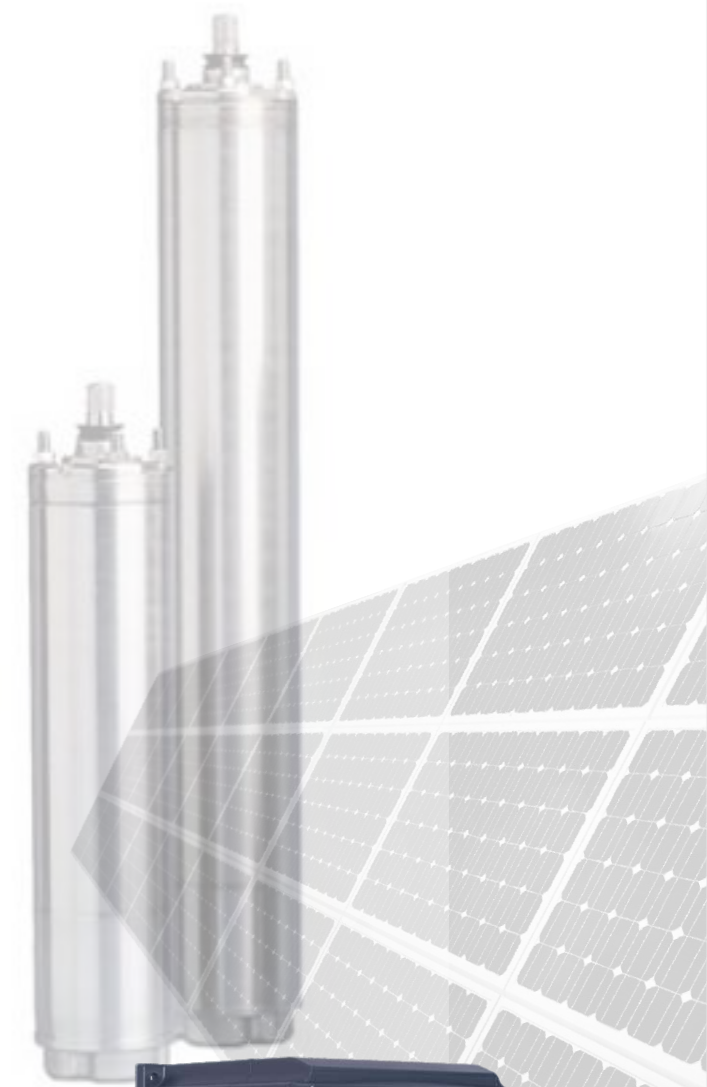


SP200 SERIES PV PUMP CONTROLLER



CE 

SP200 series PV Pump controller

Product Features

product description

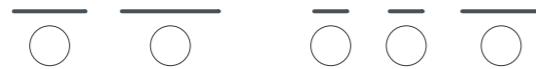
SP200 series controller is a newly developed controller specialized for PV pump, it is mainly used for water supply in remote areas where without power supply or supply is unstable. PV pump controller can drive all kinds of water pumps by changing direct current which to be issued by PV module into alternating current. Systems continuously pump in good weather. For systems without batteries and other energy storage devices, it is recommended that the water should pump to the cistern for coming use.

SP200 PV Pump Controller adds MPPT algorithm to ensure the system run at the MPPT of solar modules in real-time.

Features and Functions

1. SP200 PV Pump Controller continuously monitors the performance of the system and can detect a variety of anomalies.
2. SP200 PV Pump Controller automatically detects the ambient temperature. When the temperature is too high, the controller will reduce the output power to maintain running as far as possible; When the controller temperature is cooled to a safe level, return to full power output.
3. SP200 PV Pump Controller integrate improved MPPT algorithm, variable step size in real time tracking the MPP. Compared to a conventional constant-voltage control (CVT) method, it is more precise in tracking, response speed is much quicker, and overcomes the shortage of conventional disturbances tracking method near the MPP wide fluctuated running.
4. When SP200 PV Pump Controller fails, the panel LED will display fault types, automaticly reset regular failure, and enter into sleep and wake status according to the degree of light to ensure the controller run automatically the whole day.

Naming Rules



Field	Mark	Content
controller series	①	Solar water pump controller
Series number	②	Series second generation
Voltage Level	③	2: Three-phase 220V 4: Three-phase 380V
voltage range	④	S: Rated voltage 310VDC, Recommended voltage range (MTTP) 180VDC~360VDC T: Rated voltage 540VDC, Recommended voltage range (MTTP) 500VDC~600VDC
Pump rated power	⑤	2.2: 2.2KW

SP200 series PV Pump controller

technical data

Model		SP200-2S-0.7	SP200-2S-1.5	SP200-2S-2.2
SP200-2SXXX INPUT/OUTPUT PARAMETER				
PV array input parameter	Max input voltage (V)	DC 450V		
	Min input voltage (V)	DC 180V		
	Recommended voltage (mpp)	DC 280~360V		
	Recommended PV power(Kw)	0.9~1.2	1.8~2.4	2.7~3.5
Spare AC generator	Input voltage (V)	Singel phase AC 200-240(+10%)(kVA)		
	Max current(A)	8.2	14	23
	Generator capacity(kVA)	1.5	3	4
Output parameter	Rated output voltage	3-phase AC 200-240V		
	Max current(A)	4.7	7.5	10
	Rated output power(kW)	0.75	1.5	2.2
	Output frequency	0~50Hz/60Hz		

Model		SP200-4T-2.2	SP200-4T-3.7	SP200-4T-5.5	SP200-4T-7.5
SP200-4TXXX INPUT/OUTPUT PARAMETER					
PV array input parameter	Max input voltage (V)	DC 800V			
	Min input voltage (V)	DC 350V			
	Recommended voltage (mpp)	DC 500~600V			
	Recommended PV power(Kw)	2.7~3.5	4.8~6.4	6.6~8.8	9~12
Spare AC generator	Input voltage (V)	3-phase AC 380/400/415/440V(+15%)			
	Max current(A)	5.8	10.5	14.6	20.5
	Generator capacity(kVA)	4	5.9	8.9	11
Output parameter	Rated output voltage	3-phase AC 380/400/415/440V(+15%)			
	Max current(A)	5.1	9	13	17
	Rated output power(kW)	2.2	3.7	5.5	7.5
	Output frequency	0~50Hz/60Hz			

Model		SP200-4T-11	SP200-4T-15	SP200-4T-18.5	SP200-4T-22
SP200-4TXXX INPUT/OUTPUT PARAMETER					
PV array input parameter	Max input voltage (V)	DC 800V			
	Min input voltage (V)	DC 350V			
	Recommended voltage (mpp)	DC 500~600V			
	Recommended PV power(Kw)	13.2~17.6	18~24	22.2~29.6	26.4~35.2
Spare AC generator	Input voltage (V)	3-phase AC 380/400/415/440V(+15%)			
	Max current(A)	26	35	38.5	46.5
	Generator capacity(kVA)	17	21	24	30
Output parameter	Rated output voltage	3-phase AC 380/400/415/440V(+15%)			
	Max current(A)	25	32	37	45
	Rated output power(kW)	11	15	18.5	22
	Output frequency	0~50Hz/60Hz			

technical data

Model		SP200-4T-30	SP200-4T-37	SP200-4T-45	SP200-4T-55
SP200-4TXXX INPUT/OUTPUT PARAMETER					
PV array input parameter	Max input voltage (V)	DC 800V			
	Min input voltage (V)	DC 350V			
	Recommended voltage (mpp)	DC 500~600V			
	Recommended PV power(Kw)	36~48	44~59.2	54~72	66~88
Spare AC generator	Input voltage (V)	3-phase AC 380/400/415/440V(+15%)			
	Max current(A)	62	76	92	113
	Generator capacity(kVA)	40	57	69	85
Output parameter	Rated output voltage	3-phase AC 380/400/415/440V(+15%)			
	Max current(A)	60	75	91	112
	Rated output power(kW)	30	37	45	55
	Output frequency	0~50Hz/60Hz			

Model		SP200-4T-75	SP200-4T-90	SP200-4T-110	SP200-4T-132
SP200-4TXXX INPUT/OUTPUT PARAMETER					
PV array input parameter	Max input voltage (V)	DC 800V			
	Min input voltage (V)	DC 350V			
	Recommended voltage (mpp)	DC 500~600V			
	Recommended PV power(Kw)	90~120	112~149	132~176	159~211
Spare AC generator	Input voltage (V)	3-phase AC 380/400/415/440V(+15%)			
	Max current(A)	157	180	214	256
	Generator capacity(kVA)	114	134	160	192
Output parameter	Rated output voltage	3-phase AC 380/400/415/440V(+15%)			
	Max current(A)	150	176	210	253
	Rated output power(kW)	75	90	110	132
	Output frequency	0~50Hz/60Hz			

Model		SP200-4T-160	SP200-4T-200	SP200-4T-220	SP200-4T-250
SP200-4TXXX INPUT/OUTPUT PARAMETER					
PV array input parameter	Max input voltage (V)	DC 800V			
	Min input voltage (V)	DC 350V			
	Recommended voltage (mpp)	DC 500~600V			
	Recommended PV power(Kw)	192~256	240~320	264~352	300~400
Spare AC generator	Input voltage (V)	3-phase AC 380/400/415/440V(+15%)			
	Max current(A)	307	385	430	256
	Generator capacity(kVA)	231	250	280	355
Output parameter	Rated output voltage	3-phase AC 380/400/415/440V(+15%)			
	Max current(A)	304	377	426	456
	Rated output power(kW)	160	200	220	250
	Output frequency	0~50Hz/60Hz			

SP200 series PV Pump controller

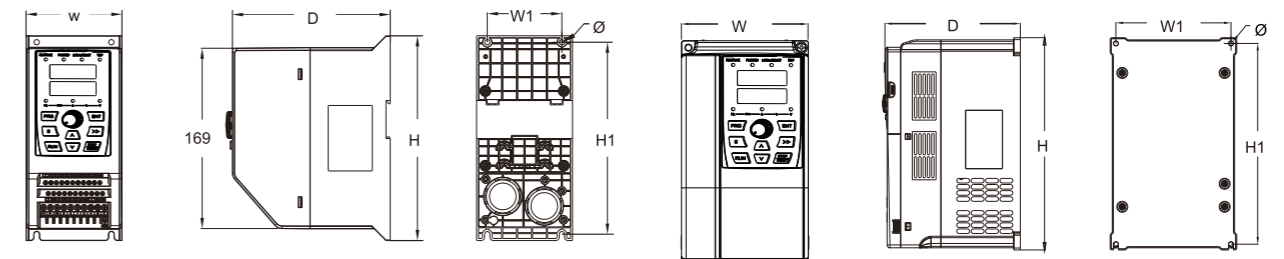
technical data

Model		SP200-4T-280	SP200-4T-315	SP200-4T-355	SP200-4T-400
SP200-4TXXX INPUT/OUTPUT PARAMETER					
PV array input parameter	Max input voltage (V)	DC 800V			
	Min input voltage (V)	DC 350V			
	Recommended voltage (mpp)	DC 500~600V			
	Recommended PV power(Kw)	336~448	378~504	426~568	480~640
Spare AC generator	Input voltage (V)	3-phase AC 380/400/415/440V(+15%)			
	Max current(A)	525	590	665	785
	Generator capacity(kVA)	396	445	500	565
Output parameter	Rated output voltage	3-phase AC 380/400/415/440V(+15%)			
	Max current(A)	520	585	650	725
	Rated output power(kW)	280	315	355	400
	Output frequency	0~50Hz/60Hz			

Note:

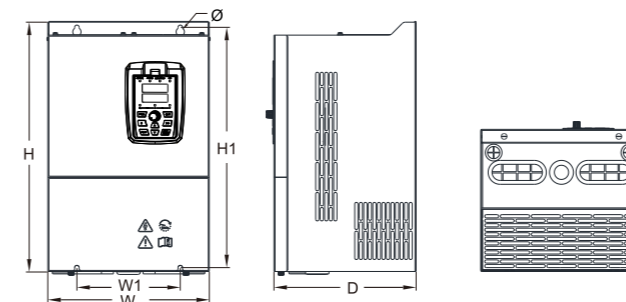
According to the different illumination in different regions, recommended PV array power is 1.2 to 1.6 times of the controller power.

outline diagram



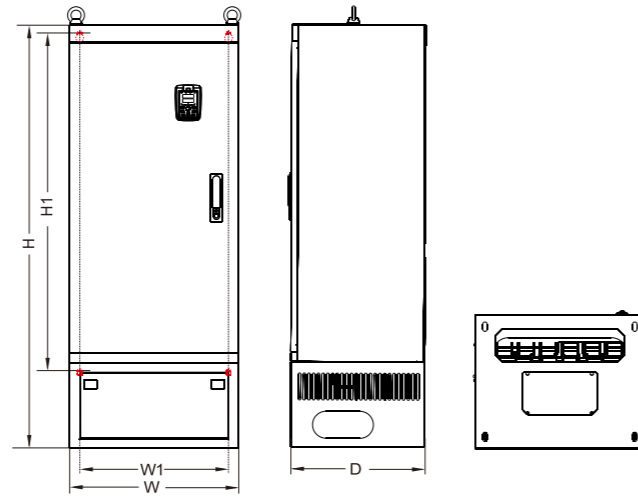
Outline Dimension			Installing Dimension		
H(mm)	W(mm)	D(mm)	H1(mm)	W1(mm)	Bore Diameter (mm)
0.7KW~4.0KW					
192	90	148	180	70	Ø5

Outline Dimension			Installing Dimension		
H(mm)	W(mm)	D(mm)	H1(mm)	W1(mm)	Bore Diameter (mm)
5.5KW					
190	110	150	178	98	Ø5
7.5KW					
210	130	160	236	141	Ø5
11KW					
250	155	176	236	141	Ø5
15KW~18.5KW					
295	176	188	279	160	Ø7
22KW~30KW					
337	245	188	320	228	Ø7



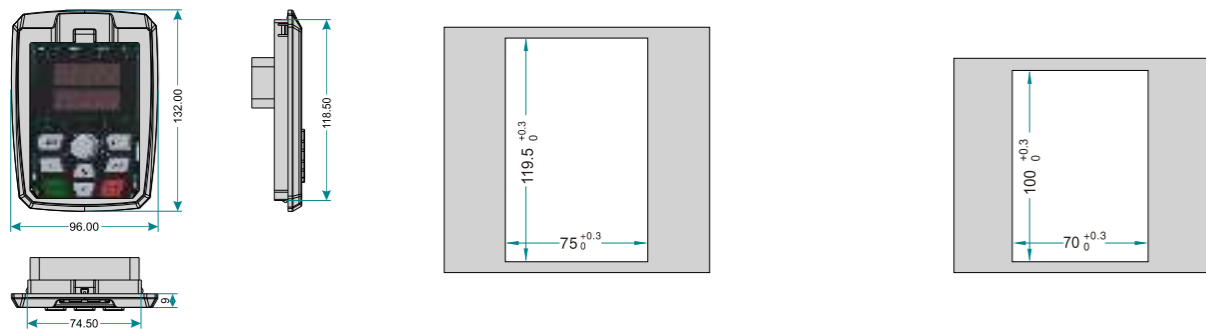
outline diagram

Outline Dimension			Installing Dimension		
H(mm)	W(mm)	D(mm)	H1(mm)	W1(mm)	Bore Diameter (mm)
37KW					
387	250	220	372	150	Ø7
45KW~55KW					
440	270	256	426	180	Ø7
75KW					
469	307	263	450	200	Ø10
90KW~110KW					
590	340	305	565	200	Ø10
132KW~185KW					
740	450	329	715	360	Ø12
200KW~250KW					
940	500	369	914	400	Ø12
280KW~350KW					
1045	725	390	1016	600	Ø14



Outline Dimension			Installing Dimension		
H(mm)	W(mm)	D(mm)	H1(mm)	W1(mm)	Bore Diameter (mm)
400KW~500KW					
1810	850	405	1410	513	Ø14

The Installing Dimension Size of the External Keypad (the maximum external length can reach 100 meters)

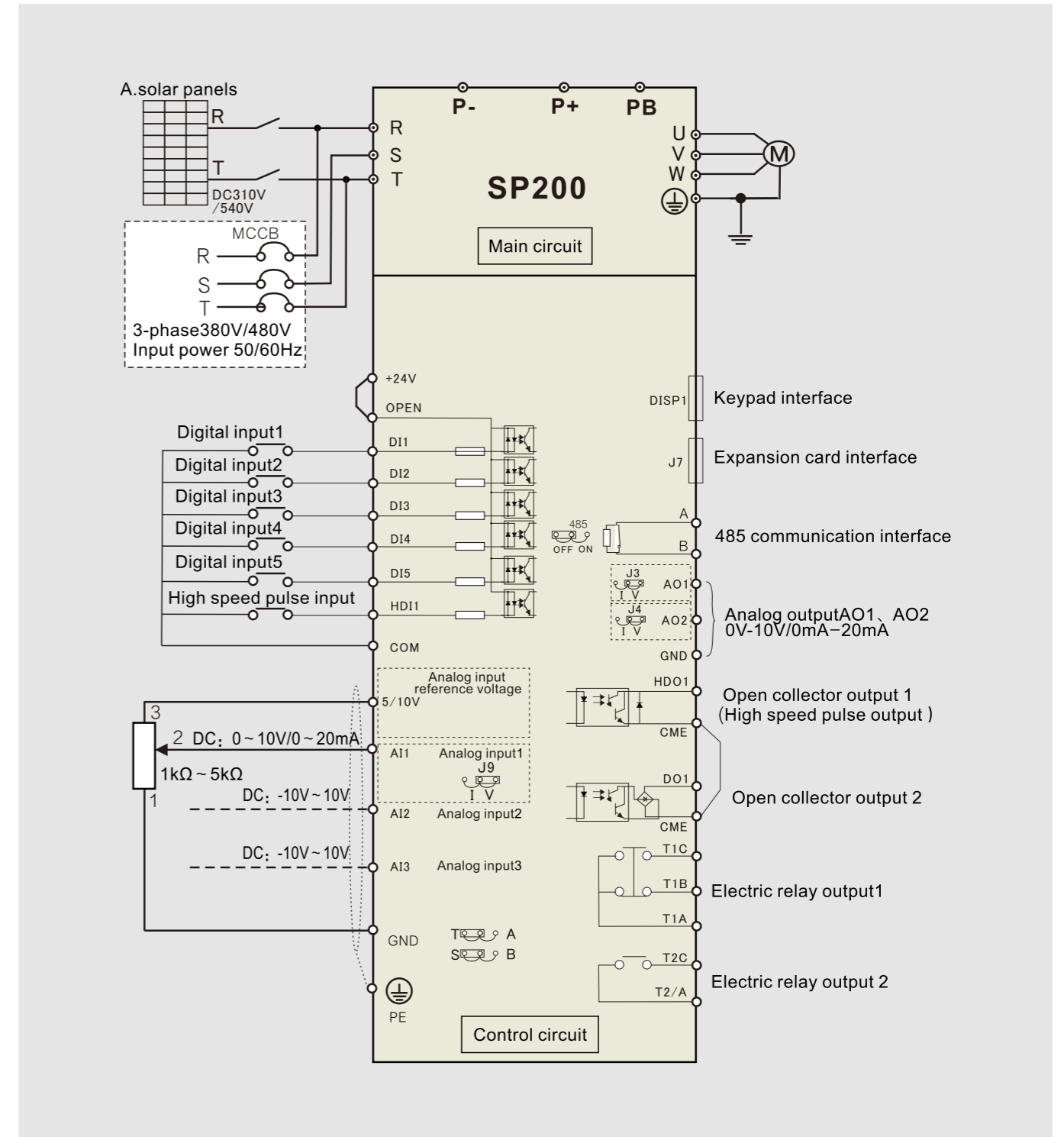


➤ Keypad Installation Structure Size

➤ Keypad with Base Mounting Hole Size Drawing

➤ Keypad Without Base Installation Cut-out Size Diagram

Basic Wiring Diagram



Note:

3. The figure "○" is Control circuit terminal "●" is main circuit terminal.