SP300-01-04-IP65 - 1R5G - S2

Marking	Series name
SP300-01-04-IP65	IP65 Series Single-Phase Motor Photovoltaic Water Pump Inverter

Marking	Rated power
1R5G	1. 5kW
2R2G	2. 2kW

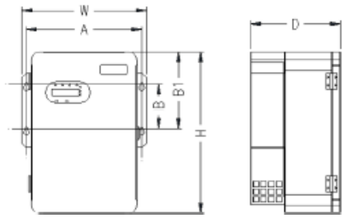
Marking	Voltage rating
S2	1AC 220V

Product Selection

SP300-01-IP65 Series (Single-phase 220V or DC 150V~450V input, three-phase 220V output) Selection Table

Rated supply voltage	Model	Applicable motor power (kW)	Rated output current (A)
Single-phase 220V or DC 150V~450V input, three-phase 220V output	SP300-01-IP65-0R4G-S2	0.4	2.3
	SP300-01-IP65-0R7G-S2	0.75	4
	SP300-01-IP65-1R5G-S2	1.5	7
	SP300-01-IP65-2R2G-S2	2.2	9.6

SP300-01-IP65 Series (Single-phase 220V or DC 150V~450V input, three-phase 220V output) Dimensions Table



Power segment	External dimensions(mm)			Installation dimensions(mm)			Mounting aperture (mm)
	W	H	D	A	B	B1	
0.4~2.2kW	206	230	168.5	188	81.4	141	M5

SP300-01-IP65 Series (Single-phase 220 V or DC 150 V~450 V input, single-phase 220 V output) Selection Table

Rated supply voltage	Model	Applicable motor power (kW)	Rated output current (A)
Single-phase 220 V or DC 150 V to 450 V input, single-phase 220 V output	SP300-01-04-IP65-0R4G-S2	0.4	4
	SP300-01-04-IP65-0R7G-S2	0.75	7
	SP300-01-04-IP65-1R5G-S2	1.5	9.6
	SP300-01-04-IP65-2R2G-S2	2.2	17

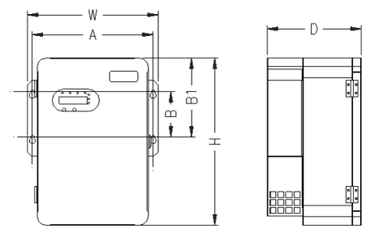
SP300-01-IP65 Series (Single-phase 220V or DC 150V~450V input, single-phase 220V output) Dimensions Table

Power segment	External dimensions(mm)			Installation dimensions(mm)			Mounting aperture (mm)
	W	H	D	A	B	B1	
0.4~2.2kW	206	230	168.5	188	81.4	141	M5

SP300-01-IP65 Series (Three-phase 380V or DC 250V~900V input, three-phase 380V output) Selection Table

Rated supply voltage	Model	Applicable motor power (kW)	Rated output current (A)
Three-phase 380V or DC 250V~900V input, three-phase 380V output	SP300-01-IP65-0R7G-T4	0.75	2.1
	SP300-01-IP65-1R5G-T4	1.5	3.8
	SP300-01-IP65-2R2G-T4	2.2	6
	SP300-01-IP65-004G-T4	4	9
	SP300-01-IP65-5R5G-T4	5.5	13
	SP300-01-IP65-7R5G-T4	7.5	17
	SP300-01-IP65-011G-T4	11	25
	SP300-01-IP65-015G-T4	15	32
	SP300-01-IP65-018G-T4	18.5	37
	SP300-01-IP65-022G-T4	22	45
	SP300-01-IP65-030G-T4	30	60
	SP300-01-IP65-037G-T4	37	75
	SP300-01-IP65-045G-T4	45	90
	SP300-01-IP65-055G-T4	55	110
	SP300-01-IP65-075G-T4	75	150

SP300-01-IP65 Series (Three-phase 380V or DC 250V~900V input, three-phase 380V output) Dimensions Table

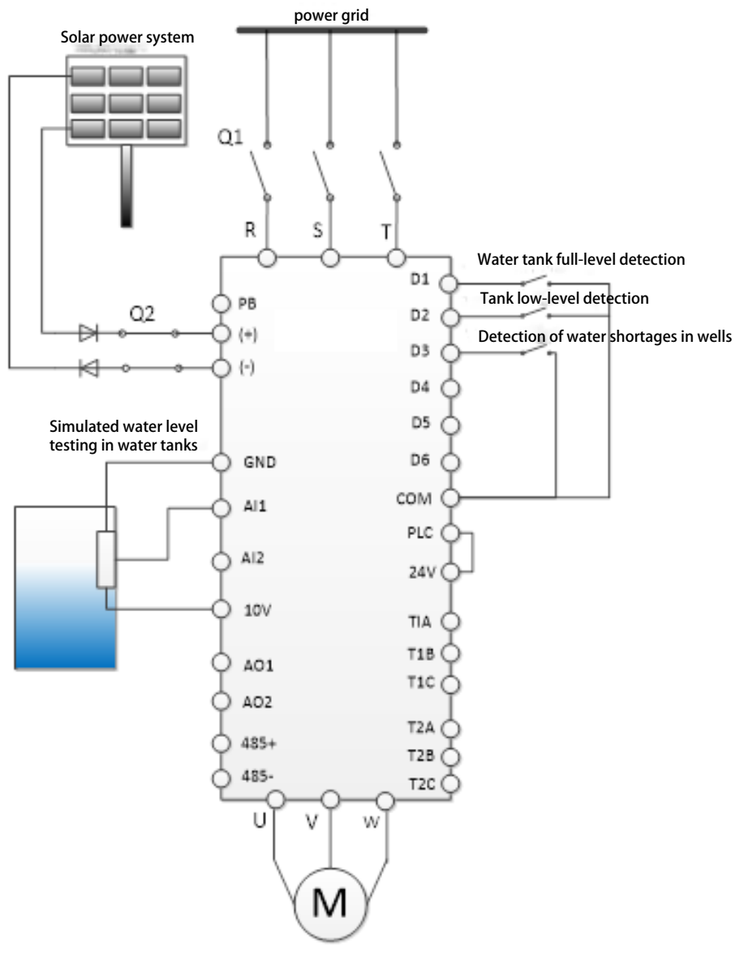


Power segment	External dimensions(mm)			Installation dimensions(mm)			Mounting aperture (mm)
	W	H	D	A	B	B1	
0.75~5.5kW	206	230	168.5	188	81.4	141.4	M5
7.5~11kW	206	260	190.7	188	81.4	141.4	M5
15~18.5kW	236	300	170.3	218	81.4	141.4	M5
22~37kW	276	380	237.1	258	145	215	M8
45~75kW	343	490	249.4	325	195	295	M8



Standard Wiring Diagram





Technical Specifications

POWER SUPPLY

Project	Standard
Input DC voltage	AC220V：DC150~450V　AC380V：DC250~900V
MPPT Voltage (Vmp)	AC220V：DC160~380V　AC380V：DC260~750V
Recommended MPPTVoltage (Vmp)	AC220V：DC320V　AC380V：DC550V

CONTROL

Project	Standard
Start-stop control mode	Control terminals (remote start), communication
Frequency control range	0.00～600.00Hz
Input frequency resolution	Numeric input：0.01Hz/0.1Hz Analogue input: 0.1% of the maximum frequency
Speed adjustment range	1:50（VVF）、1:200（SVC） ±0.2% of rated synchronous speed
Acceleration and deceleration time	0.01S～600.00 S/0.1 S～6000.0S /1 S～60000 S
Automatic output voltage adjustment	Input voltage variations cause the output voltage to remain essentially unchanged.
Automatic current limiting	Automatically limits the output current to prevent frequent overcurrent tripping.
Signal input source	Communications, multi-speed control, analogue signals, etc.

INPUT/OUTPUT

Project	Standard
Reference power supply	10V/20mA
Terminal-controlled power supply	24V/100mA
Digital input terminals	7-channel digital multifunction inputs: D1 to D7; D7 can be used as a high-speed pulse input (up to 100 kHz)
Analogue input terminals	2 analogue inputs: 1 channel (AI1) voltage source input: －10 to 10 V; 1 channel (AI2) selectable as either a 0 to 10 V voltage source input or a 0 to 20 mA current source input;
Digital output terminal	1 channel open-collector multifunction output and 2 channels of relay multifunction output. Maximum output current for the open-collector output is 50 mA; Relay contact rating: 250 VAC/3 A or 30 VDC/1 A
Analogue output terminals	2-channel multifunction analogue output terminals AO1: 0－10 V / 4－20 mA multifunction analogue output terminal AO2: 0－10 V / 4－20 mA multifunction analogue output terminal
High-frequency pulse output	Optional: two custom analogue channels; the D7 can support high-frequency pulse output via parameter settings

OPERATION PANEL

Project	Standard
LED display	LED display showing information about the inverter

PROTECTION

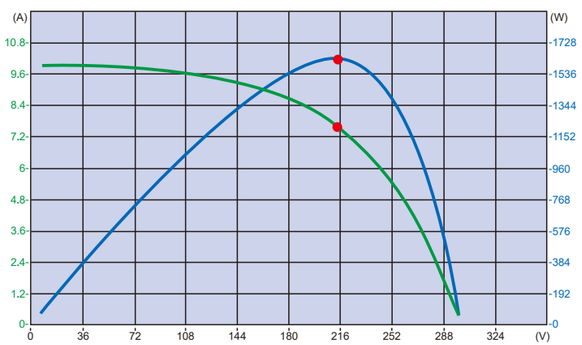
Project	Standard
Protection features	short circuits, overcurrent, overvoltage, undervoltage, phase loss, overload, overheating, loss of load and external faults, etc.

USE CONDITIONS

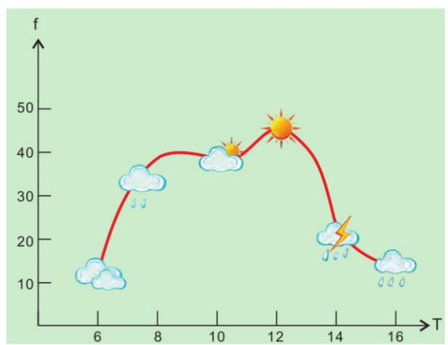
Project	Standard
Altitude	Below 1,000 m (above 1,000 m, the rating is reduced by 1% for every 100 m increase in altitude; the maximum operating altitude is 3,000 m)
Ambient temperature	-10° C to +40° C; derating is required when the temperature exceeds 40° C; derate by 1.5% for every 1° C increase in ambient temperature; the maximum operating ambient temperature is 50° C
Humidity	Less than 95% RH, with no condensation

Performance Features

Advanced MPPT technology



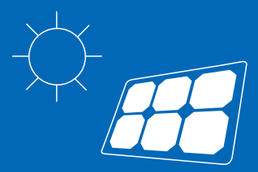
The maximum MPPT efficiency is 99.9%



Automatic tracking at all times

High-performance, multi-functional

High overload capacity



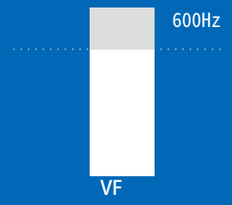
150% of rated current for 1 minute,
180% of rated current for 2 seconds,
200% of rated current for 0.5 seconds

Colour control functions



Ensure the equipment operates automatically, without the need for on-site supervision

High-frequency



The maximum output frequency under VF control is 600 Hz

A comprehensive range of voltage ratings and power ratings



Supports single-phase 220V, three-phase 220V and three-phase 380V water pumps, with power ratings ranging from 0.4 kW to 37 kW

User-friendly



Simply connect the solar panels to the inverter; no parameters need to be set, and the solar-powered water pump will start automatically as soon as power is supplied.

Multiple protective measures



Protection features such as PV overvoltage protection, PV reverse polarity alarm and automatic derating in the event of overheating can effectively extend the product's service life

Smart IoT

