VEICHI

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VEICHI

Solar Pump Inverter



SI23 Series
Solar Pump Inverter

New structure | High efficiency | Reliable Performance



Product Features

New look, narrow body

- Book-like narrow structure saves up 60% space max.
- New keyboard with simple design appearance simplifies operation .
- European terminals raises wiring efficiency.



Comply With Multiple International Standards Certification

EN 61800/EN 61000/EN IEC 61000
IEC 61683/IEC 62109~1/IEC62109-2

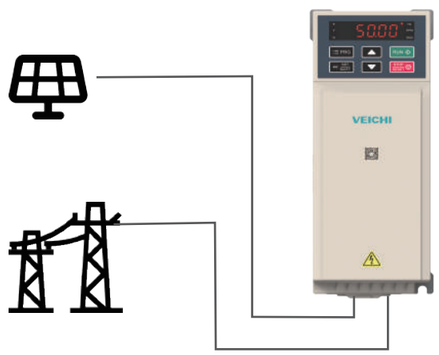
Top algorithm

- Asynchronous, single-phase, permanent magnet synchronous, synchronous reluctance etc. pump motors applicable
- Internationally leading self-learning algorithm with accurate and consistent motion control
- High-bandwidth current vector with 12 times high-precision weak magnetic output



AC/DC hybrid input

When the solar panel power is lower than the set value, solar panel will be switched to the utility power to ensure the normal operation of the system until the solar panel power is restored to the set value, then the utility power will be switched back again to supply power .



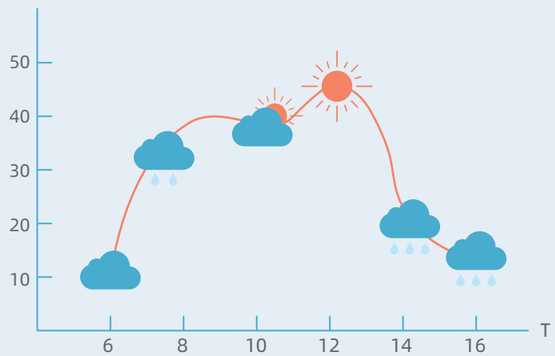
Smart IOT

- Support GPS positioning, WiFi data connection, offline data storage .
- Unattended, real-time, remote control .
- Big data analysis, calculation of cumulative power generation and flow .
- Auto identification of various APN remote data analysis devices and one-key Router connection.



Customized photovoltaic functions

- MPPT enables real-time adjustment of the optimal output frequency.
- Complete pump protections extend service life.
- Customized PQ curve offers users cumulative flow and power generation.
- AC/DC hybrid input, timing, and water pump cleaning etc. meet market demands.



Auto-Track at any daytime

SI23 Series Naming Rules

SI23 - D5 - 2R2G - A(H)

Product Category
SI:stands for the solar pump inverter

Product Series
Different series are represented by different two-digit numbers

Voltage Class
D1:155V DC, suitable for the 110V AC pumps 3PH
D3:311V DC, suitable for the 220V AC pumps 3PH
D5:540V DC, suitable for the 380V AC pumps 3PH
T3:540V DC, suitable for the 380V AC pumps 3PH
SS2: 311V DC, suitable for the 220V AC pumps 1PH

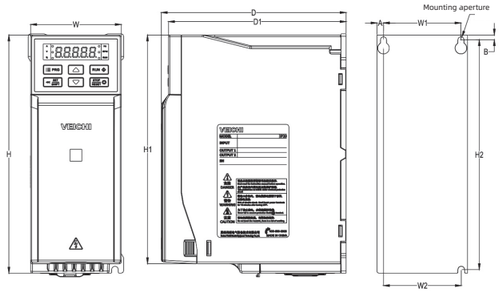
Rated Power
R75G=0.75KW
1R5G=1.5KW
004G=4KW
011G=11KW

Suffix
"A" for VEICHI
Non-A for neutral brand
" A(H)" Support up to 850V input
"I" IOT Module (optional)

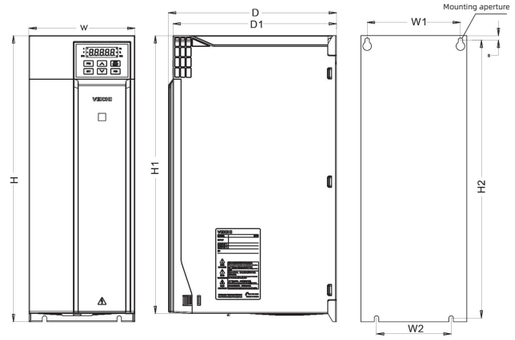
Technical Specification

MODEL	D1	D3	SS2	D5	T3
PV Input (D5 and T3 with suffix "H" support up to 850V input)					
Input voltage range	60~400V	150~450V	150~450V	250~780V	350~780V
Recommended Voc voltage	175~380V	360~430V	360~430V	620~750V	620~750V
Maximum MPPT efficiency	up to 99.8%	up to 99.8%	up to 99.8%	up to 99.8%	up to 99.8%
AC Input					
Input voltage range	1PH/3PH 110V	1PH/3PH 220V~240V	1PH/3PH 220V~240V	3PH 380~480V	3PH 380~480V
Input voltage frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Output					
Output voltage range	110~230V	150~230V	150~230V	230~460V	230~460V
Output frequency range	0~599Hz	0~599Hz	0~599Hz	0~599Hz	0~599Hz
Output power range	0.75~1.5kW	0.75~55kW	0.75~55kW	0.75~30kW	37~500kW
Power	**Rated output current**				
0.75kW	7A	4A	7A	3A	-
1.5kW	10A	7A	10A	4A	-
2.2kW	-	10A	16A	6A	-
4kW	-	16A	30A	10A	-
5.5kW	-	20A	42A	13A	-
7.5kW	-	30A	55A	17A	-
11kW	-	42A	-	25A	-
15kW	-	55A	-	32A	-
18.5kW	-	70A	-	38A	-
22kW	-	80A	-	45A	-
30kW	-	110A	-	60A	-
37kW	-	130A	-	-	75A
45kW	-	160A	-	-	90A
55kW	-	200A	-	-	110A
75kW	-	-	-	-	150A
90kW	-	-	-	-	180A
110kW	-	-	-	-	210A
132kW	-	-	-	-	250A
160kW	-	-	-	-	310A
185kW	-	-	-	-	340A
200kW	-	-	-	-	380A
Control Performance					
Motor type	Asynchronous motors Permanent magnet synchronous motor Synchronous reluctance motor	Asynchronous motors Permanent magnet synchronous motor Synchronous reluctance motor	Single phase motor	Asynchronous motors Permanent magnet synchronous motor Synchronous reluctance motor	Asynchronous motors Permanent magnet synchronous motor Synchronous reluctance motor
Control mode	V/F control, open-loop vector control, closed-loop vector control, voltage-frequency separated control				
Overload capacity	150% of rated load for 60s, 180% of overload capacity for 10s, 200% of overload capacity for 0.5s				
System					
Installation	Hitch mounting				
Protection class	IP20				
Working temperature	-10~60℃				
Cooling method	Forced air cooling				
Humidity	20%~95%RH（condensation free）				
Installation environment	Altitude lower than 1000m. Derate 1% for each 100m rise when above 1000m.No condensation, icing, rain, snow, hail, etc., solar radiation below 700W/m2, air pressure 70kPa ~ 106kPa				
Protection					
Common potection	Undervoltage / overvoltage	√	√	√	√	√
	Input/output phase loss	√	√	√	√	√
	Overload	√	√	√	√	√
	Overcurrent	√	√	√	√	√
	Drive overheat	√	√	√	√	√
	Short circuit between phases and to ground	√	√	√	√	√
Specialized protection	Low frequency	√	√	√	√	√
	Pump overcurrent	√	√	√	√	√
	Dryout	√	√	√	√	√
	Min. power	√	√	√	√	√
	Overflow	√	√	√	√	√
	Sleep protection	√	√	√	√	√

Plastic model

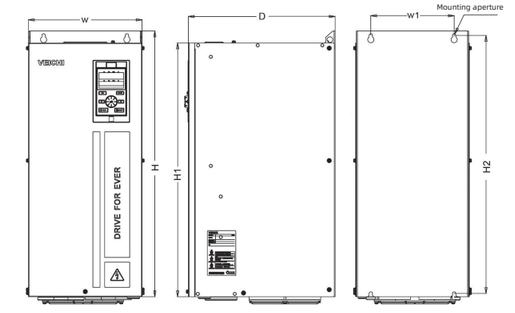


Model	Overall dimension(mm)					Installation dimension(mm)					Installation aperture
	W	H	H1	D	D1	W1	W2	H2	A	B	
SI23-D1-R75G-A SI23-D1-1R5G-A SI23-D3-R75G-A SI23-D3-1R5G-A SI23-SS2-R75G-A SI23-D5-R75G-A SI23-D5-1R5G-A SI23-D5-2R2G-A	76	200	192	155	149	65	65	193	5.5	4	M4
SI23-D3-2R2G-A SI23-D3-004G-A SI23-SS2-1R5G-A SI23-SS2-2R2G-A SI23-D5-004G-A SI23-D5-5R5G-A	100	242	231	155	149	84	86.5	231.5	8	5.5	M4
SI23-D3-5R5G-A SI23-SS2-004G-A SI23-SS2-5R5G-A SI23-D5-7R5G-A SI23-D5-011G-A	116	320	307.5	175	169	98	100	307.5	9	6	M5



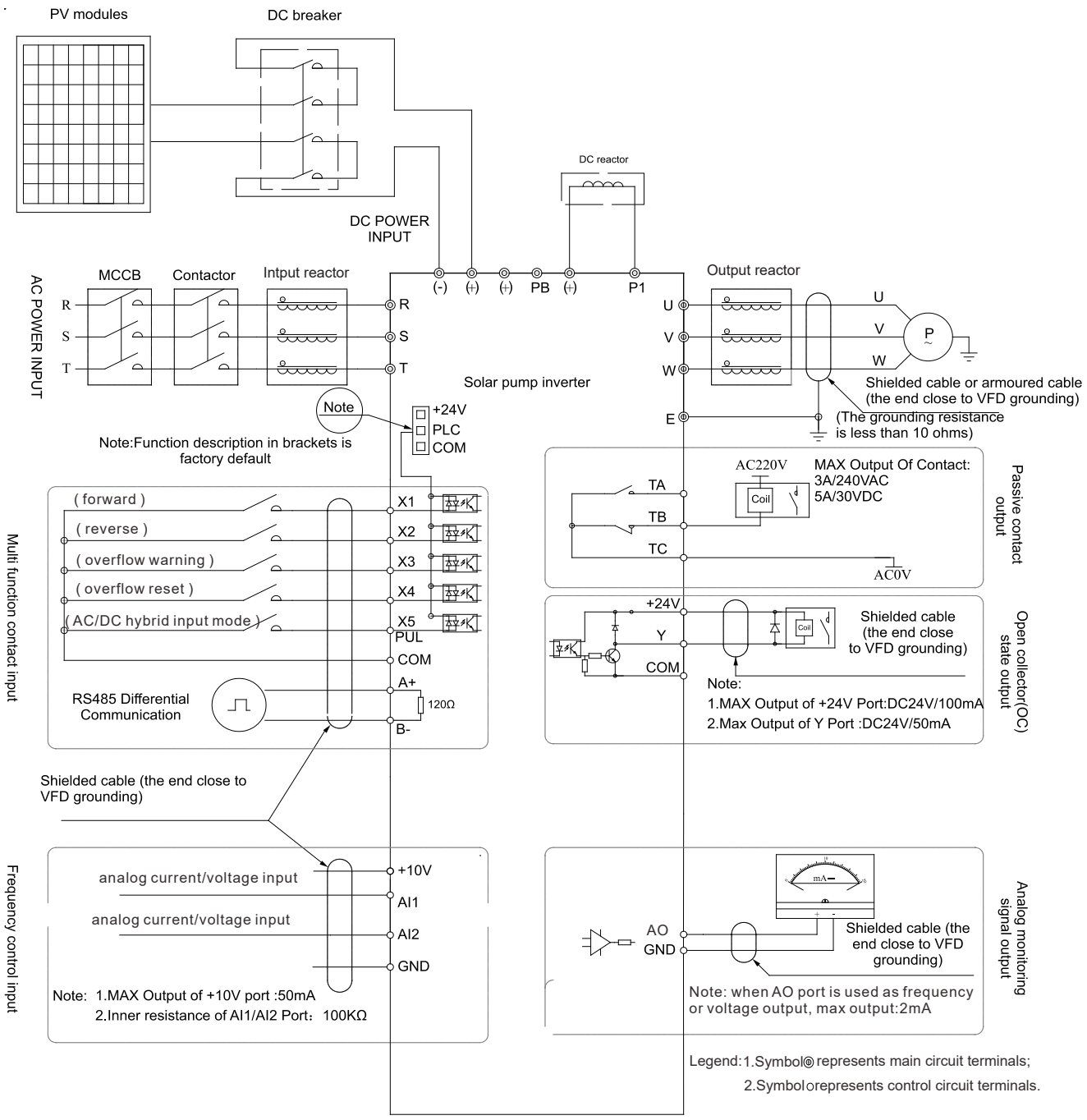
Model	Overall dimension(mm)					Installation dimension(mm)					Installation aperture
	W	H	H1	D	D1	W1	W2	H2	A	B	
SI23-D3-7R5G-A SI23-D3-011G-A SI23-SS2-7R5G-A SI23-D5-015G-A SI23-D5-018G-A SI23-D5-022G-A	142	383	372	225	219	125	100	372	6		M5
SI23-D3-015G-A SI23-D3-018G-A SI23-D3-022G-A SI23-D5-030G-A SI23-T3-037G-A	172	430	/	225	219	150	150	416.5	7.5		M5

Steel model



Model	Overall dimension (mm)				Installation dimension (mm)		Installation aperture
	W	H	H1	D	W1	H2	
SI23-D3-030G-A SI23-D3-037G-A SI23-D3-045G-A SI23-T3-045G-A SI23-T3-055G-A SI23-T3-075G-A	240	560	535	310	176	544	M6
SI23-D3-055G-A SI23-T3-090G-A SI23-T3-110G-A	270	638	580	350	195	615	M8
SI23-T3-132G-A SI23-T3-160G-A	350	738	680	405	220	715	M8
SI23-T3-185G-A SI23-T3-200G-A	360	940	850	480	200	914	M16

Standard Wiring Diagram

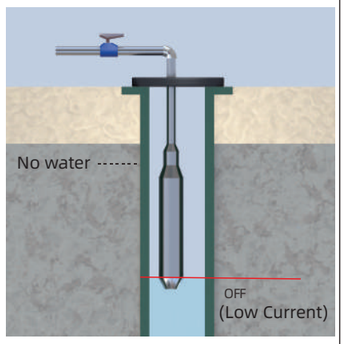


Note: When connect solar panel, both AC input (R, T) and DC input (+, -) is okay, AC input is prefer.

Exclusive Solutions For Water Pump Applications

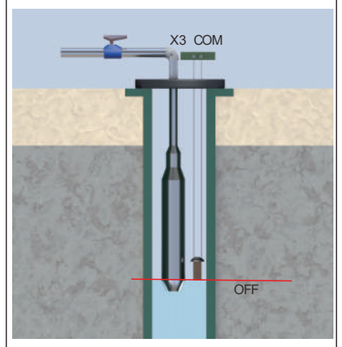
Dry running protection(No sensor)

When the well is empty, the output current will decrease, when the output current is lower than threshold value, dry running protection will be triggered



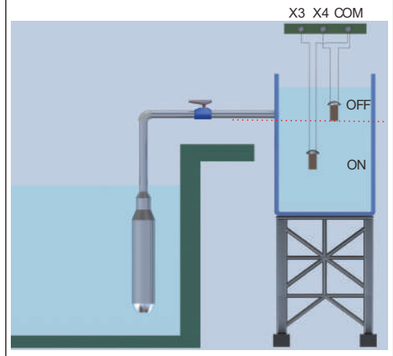
Dry running protection(One sensor)

When the downhole liquid level sensor detects water shortage, the frequency converter will enter into dry protection



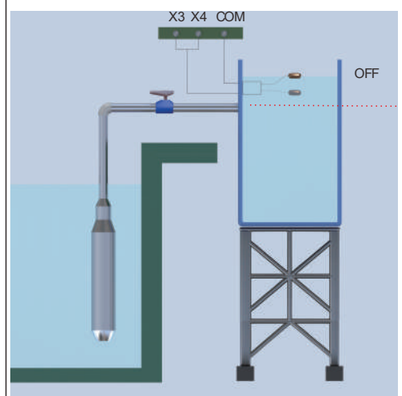
Water fulfil protection(Dual level sensor)

When the water level is higher than the high level sensor, it enters the water full protection. When the water level drops to the low level sensor, the inverter starts running



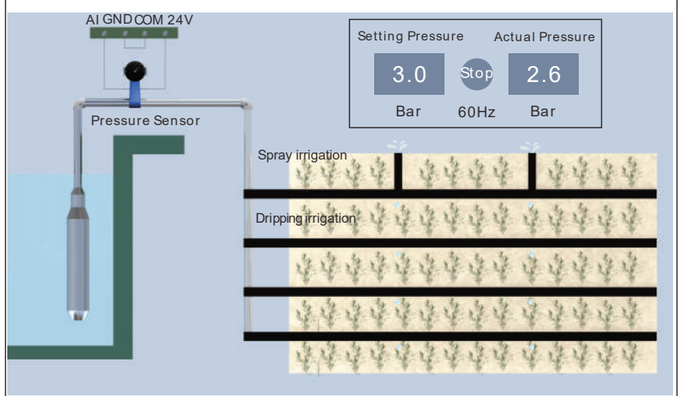
Water fulfil protection(Float switch)

The float switch controls the start and stop according to the liquid level

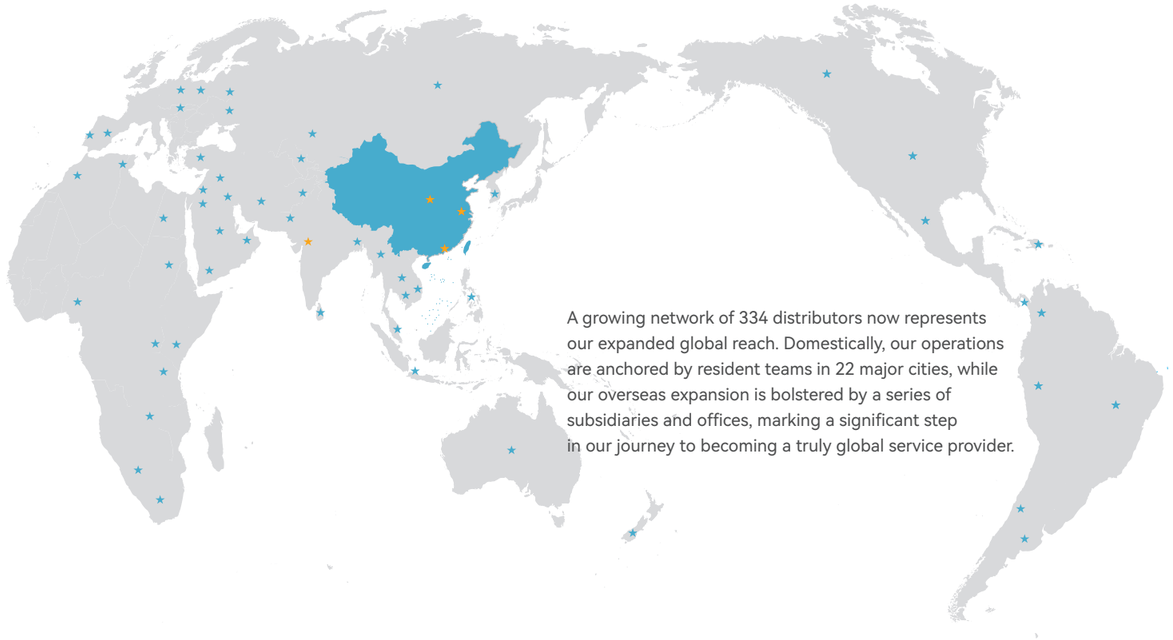


Constant pressure irrigation solution

Built-in PID algorithm, according to the pressure gauge feedback data to adjust the running frequency, to achieve constant pressure water supply



Service and Support



A growing network of 334 distributors now represents our expanded global reach. Domestically, our operations are anchored by resident teams in 22 major cities, while our overseas expansion is bolstered by a series of subsidiaries and offices, marking a significant step in our journey to becoming a truly global service provider.

01 Pre-sales

Technology promotion, site survey, proposal design, energy saving assessment

02 During-sales

Customization, design consultation, installation and commissioning, on-site training

03 After-sales

Regular return visits, regular maintenance, timelyrepairs, application instruction

