

SI23 Solar Pump Inverter Manual



Hybrid Solar Pump inverter

0.75Kw-200Kw

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1. Security Tips

1. Only qualified personnel can operate the equipment.
2. AC power supply should not be connected with output ports U, V, W, otherwise there is a danger of damage to frequency inverter.
3. After electrified, it is forbidden to contact internal wiring board and its parts. Otherwise it will cause the danger of electric shock
4. User can only operate on it after 5 minutes when cut off power.

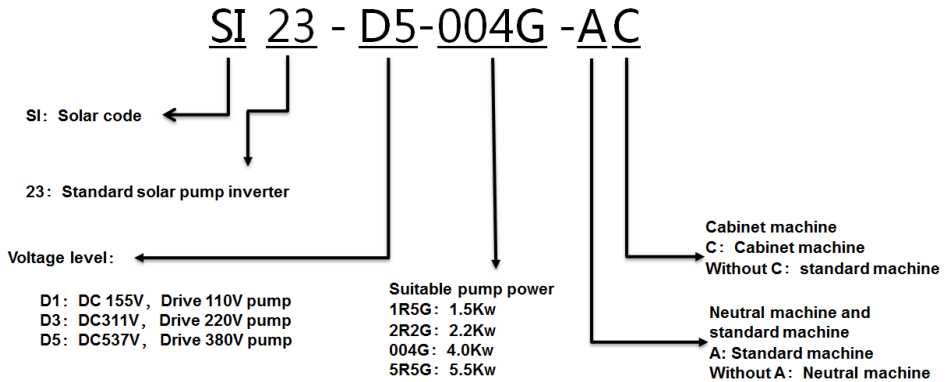
2. Technical Specification

Solar pump inverter power(KW)	Pump		Max solar power input (KW)	Max DC input voltage V	Recommend Voc voltage (V)	Rated output current (A)	Output frequency(Hz)
	Rated power (KW)	Rated voltage (V)					
SI23-D1 series, DC60-400VDC input, 3 phase 110-230VAC output							
0.75	0.75	110	1.5	400	175~380	7A	0-320
1.5	1.5	110	2.25	400	175~380	10A	0-320
SI23-D3 series,DC150V-450V input, 3 phase 220-240VAC output							
0.75	0.75	220	3.0	450	360~430	4A	0-320
1.5	1.5	220	3.0	450	360~430	7A	0-320
2.2	2.2	220	3.3	450	360~430	10A	0-320
4	4	220	6	450	360~430	16A	0-320
SI23-D5 series,DC250V to 780VDC input, 3 phase 380-460VAC output							
0.75	0.75	380	4	800	620~750	3.0	0-320
1.5	1.5	380	4	800	620~750	4.0	0-320
2.2	2.2	380	4	800	620~750	6.0	0-320
4	4	380	6	800	620~750	10	0-320
5.5	5.5	380	8.5	800	620~750	13	0-320
7.5	7.5	380	11	800	620~750	17	0-320
11	11	380	16	800	620~750	25	0-320
15	15	380	22.5	800	620~750	32	0-320
18.5	18.5	380	27.7	800	620~750	38	0-320
22	22	380	33	800	620~750	45	0-320
30	30	380	45	800	620~750	60	0-320
SI23-T3 series,DC350V to 780VDC input,3phase 380-440VAC output							
37	37	380	57	800	620~750	75	0-320
45	45	380	69	800	620~750	90	0-320
55	55	380	85	800	620~750	110	0-320
75	75	380	115	800	620~750	150	0-320
90	90	380	135	800	620~750	180	0-320
110	110	380	165	800	620~750	210	0-320

132	132	380	198	800	620~750	250	0-320
160	160	380	235	800	620~750	310	0-320
185	185	380	240	800	620~750	340	0-320
200	200	380	250	800	620~750	380	0-320

Note: SI23 products can also drive single phase pump and please select the current-matched model.

3. Product Model



4. Appearance and Dimension



SI23-D1-R75G
SI23-D3-1R5G
SI23-D5-2R2G

SI23-D3-2R2G
SI23-D5-004G
SI23-D5-5R5G

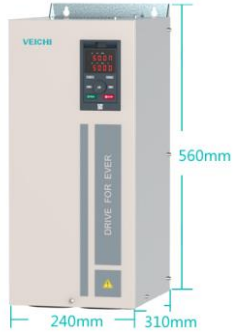
SI23-D5-7R5G
SI23-D5-011G



SI23-D5-015G
SI23-D5-018G
SI23-D5-022G



SI23-D5-030G
SI23-D5-037G



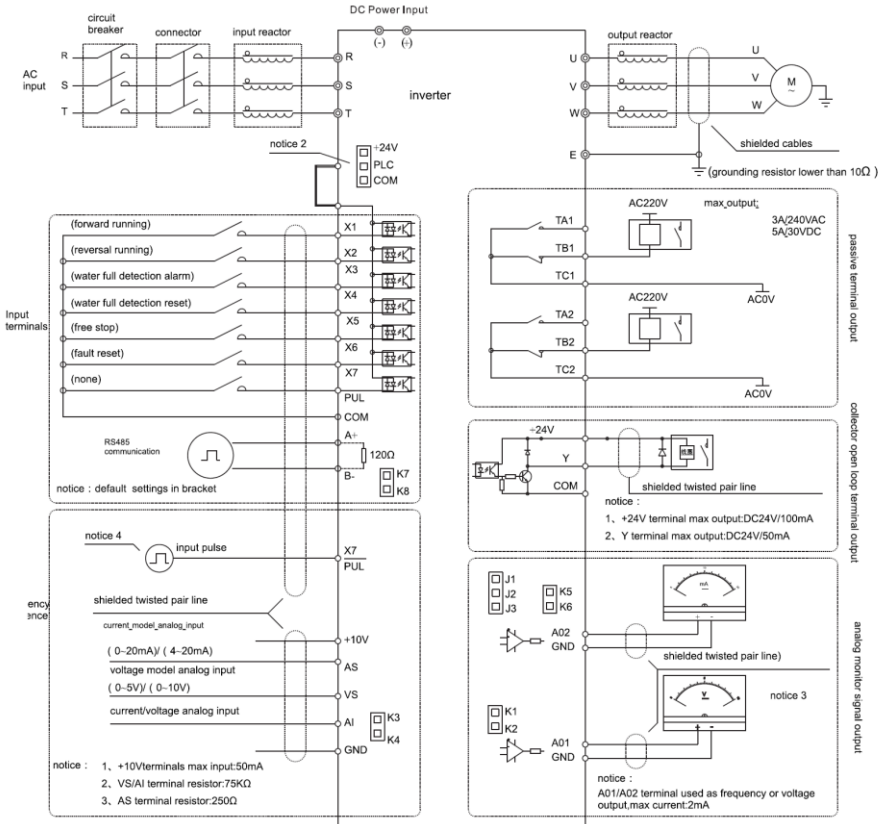
SI23-D5-045G
SI23-D5-055G
SI23-D5-075G

5. Solar Pump Controller Wiring

(1) Standard Wiring for three phase motor

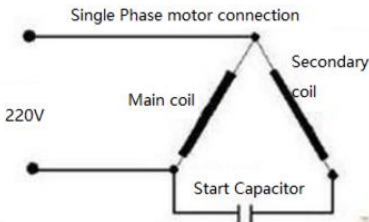
Power Type	Input Terminal	Output Terminal
DC power	+,- or R,T	U,V,W
AC power	R, S, T	U,V,W
DC and AC power	+,- and R,S,T	U,V,W





Note: When connect solar panel, both AC input (R, T) and DC input (+, -) is okay, AC input is prefer.

(2) Connection for single phase motor



Notes: Single phase motor has three lines, first use the multimeter check the three lines resistor, the biggest value two lines parallel the start capacitor (recommend the capacitor volume is 150UF/250V), the other line(common-coil) connect the power terminal. Then use the multimeter check the common coil with the other two lines resistor, the lower one connects another power terminal.

6. Basic Operation

● Motor debugging

(1) AM Pump

- Default parameter one key start and stop
- Same power level, determine the direction of operation (F0.16)
- Adjust motor parameters and corresponding protection parameters according to the application

(2) PMSM Pump

- Set motor parameter (F5.00-F5.06, Motor series、Frequency、Speed、Voltage、Current、Power)
- Rotating self-tuning F5.12(SI22 SI30), F5.20 (SI23)
- Judge the direction of the pump

(3) Single Phase Pump

- ◆ Connect the starting capacitor between the main coil and the auxiliary coil
- ◆ Set F10.15=0020, Shield output phase loss
- ◆ Running judge the direction of the pump