
PV10-16-41	16	4	16
PV10-16-42	16	5.5	13
PV10-25-21	25	2.2	23
PV10-25-22	25	4	18
PV10-25-31	25	5.5	25
PV10-25-32	25	7.5	20
PV10-25-41	25	5.5	24
PV10-25-42	25	7.5	18

Note: Since the solar switch module is connected to the input terminal of the solar inverter, the actual situation of the single phase input shall prevail. The above selection is for reference only. Note that the long-term working current must be less than the rated current of the solar switch module.

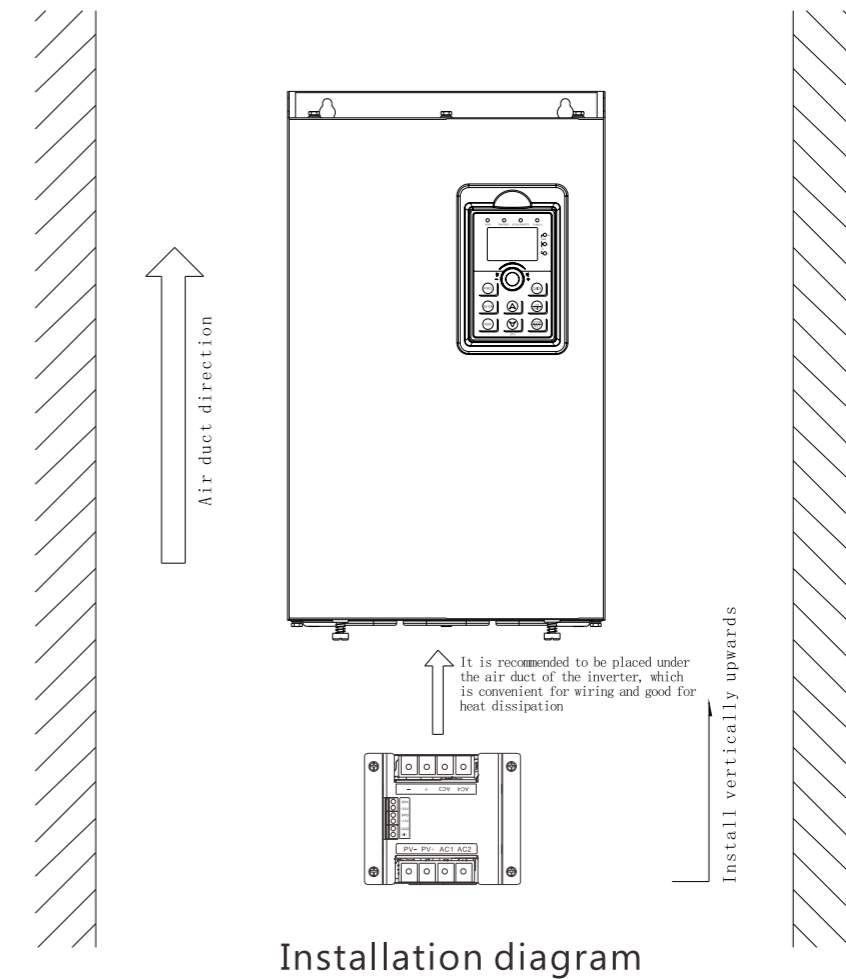
Instructions

1. The PV+ and PV- of the solar switch module are connected to the positive and negative inputs of the corresponding photovoltaic.
2. The "+" and "-" of the solar switch module are connected to the corresponding solar inverter's "+" and "-"
3. The control board terminals SPA, 24V, 10V, GND, AI1, COM of the booster module are connected to the corresponding solar inverter SPA, 24V, 10V, GND, AI1, COM.

Electrical wiring diagram of solar inverter and solar switching module (3-phase input)

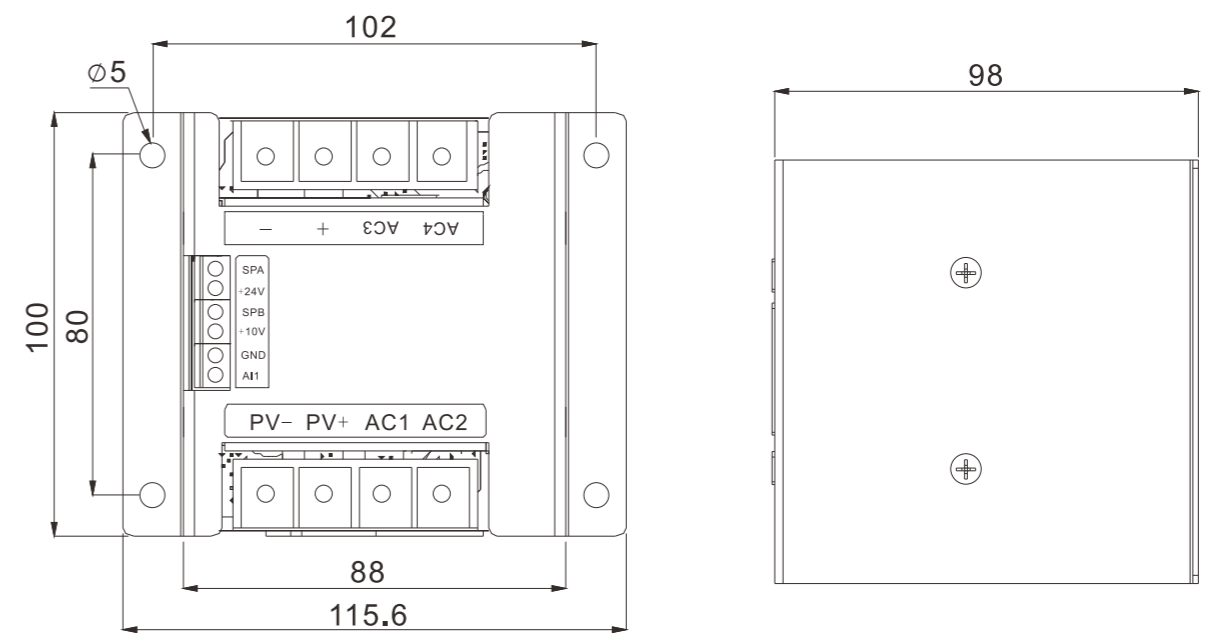
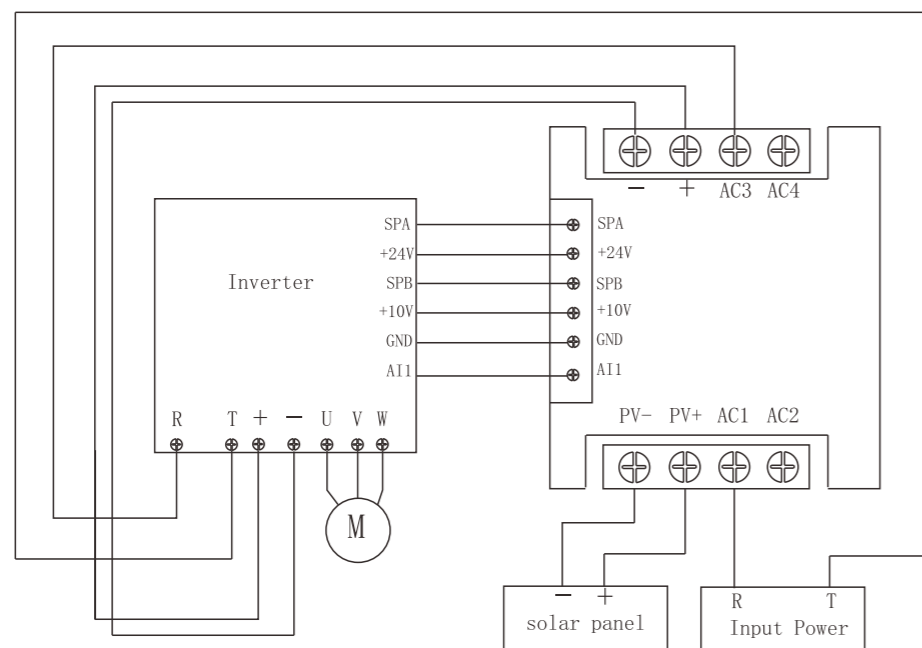


Installation size



Installation diagram

Electrical wiring diagram of solar inverter and solar switching module (1-phase input)



Shape and installation dimensions of 16-25A

