

SPC Series Solar Pump Controller





/ Introduction

SPC is INVT new generation solar pump controller. It integrates high protection, exquisite structure and simple operation into one, which not only perfectly realizes the control function, but also has a perfect rated system scheme to meet the requirements of different scenes.



/ Features



Only PV input



Support SKD modular design



Support OEM/customization



Optional DC switch



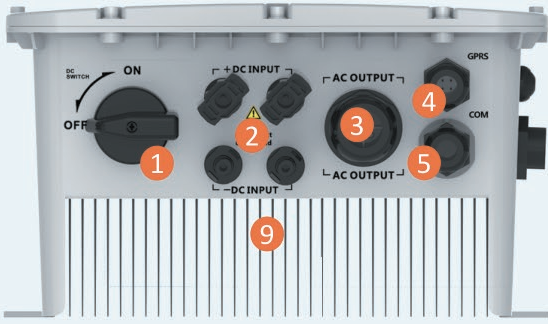
Compact appearance



IP65 protection level



GPRS module



Modular Simplicity

1. DC switch

Optional part for safe operation.

2. +DC input terminal and -DC input terminal

MC4 plug for PV input

3. AC output switch

PG plug for standard configuration;
Aviation plug for high-end configuration.

4. GPRS connector

For external GPRS card equipment.

5. COM connector

Designed for water level detection.

6. RUN/STOP button

To control the start and stop of the controller.

7. Keypad connector

For external keypad connection.
Easy for debugging and setting.

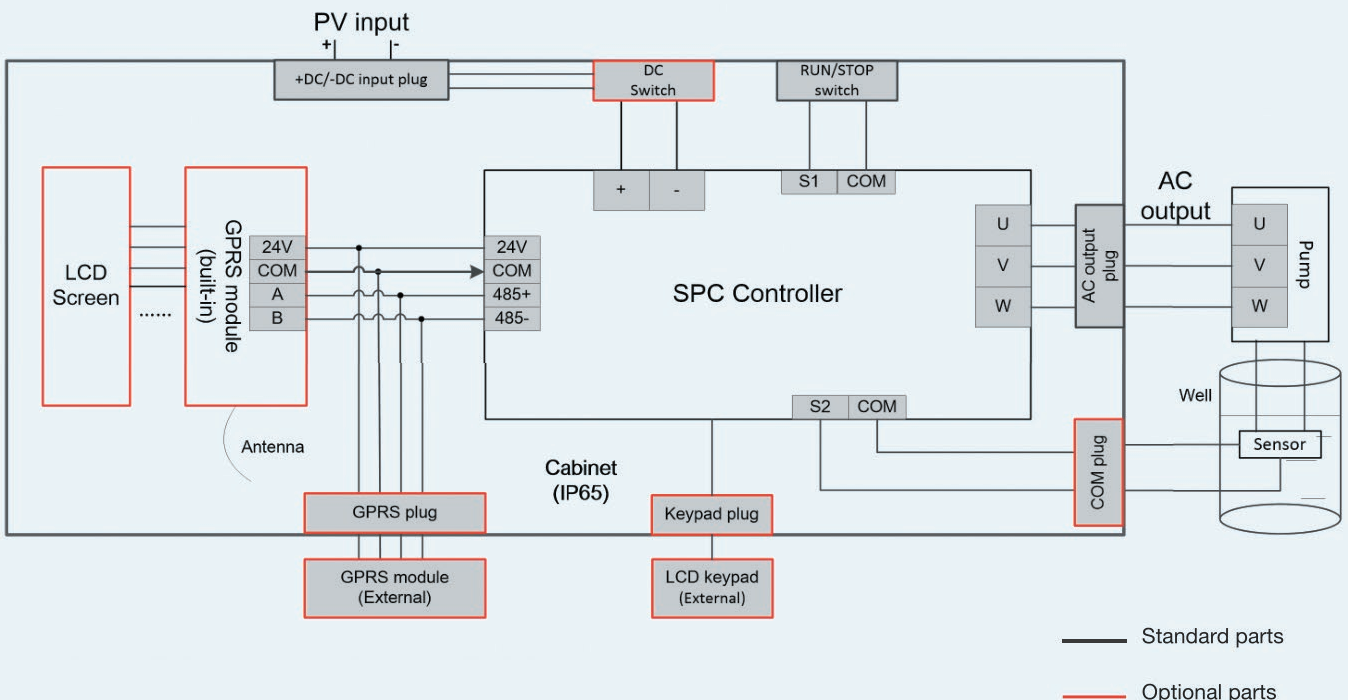
8. Enclosure

IP65 protection degree for most harsh outdoor applications. The materials are certificated by UL as the highest F1 level.

9. Heat sink

Fan-less design for natural cooling.

System connection



/ Type Selection

SPC 2K2 TR 4 6 - H

① ② ③ ④ ⑤ ⑥

No.	Sign	Detail description	Detail content
①	SPC	Product abbreviation	Name of the solar pumping controller
②	2K2	AC output power	Rated AC output power 2K2: 2.2kW
③	TR	Technical type	TR: 3PH
④	4	Output voltage	2: 3PH 220V 4: 3PH 380V
⑤	6	Protection level	0: IP00 6: IP65
⑥	H	Configuration instruction	For IP00 parts: None For IP65 machine: H: High-end configuration S: Standard configuration

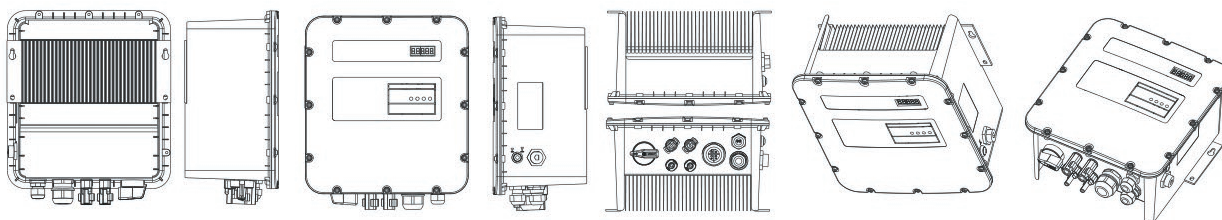
/ Product Specification

DC input			
Output power	2.2kW	4kW	7.5kW
Model	SPC2K2TR26-S/H	SPC004TR46-S/H	SPC7K5TR46-S/H
Max. DC voltage (V)	450	800	800
Start voltage (V)	120	250	250
Min. working voltage (V)	70	200	200
Recommended MPPT voltage (V)	200-400	300-750	300-750
Recommended input working voltage (V)	330	580	580
AC output			
Output voltage (V)	0-230	0-400	0-400
Output frequency (Hz)	0-400	0-400	0-400
Control performance			
Control method	V/F(SVPWM), SVC		
Motor type	Asynchronous, synchronous and BLDC		
Overload capability	120% of rated current: 1 minute 150% of rated current: 10 seconds		
Reset function	Support fault classification, fault(except for IGBT over current) reset, anti-electricity if wake light.		
Others			
Protective degree	IP65		
Cooling method	Natural cooling		
Interface	External LED keypad		
Ambient temperature	-25 C ~60 C , if above 50 C , de-rated 1% for every additional 1 C .		
Altitude	Below 3000m; if above 2000m, de-rated 1% for every additional 100m.		
GPRS module			
Power supply voltage	DC10~25V		
Interface	1RS485, 1TTL, 2SMA(GSM, GPS), 1 spring card holder, 1 spring Micro SD		
Communication	Modbus, IoT communication, PPP, FTP and embedded TCP/UDP protocol		
Protective degree	IP00		
Ambient temperature	-25 C ~60 C		

Power Ratings

Model	Output power		Rated input current(A)	Rated output current (A)	Product dimension/ Carton dimension W*H*D (mm)	Weight			
	(kW)	(HP)				Net		Gross	
						kg	lbs	kg	lbs
3PH 220V									
SPC2K2TR20	2.2	3	9	10	None	0.5	1.1	None	
SPC2K2TR26-S	2.2	3	9	10	242*311*111 302*380*190	2.5	5.5	3	6.6
SPC2K2TR26-H	2.2	3	9	10		2.5	5.5	3	6.6
3PH 380V									
SPC004TR40	4.0	5	9	9.5	None	0.6	1.3	None	
SPC7K5TR40	7.5	10	18	18.5	None	0.8	1.8	None	
SPC004TR46-S	4.0	5	9	9.5	242*311*111 302*380*190	2.5	5.5	3	6.6
SPC004TR46-H	4.0	5	9	9.5		2.5	5.5	3	6.6
SPC7K5TR46-S	7.5	10	18	18.5	265*311*151 340*400*260	3.6	7.9	4.4	9.7
SPC7K5TR46-H	7.5	10	18	18.5		3.6	7.9	4.4	9.7

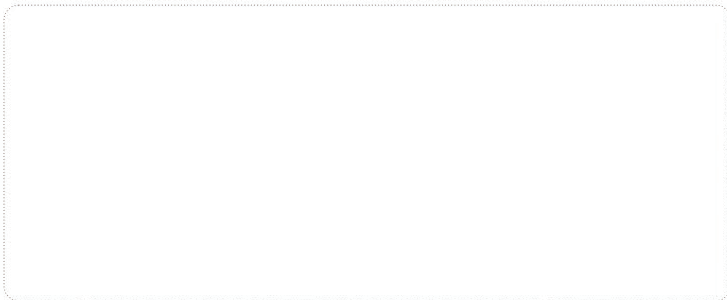
Note: IP00 products are packed in integrated package. The specific size and gross weight are confirmed according to the order requirement.



Recommended configuration

VFD model	Open circuit voltage class of PV module			
	37 ± 1V		45 ± 1V	
	Module power ± 5Wp	Modules per string * Strings	Module power ± 5Wp	Modules per string * Strings
2.2kW	250	11*1	300	9*1
4kW	250	20*1	300	16*1
7.5kW	250	18*2	300	15*2

Your trusted industry automation solution provider



Service line: 86-755-23535967 E-mail: overseas@invt.com.cn Website: www.invt.com

SHENZHEN INVT ELECTRIC CO.,LTD. INVT Guangming Technology Building, Songbai Road, Matian, Guangming District, Shenzhen, China

- | | | | | |
|-------------------------------|--|---------------------------------------|----------------------------|-----------------------------------|
| Industrial Automation: | • Frequency AC Drive | • Servo & Motion Control | • Motor & Electric Spindle | • PLC |
| | • HMI | • Intelligent Elevator Control System | • Traction Drive | |
| Electric Power: | • SVG | • Solar Pump Controller | • UPS | • Online Energy Management System |
| | • New Energy Vehicle Electric Control System | | | |

INVT Copyright.
Information may be subject to change without notice during product improving.

66003-00238 20210628(V3.0)