

**VEICHI**



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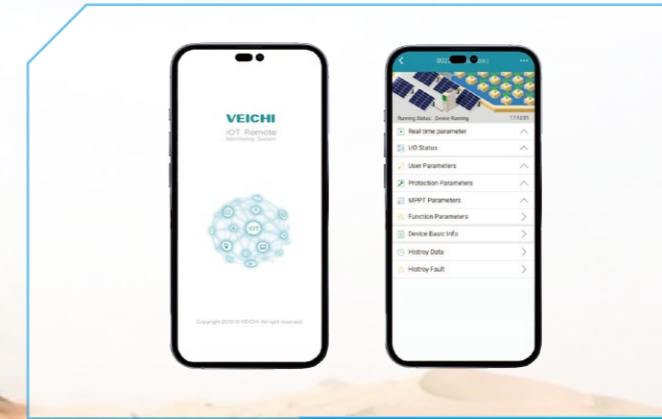
Official Website

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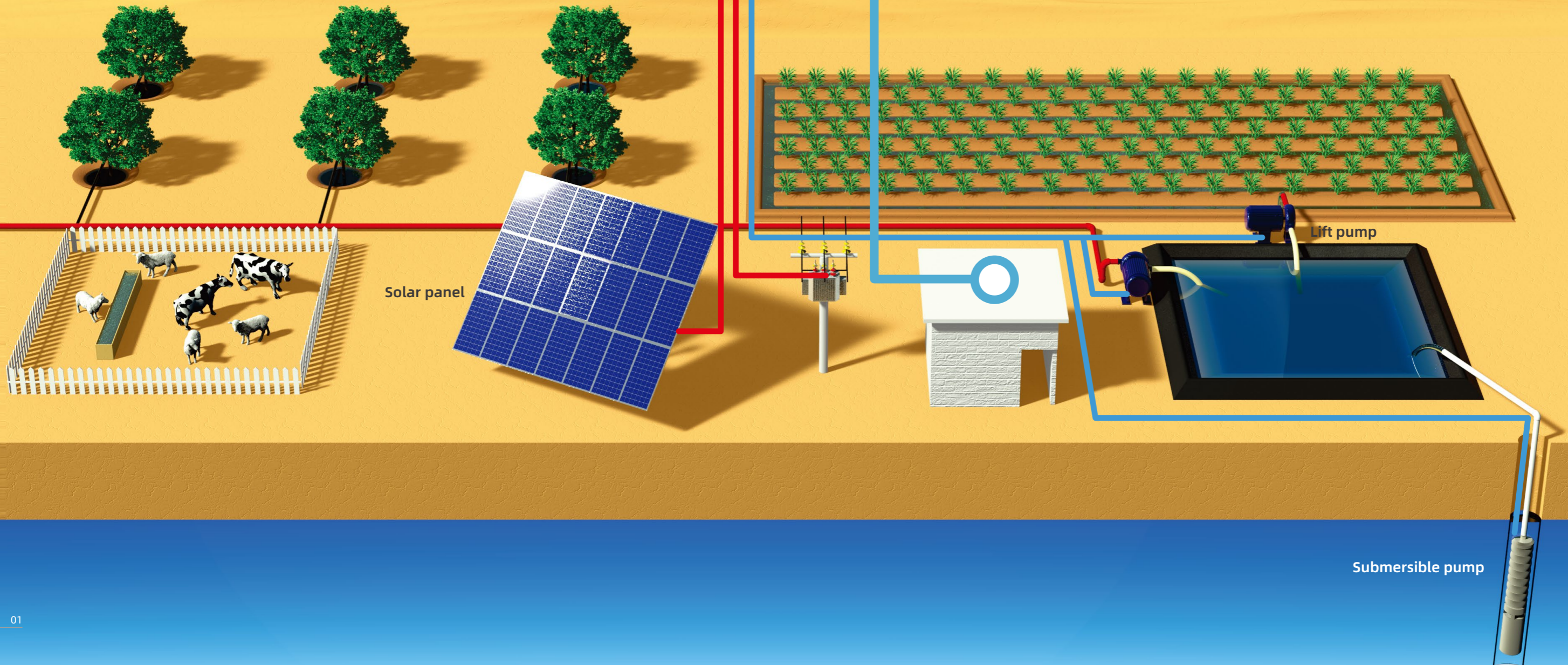
# SOLAR PUMP INVERTER CABINET

## Intelligent Agriculture IOT System

The solar energy system drives an electric pump to pump groundwater, river water, or reservoir water into a reservoir for daily use and agricultural irrigation. Eliminating the battery design process can reduce investment costs and improve overall system efficiency. The system operates automatically when there is sufficient sunlight, and we also provide a control system to meet customers' personalized needs.



Website/Mobile APP Access



Solar panel

Lift pump

Submersible pump

## Naming Rule

**SI23 - D5 - 500 G - C**

### Product Series

SI23

### Voltage level

D1:155V DC, Suitable for 110V AC 3PH pump  
 D3:311V DC, Suitable for 220V AC 3PH pump  
 SS2:311V DC, Suitable for 220V AC 1PH pump  
 D5:540V DC, Suitable for 380V AC 3PH pump  
 T3:540V DC, Suitable for 380V AC 3PH pump

### Suffix

C : control cabinet

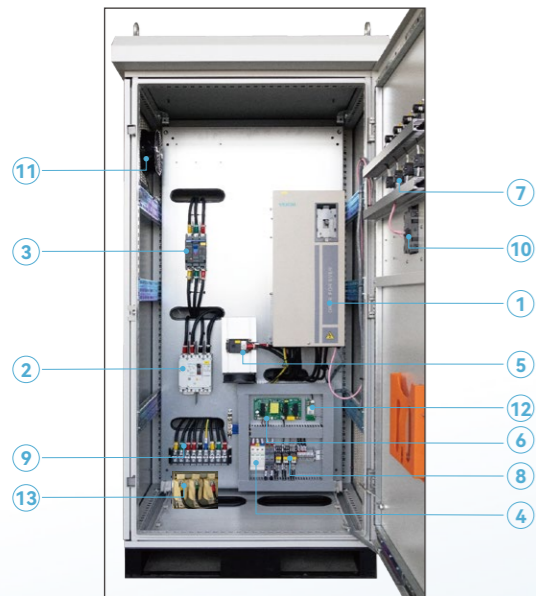
### Torque load

G: constant torque load  
 P: variable torque load

### Power level

R75: 0.75kW  
 1R5: 1.5kW  
 004: 4kW  
 011: 11kW

## Common Device Details

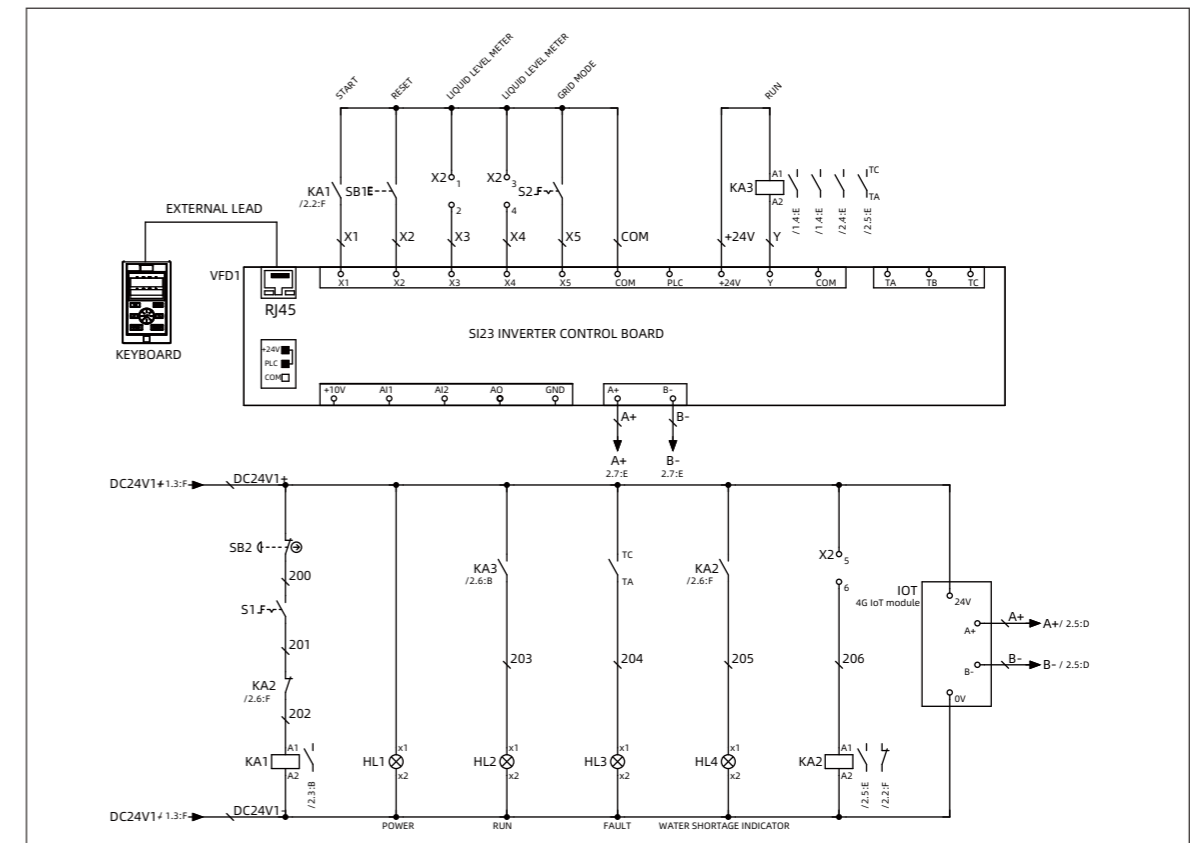
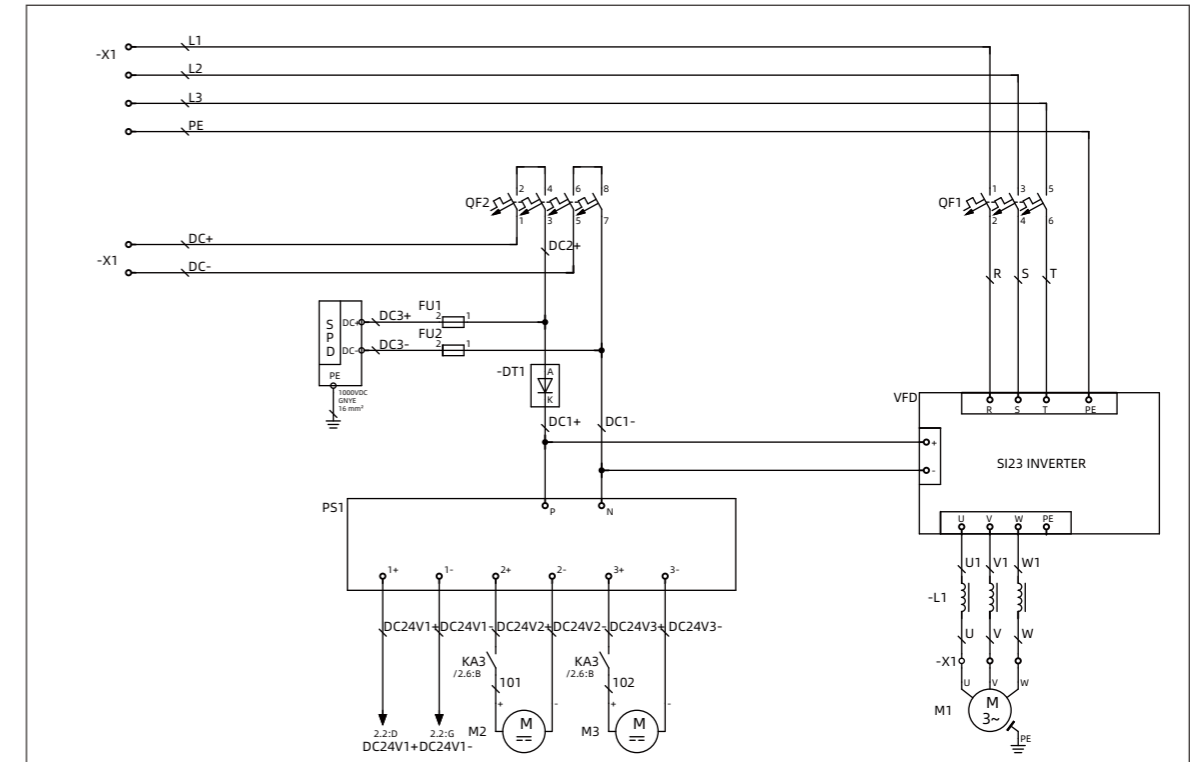


Serial number	Device name	Remark
1	Solar pumping inverter	Standard configuration
2	DC circuit breaker	Standard configuration
3	AC circuit breaker	Standard configuration
4	Surge protector	Standard configuration
5	Anti reverse diode	Standard configuration
6	24V power board	Standard configuration
7	Indicator lights, buttons, knobs	Standard configuration
8	Intermediate relay	Standard configuration
9	Terminal block	Standard configuration
10	Keyboard	Standard configuration
11	Cooling fan	Standard configuration
12	4G IoT module	Optional
13	Reactor/Filter	Optional

### Note:

1. For information about inverters, please refer to the directory of solar pump inverters in the document.
2. If you have customization requirements, please contact us.
3. The internal component list is subject to actual engineering customization, and the above is for reference only.
4. Solar pump inverter D5 and T3 with suffix " H " support up to 850V input.

## Cabinet Standard Electrical Wiring Diagram



## Size Information

Model	Cabinet dimensions			Package dimensions		
	W(mm)	H(mm)	D(mm)	W(mm)	H(mm)	D(mm)
SI23-D5-R75G-C	600	1000	350	800	1200	500
SI23-D5-1R5G-C	600	1000	350	800	1200	500
SI23-D5-2R2G-C	600	1000	350	800	1200	500
SI23-D5-004G-C	600	1000	350	800	1200	500
SI23-D5-5R5G-C	600	1000	350	800	1200	500
SI23-D5-7R5G-C	600	1000	350	800	1200	500
SI23-D5-011G-C	600	1000	350	800	1200	500
SI23-D5-015G-C	800	1000	350	1000	1200	500
SI23-D5-018G-C	800	1000	350	1000	1200	500
SI23-D5-022G-C	800	1000	350	1000	1200	500
SI23-D5-030G-C	800	1000	350	1000	1200	500
SI23-T3-037G-C	800	2000	600	1000	2200	800
SI23-T3-045G-C	800	2000	600	1000	2200	800
SI23-T3-055G-C	800	2000	600	1000	2200	800
SI23-T3-075G-C	800	2000	600	1000	2200	800
SI23-T3-090G-C	800	2000	600	1000	2200	800
SI23-T3-110G-C	800	2000	600	1000	2200	800
SI23-T3-132G-C	800	2000	600	1000	2200	800
SI23-T3-160G-C	800	2000	600	1000	2200	800
SI23-T3-185G-C	1000	2200	800	1200	2300	1000
SI23-T3-200G-C	1000	2200	800	1200	2300	1000
SI23-T3-220G-C	1000	2200	800	1200	2300	1000
SI23-T3-250G-C	1000	2200	800	1200	2300	1000
SI23-T3-280G-C	1000	2200	800	1200	2300	1000
SI23-T3-315G-C	1200	2200	800	1400	2300	1000
SI23-T3-355G-C	1200	2200	800	1400	2300	1000
SI23-T3-400G-C	1200	2200	800	1400	2300	1000
SI23-T3-450G-C	1200	2200	800	1400	2300	1000
SI23-T3-500G-C	1200	2200	800	1400	2300	1000
SI23-T3-560G-C	1200	2200	800	1400	2300	1000
SI23-T3-630G-C	1800	2200	800	2000	2400	1000
SI23-T3-710G-C	1800	2200	800	2000	2400	1000

Note: Can support customer size customization.

Solar pump VFD 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,60VDC-400VDC input, 3 phase 110VAC-230VAC output							
0.75	0.75	110	1.0	400	175~380	7A	0-599
1.5	1.5	110	1.95	400	175~380	10A	0-599
SI23-D3 series,150VDC-450VDC input, 3 phase 220VAC-240VAC output							
0.75	0.75	220	1.0	450	360~430	4A	0-599
1.5	1.5	220	1.95	450	360~430	7A	0-599
2.2	2.2	220	2.86	450	360~430	10A	0-599
4	4	220	5.4	450	360~430	16A	0-599
5.5	5.5	220	8	450	360~430	20	0-599
7.5	7.5	220	10	450	360~430	30	0-599
11	11	220	14.3	450	360~430	42	0-599
15	15	220	19.5	450	360~430	55	0-599
18.5	18.5	220	23.4	450	360~430	70	0-599
22	22	220	28.6	450	360~430	80	0-599
30	30	220	39	450	360~430	110	0-599
37	37	220	48.1	450	360~430	130	0-599
45	45	220	58.5	450	360~430	160	0-599
55	55	220	71.5	450	360~430	200	0-599
SI23-D5 series, 250VDC-800VDC input, 3 phase 380VAC-460VAC output							
0.75	0.75	380	1.0	780	620~750	3.0	0-599
1.5	1.5	380	1.95	780	620~750	4.0	0-599
2.2	2.2	380	2.86	780	620~750	6.0	0-599
4	4	380	5.4	780	620~750	10	0-599
5.5	5.5	380	8	780	620~750	13	0-599
7.5	7.5	380	10	780	620~750	17	0-599
11	11	380	14.3	780	620~750	25	0-599
15	15	380	19.5	780	620~750	32	0-599
18.5	18.5	380	23.4	780	620~750	38	0-599
22	22	380	28.6	780	620~750	45	0-599
30	30	380	39	780	620~750	60	0-599
SI23-T3 series,350VDC-800VDC input,3phase 380VAC-440VAC output							
37	37	380	48.1	780	620~750	75	0-599
45	45	380	58.5	780	620~750	90	0-599
55	55	380	71.5	780	620~750	110	0-599
75	75	380	97.5	780	620~750	150	0-599
90	90	380	121.5	780	620~750	180	0-599
110	110	380	148.5	780	620~750	210	0-599
132	132	380	178.2	780	620~750	250	0-599
160	160	380	216	780	620~750	310	0-599
185	185	380	249.75	780	620~750	340	0-599
200	200	380	270	780	620~750	380	0-599
220	220	380	297	780	620~750	415	0-599
250	250	380	337.5	780	620~750	470	0-599
280	280	380	378	780	620~750	510	0-599
315	315	380	425.25	780	620~750	599	0-599
355	355	380	479.25	780	620~750	670	0-599
400	400	380	540	780	620~750	750	0-599
450	450	380	607.5	780	620~750	810	0-599
500	500	380	675	780	620~750	860	0-599
560	560	380	756	780	620~750	990	0-599
630	630	380	850.5	780	620~750	1100	0-599
710	710	380	958.5	780	620~750	1260	0-599

Solar pump inverter SI23-D5-XXXX-A(H) or SI23-T3-XXXX-A(H) series products used in the cabinet can support max. 900VDC input. Considering the solar panels Voc fluctuation in different seasons, we recommend the maximum voltage from solar DC input is 850VDC.

## Recommended Specifications For Main Circuit Accessories

Inverter power	Recommended specifications					Output AC reactor model		Output AC sine wave filter
	Contactor(A)	Circuit breaker(A)	Main circuit terminal screw (Mm)	Fixed torque (N.m)	Copper core cable mm <sup>2</sup> (AWG)	1% reactance, 50M-150M	4% reactance, 150M-500M	500-5000M
R75kW	10A	10A	M3	0.8 ~ 1.0	1.5mm <sup>2</sup> (14)	VC-OCL-C-0011A-T3-1M10	CKSG2-0015/G3-4	XGM-3Z-13A
1R5kW	10A	10A	M3	0.8 ~ 1.0	2.5mm <sup>2</sup> (12)		CKSG2-0015/G3-4	
2R2kW	16A	15A	M3	0.8 ~ 1.0	2.5mm <sup>2</sup> (12)		CKSG2-0040/G3-4	
004kW	16A	20A	M3.5	1.2 ~ 1.5	4mm <sup>2</sup> (10)		CKSG2-0040/G3-4	
5R5kW	25A	20A	M3.5	1.2 ~ 1.5	6mm <sup>2</sup> (9)	VC-OCL-C-0016A-T3-M800	CKSG2-0075/G3-4	XGM-3Z-18A
7R5kW	25A	30A	M4	1.2 ~ 1.5	6mm <sup>2</sup> (9)	VC-OCL-C-0018A-T3-M650	CKSG2-0075/G3-4	
011kW	32A	40A	M4	1.2 ~ 1.5	10mm <sup>2</sup> (7)	VC-OCL-C-0028A-T3-M330	CKSG2-0150/G3-4	XGM-3Z-24A
015kW	40A	50A	M6	4 ~ 6	10mm <sup>2</sup> (7)	VC-OCL-C-0035A-T3-M250	CKSG2-0150/G3-4	XGM-3Z-34A
018kW	50A	60A	M6	4 ~ 6	16mm <sup>2</sup> (5)	VC-OCL-C-0040A-T3-M200	CKSG2-0220/G3-4	XGM-3Z-38A
022kW	50A	75A	M6	4 ~ 6	16mm <sup>2</sup> (5)	VC-OCL-C-0050A-T3-M180	CKSG2-0220/G3-4	XGM-3Z-50A
030kW	63A	100A	M6	4 ~ 6	25mm <sup>2</sup> (3)	VC-OCL-C-0063A-T3-M090	CKSG2-0300/G3-4	XGM-3Z-60A
037kW	80A	125A	M6	4 ~ 6	25mm <sup>2</sup> (3)	VC-OCL-C-0080A-T3-M080	CKSG2-0370/G3-4	XGM-3Z-110A
045kW	100A	150A	M8	8 ~ 10	35mm <sup>2</sup> (2)	VC-OCL-C-0100A-T3-M060	CKSG2-0450/G3-4	
055kW	125A	175A	M8	8 ~ 10	35mm <sup>2</sup> (2)	VC-OCL-A-0125A-T3-M056	CKSG2-0550/G3-4	XGM-3Z-150A
075kW	160A	200A	M8	8 ~ 10	50mm <sup>2</sup> (1)	VC-OCL-A-0160A-T3-M041	CKSG2-0750/G3-4	
093kW	220A	250A	M8	8 ~ 10	50mm <sup>2</sup> (1/0)	VC-OCL-A-0200A-T3-M035	CKSG2-0900/G3-4	XGM-3Z-210A
110kW	220A	300A	M8	8 ~ 10	70mm <sup>2</sup> (2/0)	VC-OCL-A-0224A-T3-M028	CKSG2-1100/G3-4	
132kW	250A	400A	M12	14 ~ 16	95mm <sup>2</sup> (3/0)	VC-OCL-A-0280A-T3-23U3	CKSG2-1320/G3-4	XGM-3Z-265A
160kW	300A	500A	M12	14 ~ 16	95mm <sup>2</sup> (4/0)	VC-OCL-A-0315A-T3-19U4	CKSG2-1600/G3-4	XGM-3Z-315A
185kW	400A	600A	M12	14 ~ 16	120mm <sup>2</sup>	VC-OCL-A-0400A-T3-18U4	CKSG2-2000/G3-4	
200kW	400A	700A	M12	14 ~ 16	150mm <sup>2</sup>		CKSG2-2000/G3-4	XGM-3Z-420A
220kW	630A	800A	M12	14 ~ 16	150mm <sup>2</sup>	VC-OCL-A-0450A-T3-16U4	CKSG2-2200/G3-4	
250kW	630A	1000A	M12	14 ~ 16	185mm <sup>2</sup>	VC-OCL-A-0560A-T3-13U2	CKLSG-2200/G3-T4	XGM-3Z-530A
280kW	630A	1200A	M12	14 ~ 16	185mm <sup>2</sup>		CKLSG-2800/G3-T4	
315kW	630A	1200A	M16	20 ~ 23	240mm <sup>2</sup>	VC-OCL-A-0690A-T3-11U6	CKLSG-3150/G3-T4	XGM-3Z-600A
355kW	800A	1400A	M16	20 ~ 23	240mm <sup>2</sup>		CKLSG-3500/G3-T4	
400kW	1000A	1600A	M16	20 ~ 23	300mm <sup>2</sup>	VC-OCL-A-1000A-T3-7U40	CKLSG-4000/G3-T4	XGM-3Z-800A
450kW	1000A	2000A	M16	20 ~ 23	400mm <sup>2</sup>		CKLSG-4500/G3-T4	
500kW	1000A	2000A	M16	20 ~ 23	400mm <sup>2</sup>		CKLSG-5000/G3-T4	
560kW	1200A	2000A	M16	20 ~ 23	500mm <sup>2</sup>		CKLSG-5600/G3-T4	
630kW	1200A	2000A	M16	20 ~ 23	500mm <sup>2</sup>	VC-OCL-A-1250A-T3-5U80	CKLSG-6300/G3-T4	XGM-3Z-1250A
710kW	1400A	2000A	M16	20 ~ 23	500mm <sup>2</sup>		CKLSG-7100/G3-T4	

## Application

### Home Owners >

Pump water for drinking, cooking and sanitation in and around the home. Gardens are irrigated and swimming pools are kept clean in a cost effective and sustainable way.



### < Farmers Agriculture

Irrigate crops without the need for grid power or cost of running generators. Livestock have drinking water, reliably wherever it is needed.

### NGOs >

Keep operational costs low while delivering water to communities and displaced people. Even emergency relief water needs can be met with solar water pumping.



### < Communities

Have their water needs met quietly and cleanly. The solution is sustainable, affordable and dependable allowing the community to prosper.

## Project Cases



Solar Pump Inverter Cabinet for Saudi Arabia



75kW Solar Irrigation Project in Morocco



206 kW Solar Irrigation System in Egypt



160KW Solar Irrigation Project in Lebanon



50MW Solar Irrigation Project in Saudi Arabia



1.4MW Solar Irrigation Project in Saudi Arabia