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## POWTRAN Vision and Mission

Provide the most valuable intelligent products and solutions for global customers, becoming a well-known brand in the field of electrical drive and control.

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## PI570-S<sup>series</sup> Special Solar inverter for Water Pump



[www.powtran.com](http://www.powtran.com)

## Special Solar Inverter for Water Pump

## PI570-S series

## Technique Features

PI570-S series solar inverter special for PV water pump is a brand-new designed series with upgraded software which 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. PI570-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

1  
 Advanced MPPT algorithms high precision solar tracking rate  $\geq 98\%$ .

2  
 Built in Automatic boost module (0.4~2.2kW)

3  
 GPRS device optional for remote monitoring and parameter setting

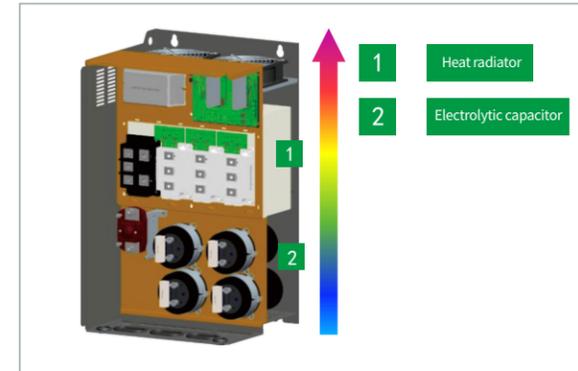


- Dry running protection and tank water level control
- LED displays the real time situation and the parameter of system
- Built in RS485 communication function
- Fast installation design, no need extra maintenance
- Accept DC/AC input meanwhile
- Built-in full protection and diagnostic mechanism

## Reliable structural design

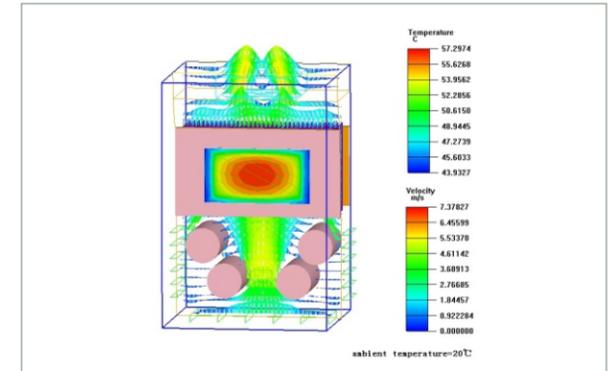
## 1&gt; Heat dissipation: Excellent air duct design

- ▶ A full series of independent air duct design, heat dissipation duct and electrical and electronic circuit separate, reduce the failure rate of electronic circuit part
- ▶ The fan adopts an easy-to-disassemble design for installation and maintenance.



## 2&gt; Excellent thermal management

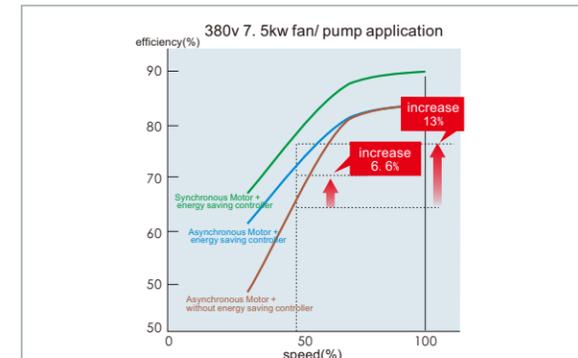
- ▶ The modular design concept and thermal simulation technology ensure the thermal reliability of the whole machine and the compact structure and small size.
- ▶ The rated load temperature rise test and overload temperature rise test of the whole series of inverters are carried out.



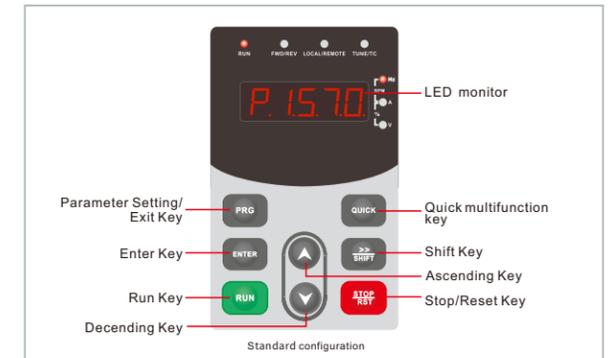
## Efficient energy-saving performance

## &gt; New generation energy saving running

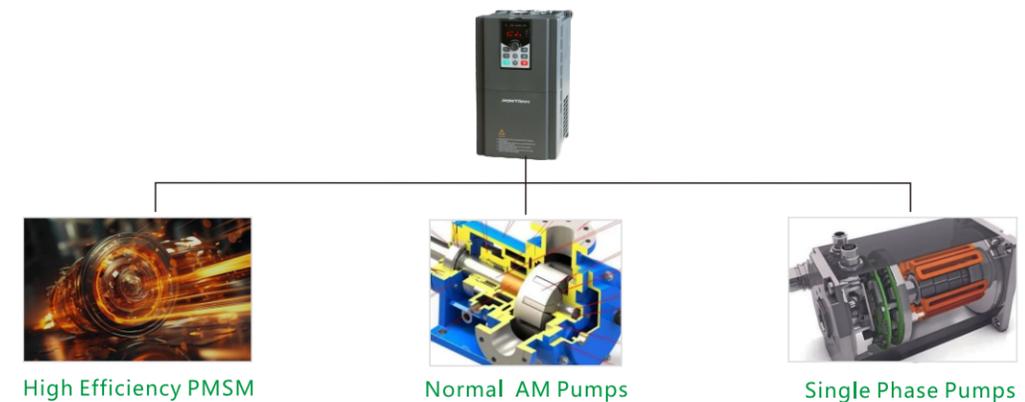
- ▶ Adopt the advanced energy control technology to realize the high efficient running of motor;
- ▶ Super energy saving while running with synchronous motor, better than asynchronous motor, realize the super energy saving



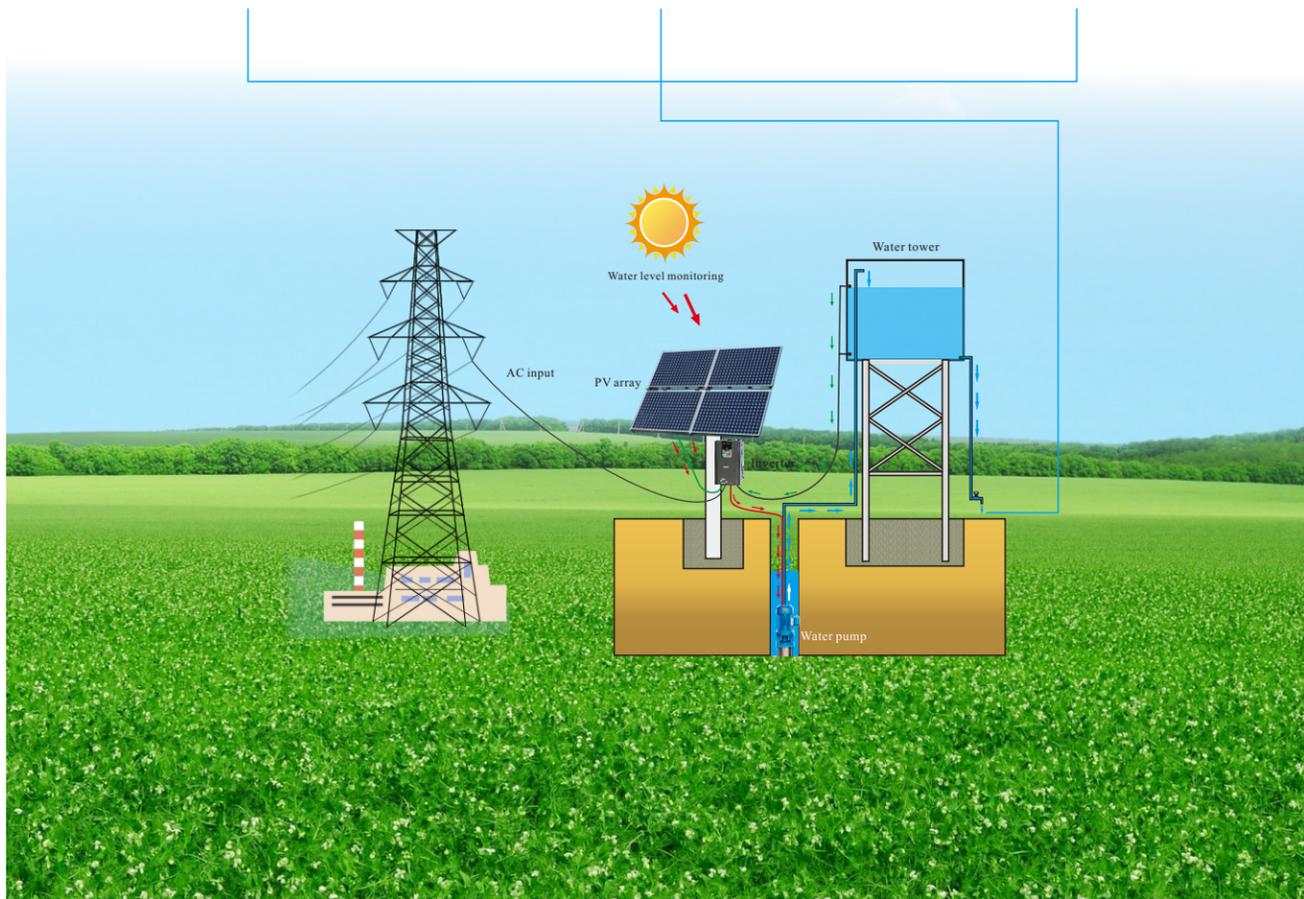
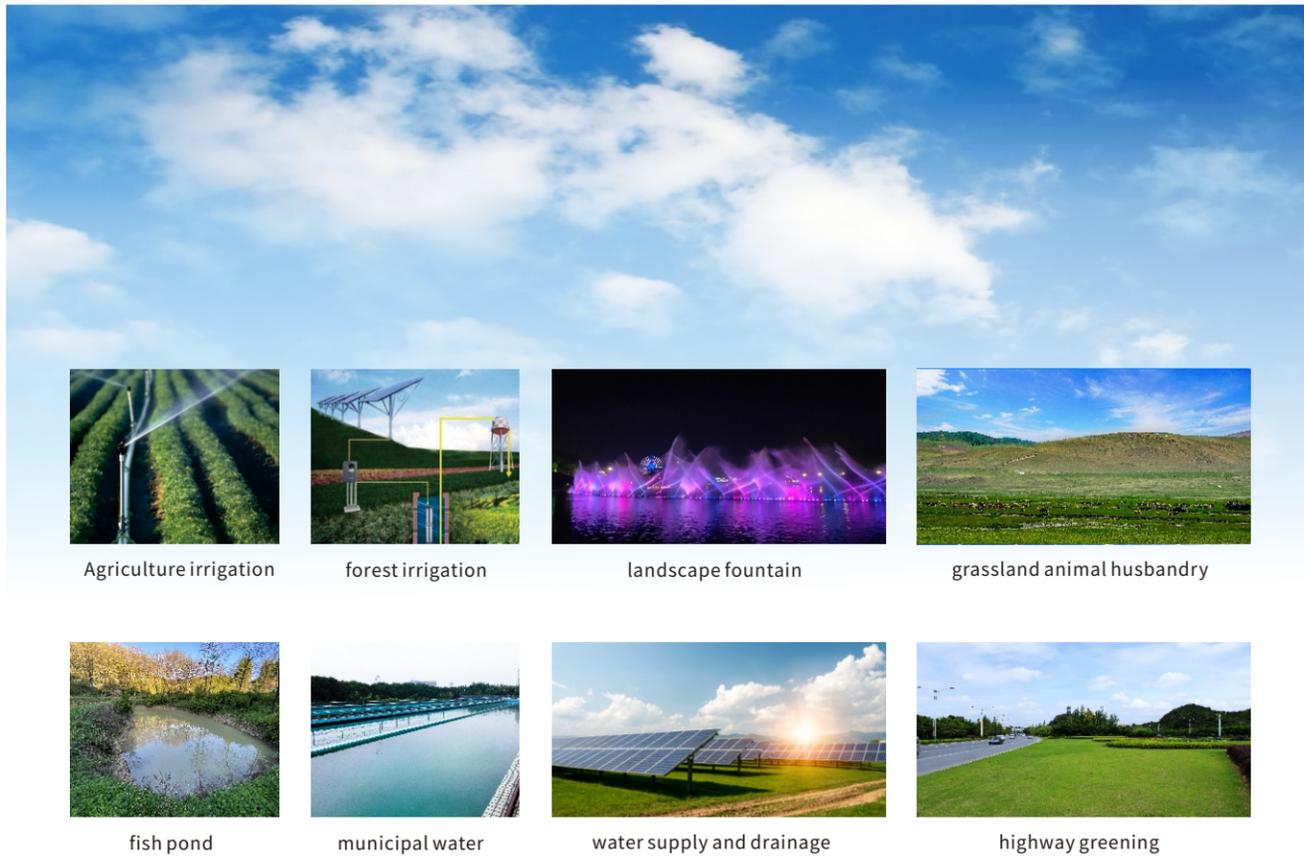
## &gt; Easy and convenient operation



## Driving Multiple Types of Pumps



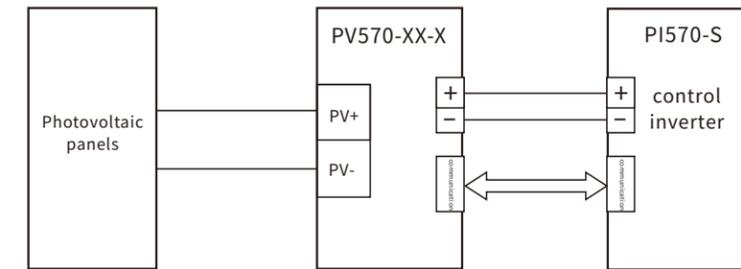
Application field



Select accessories

Boost module

0.4-2.2KW models support optional boost modules to improve the utilization rate of photovoltaic modules; Simply connect the power cord and 422 communication cable to match the voltage level of the frequency converter.



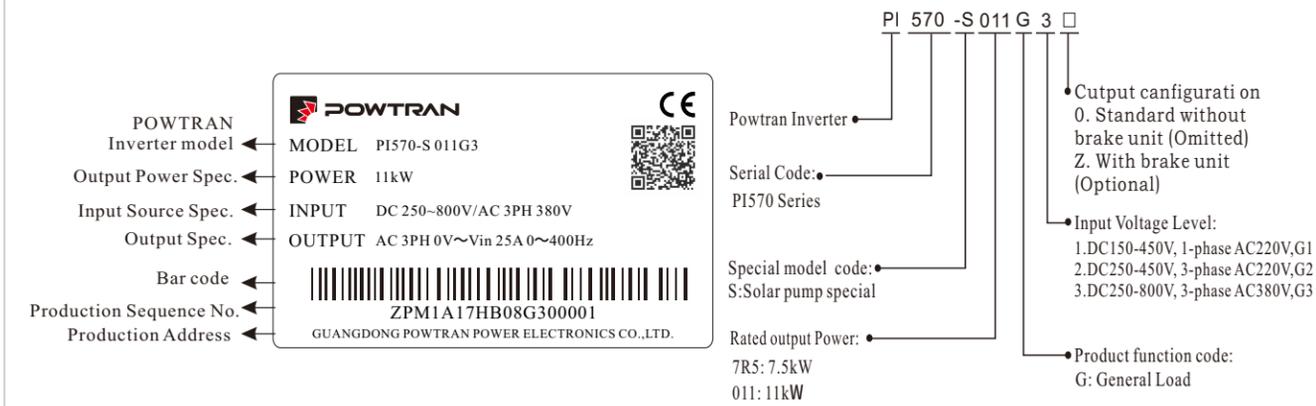
Connection diagram between boost module and frequency converter

Specification of boost module

Model	Input voltage	Input current
PV570-12-2	DC70-400V	12
PV570-12-4	DC150-600V	12



Nameplate instruction:

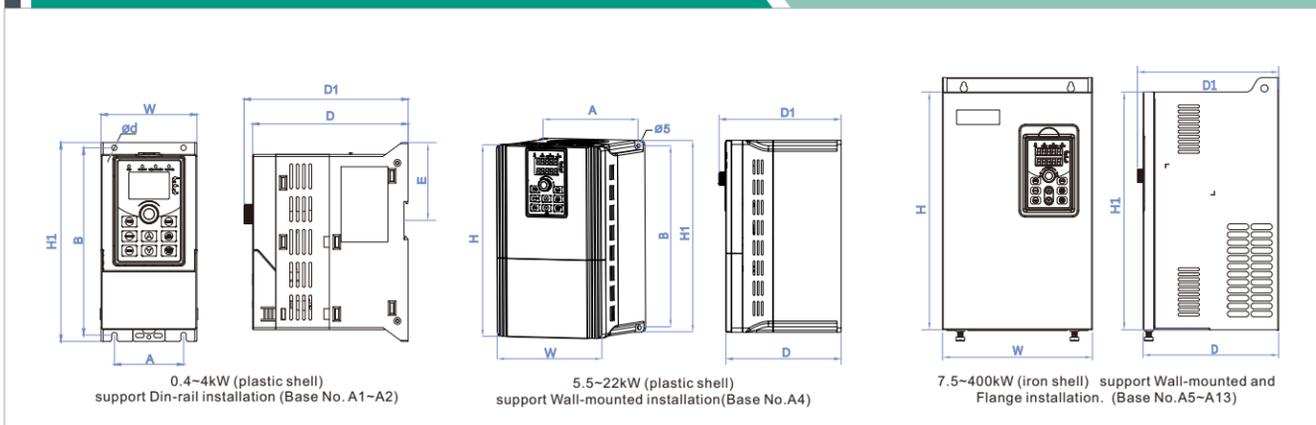


Recommended solar array configuration:

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.
PI570-S 0R4G1	0.4	DC150-450V 1-phase AC220V±10%	2.5	185/90/154	65/174/Ø5	1.6	A1
PI570-S 0R7G1	0.75		4.2				
PI570-S 1R5G1	1.5		7.5				
PI570-S 2R2G1	2.2		10	185/90/174	65/174/Ø5	1.8	A2
PI570-S 004G1	4		16				
PI570-S 5R5G1	5.5		20	290/170/201	155/276/Ø5	5.8	A4
PI570-S 7R5G1	7.5		30				
PI570-S 011G1	11		42				
PI570-S 015G1	15		55	400/240/223	180/385/Ø7	13	A6
PI570-S 018G1	18.5		70				
PI570-S 022G1	22		80				
PI570-S 030G1	30		110	520/300/275	220/500/Ø10	42	A8
PI570-S 037G1	37		130				
PI570-S 045G1	45		160				
PI570-S 055G1	55		200	575/355/328	250/555/Ø10	58	A9
PI570-S 075G1	75	270					
PI570-S 0R4G2	0.4	2.5	DC150-450V 3-phase AC220V±10%				
PI570-S 0R7G2	0.75	4					
PI570-S 1R5G2	1.5	7					
PI570-S 2R2G2	2.2	10		185/90/174	65/174/Ø5	1.8	A2
PI570-S 004G2	4	16					
PI570-S 5R5G2	5.5	25		290/170/201	155/276/Ø5	5.8	A4
PI570-S 7R5G2	7.5	32					
PI570-S 011G2	11	45					
PI570-S 015G2	15	60		350/210/198	150/335/Ø6	9.5	A5
PI570-S 018G2	18.5	75					
PI570-S 022G2	22	90					
PI570-S 030G2	30	110		400/280/223	180/385/Ø7	14	A7
PI570-S 037G2	37	152					
PI570-S 045G2	45	176					
PI570-S 055G2	55	210		575/355/328	250/555/Ø10	58	A9
PI570-S 075G2	75	304					
PI570-S 093G2	93	380					
PI570-S 110G2	110	426	820/480/398	370/800/Ø11	108	A11	
PI570-S 132G2	132	465					
PI570-S 160G2	160	520					
PI570-S 0R7G3	0.75	DC250-800V 3-phase AC380V±10%	2.5	185/90/154	65/174/Ø5	1.6	A1
PI570-S 1R5G3	1.5		3.8				
PI570-S 2R2G3	2.2		5.1				
PI570-S 004G3	4		9				

Remark: Please refer to the instruction manual for the voltage level, input/output current, and specifications of PI570-S 185G2/220G2

Model	Power (kW)	Input Voltage (V)	Current (A)	Dimension (H1*W*D1mm)	Installation Dimension (A*B*dmm)	N.W (KG)	Base No.
PI570-S 5R5G3	5.5	DC250-800V 3-phase AC380V±10%	13	260/120/190	90/250/Ø5	2.7	A3
PI570-S 7R5G3	7.5		17				
PI570-S 011G3	11		25				
PI570-S 015G3	15		32				
PI570-S 018G3	18.5		37				
PI570-S 022G3	22		45				
PI570-S 030G3	30		60	350/210/198	150/335/Ø5	9.4	A5
PI570-S 037G3	37		75	400/240/223	180/385/Ø7	13	A6
PI570-S 045G3	45		90				
PI570-S 055G3	55		110	400/280/223	180/385/Ø7	14.2	A7
PI570-S 075G3	75		150	520/300/283	220/500/Ø10	42	A8
PI570-S 093G3	93		176	575/355/328	250/555/Ø10	58	A9
PI570-S 110G3	110		210				
PI570-S 132G3	132		253				
PI570-S 160G3	160		304	720/400/368	300/700/Ø10	73	A10
PI570-S 187G3	187		340	820/480/398	370/800/Ø11	108	A11
PI570-S 200G3	200	380					
PI570-S 220G3	220	426					
PI570-S 0R7G4	0.75	DC400-900V 3-phase AC480V±10%	2.5	185/90/154	65/174/Ø5	1.6	A1
PI570-S 1R5G4	1.5		3.7				
PI570-S 2R2G4	2.2		5.0				
PI570-S 004G4	4		8	185/90/174	65/174/Ø5	1.8	A2
PI570-S 5R5G4	5.5		11	260/120/190	90/250/Ø5	2.7	A3
PI570-S 7R5G4	7.5		15				
PI570-S 011G4	11		22				
PI570-S 015G4	15		27				
PI570-S 018G4	18.5		34				
PI570-S 022G4	22		40				
PI570-S 030G4	30		55	350/210/198	150/335/Ø6	9.5	A5
PI570-S 037G4	37		65	400/240/223	180/385/Ø7	13	A6
PI570-S 045G4	45		80				
PI570-S 055G4	55		100	400/280/223	180/385/Ø7	14	A7
PI570-S 075G4	75		130	520/300/283	220/500/Ø10	42	A8
PI570-S 093G4	93		147	575/355/328	250/555/Ø10	58	A9
PI570-S 110G4	110	180					
PI570-S 132G4	132	216					
PI570-S 160G4	160	259	720/400/368	300/700/Ø10	73	A10	
PI570-S 187G4	187	300	820/480/398	370/800/Ø11	108	A11	
PI570-S 200G4	200	328					
PI570-S 220G4	220	358					

Remark: PI570-S 30KW-220kW Iron shell, Keyboard with double display. Please refer to the instruction manual for the voltage level, input/output current, and specifications of PI570-S 250G3~400G3, PI570-S 250G4~400G4, PI570-S 132G3R~400G3R

Select accessories

Basic Function

- ▶ Full netcom design, support three telecom operators APN
- ▶ Stable and reliable, networking is simple and flexible
- ▶ Provide TTL, RS232 and RS485 three communication interfaces
- ▶ Embedded in the TCP/IP protocol stack, realize the transparent transmission of data between machines
- ▶ Support point to point, center to multi-point data transmission
- ▶ Data terminal support always-online working
- ▶ Support automatic reconnection and restart function
- ▶ Support SMS remote query, restart and configuration parameters
- ▶ Wide voltage range(8V~28VDC)



Technical Specification \ Dimension (unit : mm)

frequency band



GSM(2G)  
WCDMA(3G)  
FDD-LTE(4G)

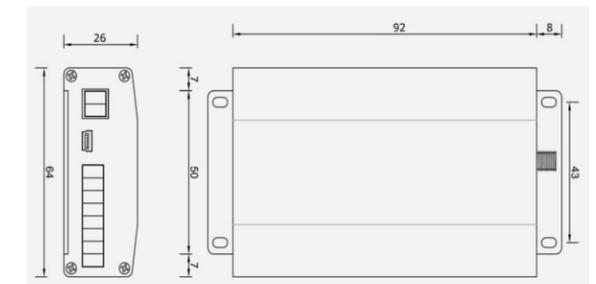


GSM(2G)  
TD-SCDMA(3G)  
TD-LTE(4G)



FDD-LTE(4G)

Power: 8V~28VDC  
Data rate: 300~115200bps(115200bps default)  
Power dissipation:  
Average current during communication: 40mA @+24V  
Average idle current: 20mA @+24V  
Operating temperature& humidity: -20~60°C(<95%)  
Serial data interface: TTL/RS232/RS485  
Dimension: 92\*64\*26mm



Interface Definition

