**VEICHI**

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Official Website


*Version: Y5/2-11




VEICHI

# Solar Pump Inverter

# About Us

Veichi Electric (Stock Code: 688698) specializes in electrical transmission and industrial control, operating as an integrated high-tech enterprise in R&D, production, and sales of industrial automation products. With a vision to lead in smart industry and green energy solutions, the company leverages its R&D and manufacturing hubs in Suzhou, additional R&D centers in Shenzhen and Xi'an, and wholly-owned subsidiaries overseas, consistently serving customers worldwide with competitive and reliable solutions.

Under the "One Core, Two New Drivers" strategy, Veichi focuses on industrial automation, offering AC drives, servo systems, and control systems widely applied across heavy and light industries, as well as high-end equipment sectors, supporting the digital and intelligent transformation of manufacturing with its tailored solutions. Simultaneously, in two emerging fields, it provides one-stop solutions for humanoid, collaborative, and mobile robots in embodied intelligence, while in green energy, it delves into segments like photovoltaic, energy storage, and hydrogen energy, to "connect every device with green power," fostering a synergistic growth between core operations and new ventures.

Sustained R&D has yielded a portfolio of proprietary patented technologies including silicon carbide application, HF injection, motor controls and protections (auto-tuning, flying-start, high-speed flux-weakening, V/F control, vector control), high-density water-cooling layout, and IGBT drive protection. As of September 30, 2025, Veichi holds 234 patents, with 66 for invention.

Over two decades of steady growth, Veichi has earned numerous certifications and accolades from national and regulatory authorities, including "High-Tech Enterprise," "Postdoctoral Research Workstation," and provincial honors like "Engineering Technology Research Center," "Enterprise Technology Center," and "Industrial Internet Development Demonstration Enterprise (Benchmark Factory Category)."

Guided by its mission to "Drive Smart Industry, Co-create a Green Future," Veichi will continue to intensify R&D and advance into high-performance, high-reliability fields to propel global progress.

**2005**
- Start of business in Shenzhen
- First generation of AC drive launched

**2016**
- Suzhou VEICHI Phase I put into operation
- First-generation motion control system successfully launched

**2019**
- Restructured into a joint-stock company
- VEICHI overseas subsidiary established, marking the start of global expansion

**2020**
- Listed on the Science and Technology Innovation Board (STAR Market)
- Recognized as a provincial SRDI "Little Giant" enterprise

**2021**
- VEICHI-controlled subsidiary established, enhancing industrial chain integration
- Recognized as a SRDI "Little Giant" enterprise

**2022**
- Xi'an R&D Center established
- VEICHI Digital Energy subsidiary founded, digitalizing the green energy
  Integrated power solutions for humanoid/ collaborative/mobile robots launched, initiating deployment in the robotics sector

**2023**
- Suzhou VEICHI Phase II put into operation
- VEICHI Medical Equipment subsidiary established, expanding into the healthcare sector

**2024**
- Strategic acquisition of Changzhou Jiteng, entering the port and marine sector
- “One Core, Two New Drivers” development strategy adopted

**2025**
- Suzhou VEICHI Phase III digital production base put into operation
- Changzhou high-end electrical equipment production base topped out
- Jiujiang smart production base groundbreaking ceremony held





# SOLAR PUMP INVERTER


In the context of intensifying world energy crisis, Veichi Electric launched the SI series of photovoltaic water pumps in line with new energy and sustainable development concepts, and they have gained a good reputation both at home and abroad so far. The SI series of photovoltaic water pumping systems are used to provide clean water resources in remote areas short of electric power facilities. The controller converts the DC power from the photovoltaic array into AC power and drives various water pumps so on sunny days, the SI series PV water pumping system can continuously pump water (the water source can be natural or special, such as rivers, lakes, wells or waterways, etc.).

# Intelligent Agriculture IOT System

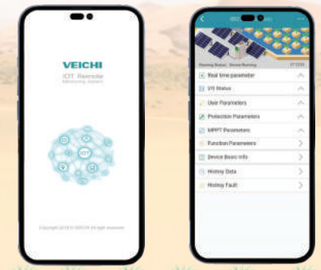
SI30 series

SI23 series

SI21 series

SIV series

Smart Solar Pump Inverter



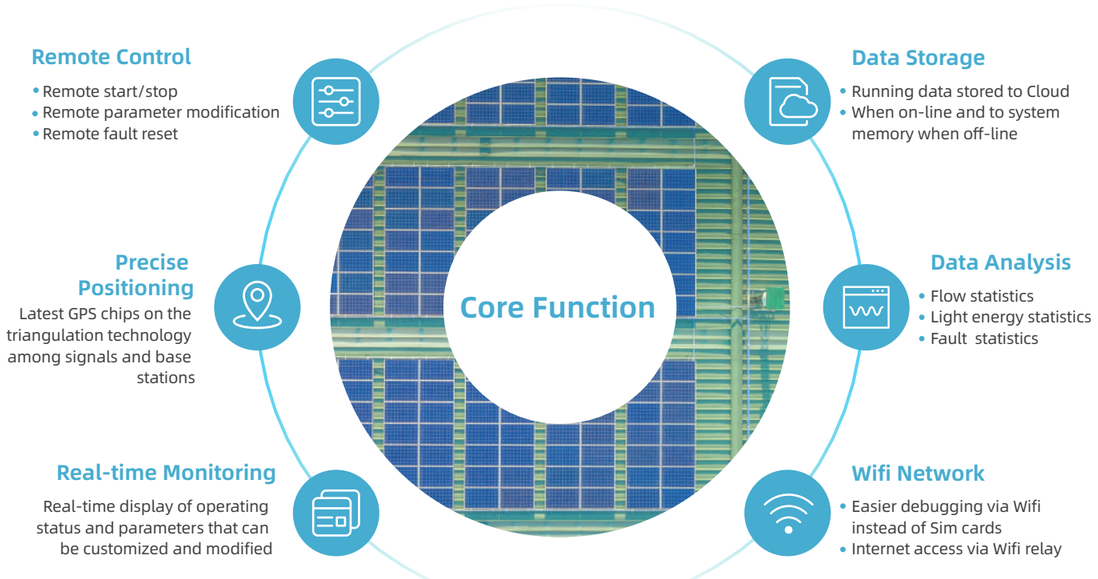
Website/Mobile APP Access

Lift pump

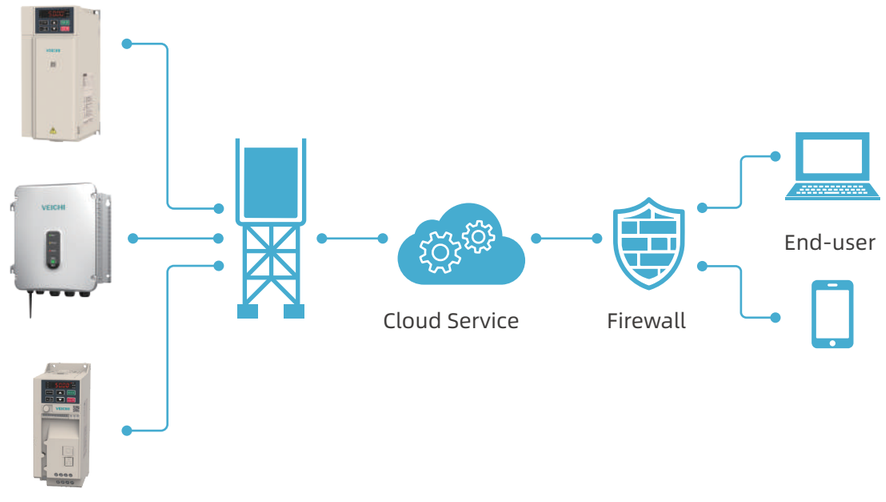
Solar panel

Submersible pump

## Core Functions of IOT Products and System




## Topological Graph of GPRS and Cloud Platform







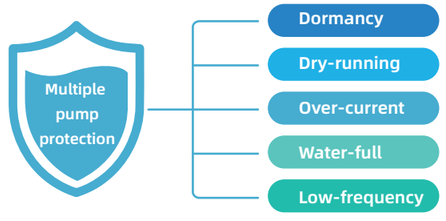

# SI30 Series Solar Pump Inverter

IP65 High Protection | One Key Start/Stop | Smart IOT


## Product Features

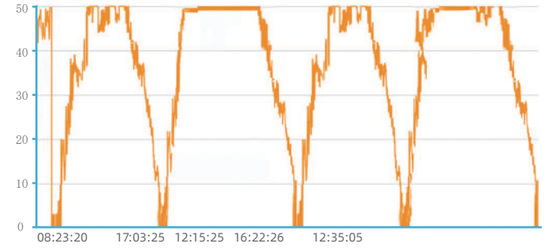
### Multiple Pump Protections

- When the sunshine change, the solar panel output DC voltage is too low, the controller enters the dormant protection and alerts A.LPn .
- When running frequency too low, the controller will enter the low frequency protection and alert A.LFr; because the low frequency influence the pump cooling .
- When the inverter detects the output current is too low, the pump is prevented from running, automatically enters the dry-running and alerts A.LuT .
- When the running current is greater than the set threshold, the controller will automatically enter the overcurrent protection and alert the A.oLd .
- Through the terminal control and the liquid level sensor, the inverter can control the start and stop of the water pump according to the liquid level of the water tank .




### Unattended, Automatic Operation, Remote Monitoring

- Unattended:After the system is installed, there is no need for personnel to be on duty.
- Automatic Operation:One key Start, inverter will automatically adjust the output frequency according to weather conditions, and upload fault alarm to IOT platform .
- Remote monitoring & control:Adjust operating parameters, handle and reset the fault remotely .



## Adapt To Various Types Of Pumps

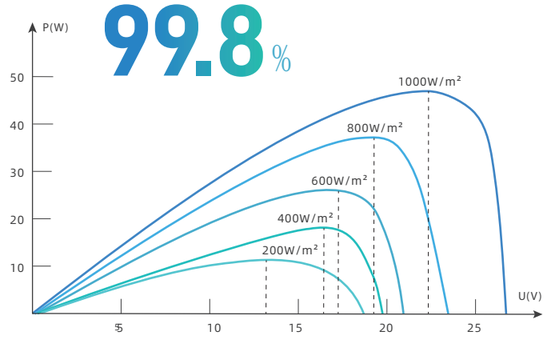
- AC Pumps：One key start/stop.
- PM synchronous pumps：Vector control, accurate Self -tuning of stator parameters .
- Single Phase: Single-phase/three-phase quick setting, simple operation .

## Hige-efficient MPPT

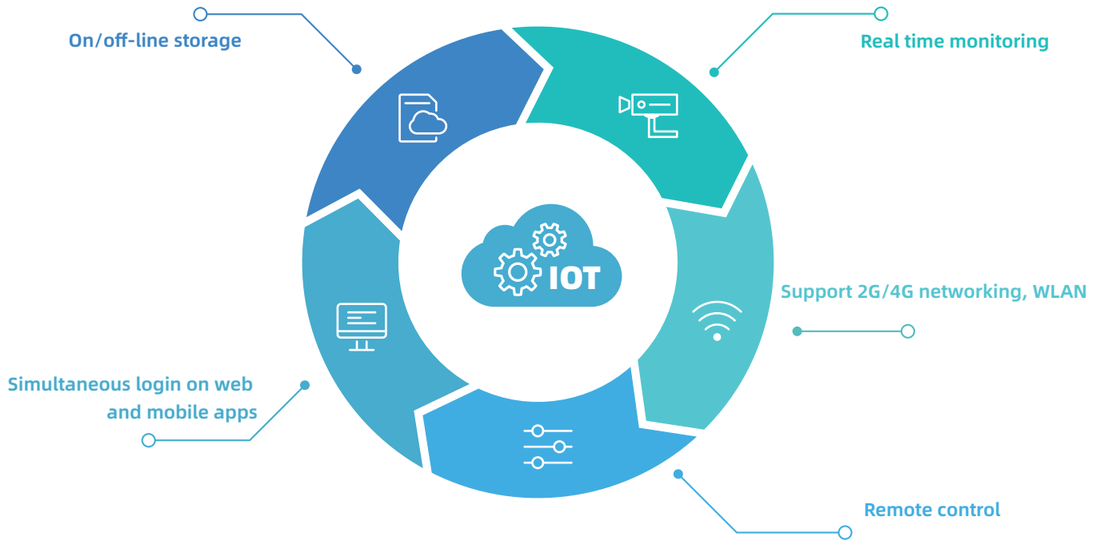
The software can quickly detect changes in bus voltage and then ensure the maximum output power of Solar panels when sunlight and temperature change .

MPPT efficiency up to:

**99.8%**




## Smart IOT Platform

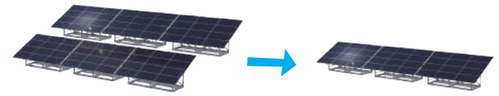



## Comply With Multiple International Standards Certification

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

## Voltage boost function

The voltage boost function on SI30 series minimizes the number of PV panels.



## IP65 High Protection Level

Integral aluminum shell, up to:

**25** years
of service life .

Overall protection:

**IP65**
waterproof display with one-key .
start and stop, safe and reliable waterproof connector .


## SI30 Series Naming Rules

**SI30 - D5 - 004G - R**

Product Category
SI:stands for the solar pump inverter

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

Voltage Class
D1:155VDC, for three-phase and single-phase 110V AC synchronous, asynchronous, single-phase and BLDC pumps.
D3:311V DC, for three-phase and single-phase 220V AC synchronous, asynchronous, single-phase and BLDC pumps.
D5:540VDC, for three-phase and single-phase 380~460V AC synchronous and asynchronous pumps.

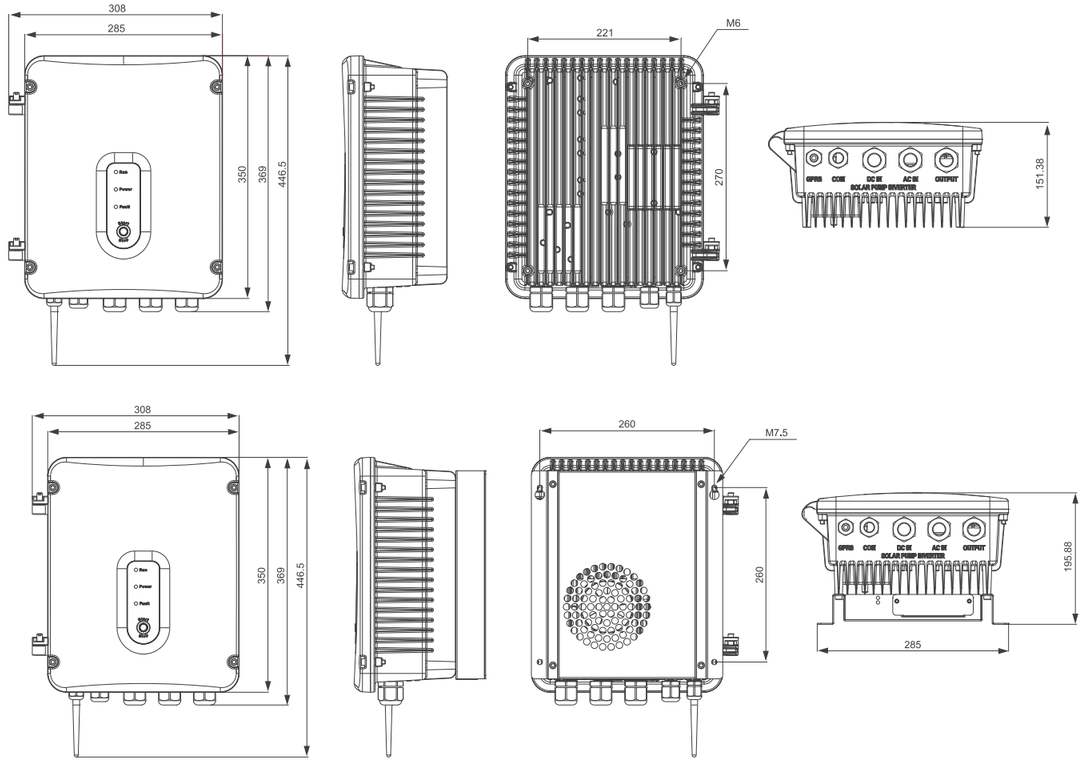
Rated Output Power
R75G=0.75KW
1R5G=1.5KW
004G=4KW
011G=11KW

Suffix
“R” stands for rectifier module
“I” stands for IOT module(optional)

## Technical Specification

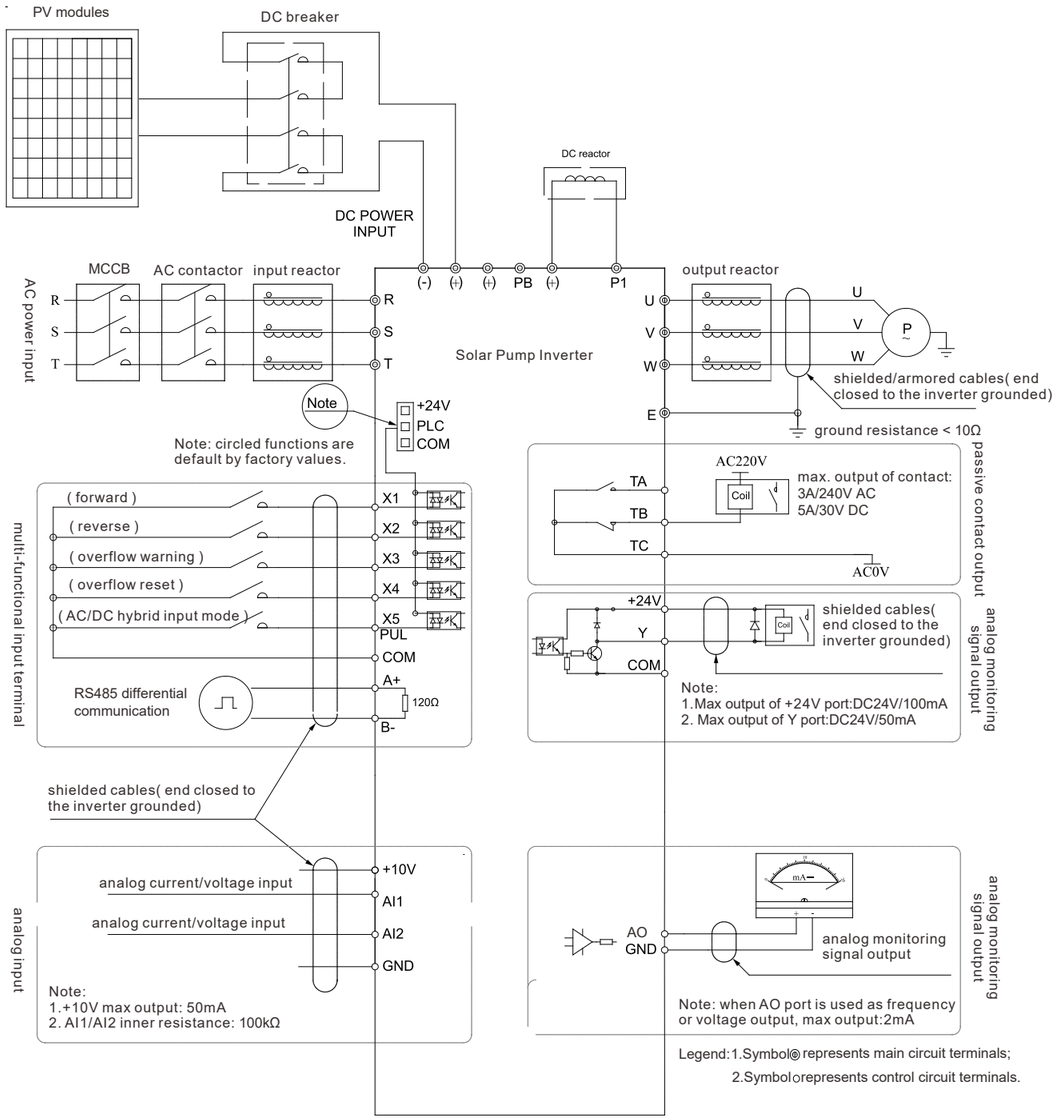
| MODEL | | D1 | D3 | D5 |
|---|---|---|---|---|
| | | | **PV Input** | |
| Input voltage range | | 60~400V | 150~450V | 300~850V |
| Recommended Voc voltage | | 175~380V | 360~430V | 620~750V |
| Maximum MPPT efficiency | | up to 99.8% | up to 99.8% | up to 99.8% |
| | | | **AC Input** | |
| Input voltage range | | 1PH 110V | 1PH 220~240V | 3PH 380~480V |
| Input voltage frequency | | 50/60Hz | 50/60Hz | 50/60Hz |
| | | | **Output** | |
| Output voltage range | | 110~230V | 150~230V | 230~460V |
| Output frequency range | | 0~599Hz | 0~599Hz | 0~599Hz |
| Output power range | | 0.75~1.5kW | 0.75~2.2kW | 0.75~11kW |
| **Power** | | **Rated output current** | | |
| 0.75kW | | 7A | 4A | 2.5A |
| 1.5kW | | 10A | 7A | 3.7A |
| 2.2kW | | - | 10A | 5A |
| 4kW | | - | - | 10A |
| 5.5kW | | - | - | 13A |
| 7.5kW | | - | - | 17A |
| 11kW | | - | - | 25A |
| | | | **Control Performance** | |
| Motor type | | Asynchronous motor, 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 | | IP65 | | |
| 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 | √ | √ | √ |

## SI30 Solar Pump Inverter Dimension



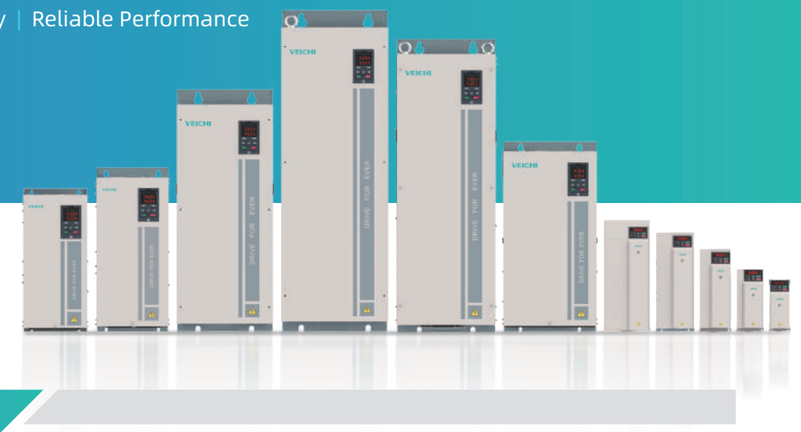

| Inverter Model | Dimension(mm) | | | Installation dimension(mm) | | Aperture Size |
|---|---|---|---|---|---|---|
| | W | H | D | W1 | H1 | |
| SI30-D1-R75G-R | 308 | 446.5 | 151.38 | 221 | 270 | M6 |
| SI30-D1-1R5G-R | | | | | | |
| SI30-D3-R75G-R | | | | | | |
| SI30-D3-1R5G-R | | | | | | |
| SI30-D3-2R2G-R | | | | | | |
| SI30-D5-R75G-R | | | | | | |
| SI30-D5-1R5G-R | | | | | | |
| SI30-D5-2R2G-R | | | | | | |
| SI30-D5-004G-R | | | | | | |
| SI30-D5-5R5G-R | 308 | 446.5 | 195.88 | 260 | 260 | M7.5 |
| SI30-D5-7R5G-R | | | | | | |
| SI30-D5-011G-R | | | | | | |

## SI30 Series Electric Wiring




# 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

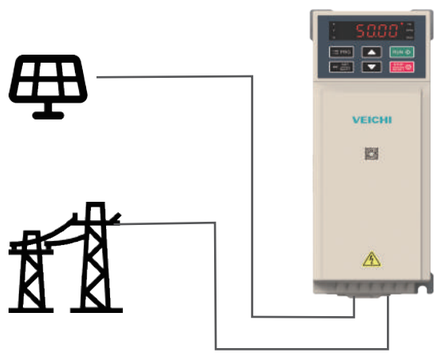
EN 61800/EN 61000/EN IEC 61000
IEC 61683/IEC 62109~1/IEC62109-2

## 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 .

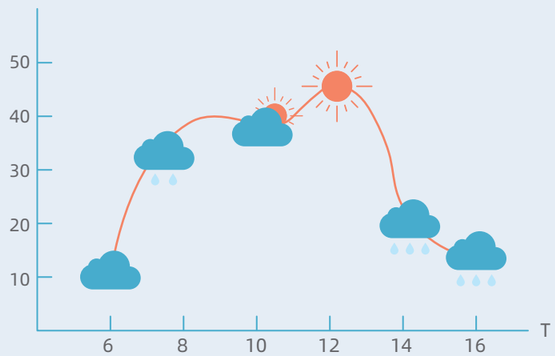



## Smart IOT

- 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

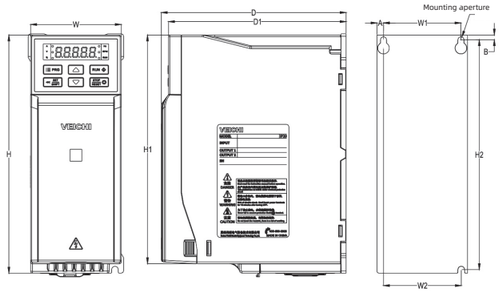
**Rated Power**
R75G=0.75KW
1R5G=1.5KW
004G=4KW
011G=11KW

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

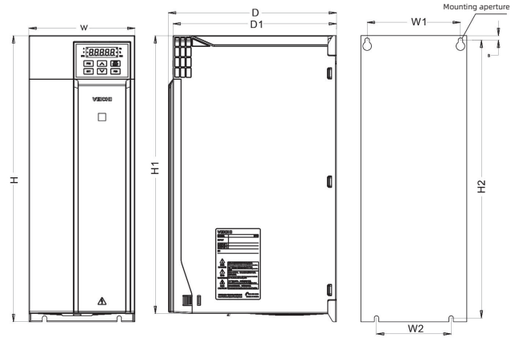
## Technical Specification

| 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<br>Permanent magnet synchronous motor<br>Synchronous reluctance motor | Asynchronous motors<br>Permanent magnet synchronous motor<br>Synchronous reluctance motor | Single phase motor | Asynchronous motors<br>Permanent magnet synchronous motor<br>Synchronous reluctance motor | Asynchronous motors<br>Permanent magnet synchronous motor<br>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

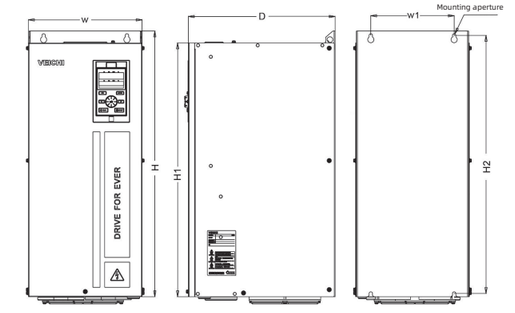



| Model | Overall dimension(mm) | | | | | Installation dimension(mm) | | | | | Installation aperture |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | W | H | H1 | D | D1 | W1 | W2 | H2 | A | B | |
| SI23-D1-R75G-A<br>SI23-D1-1R5G-A<br>SI23-D3-R75G-A<br>SI23-D3-1R5G-A<br>SI23-SS2-R75G-A<br>SI23-D5-R75G-A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



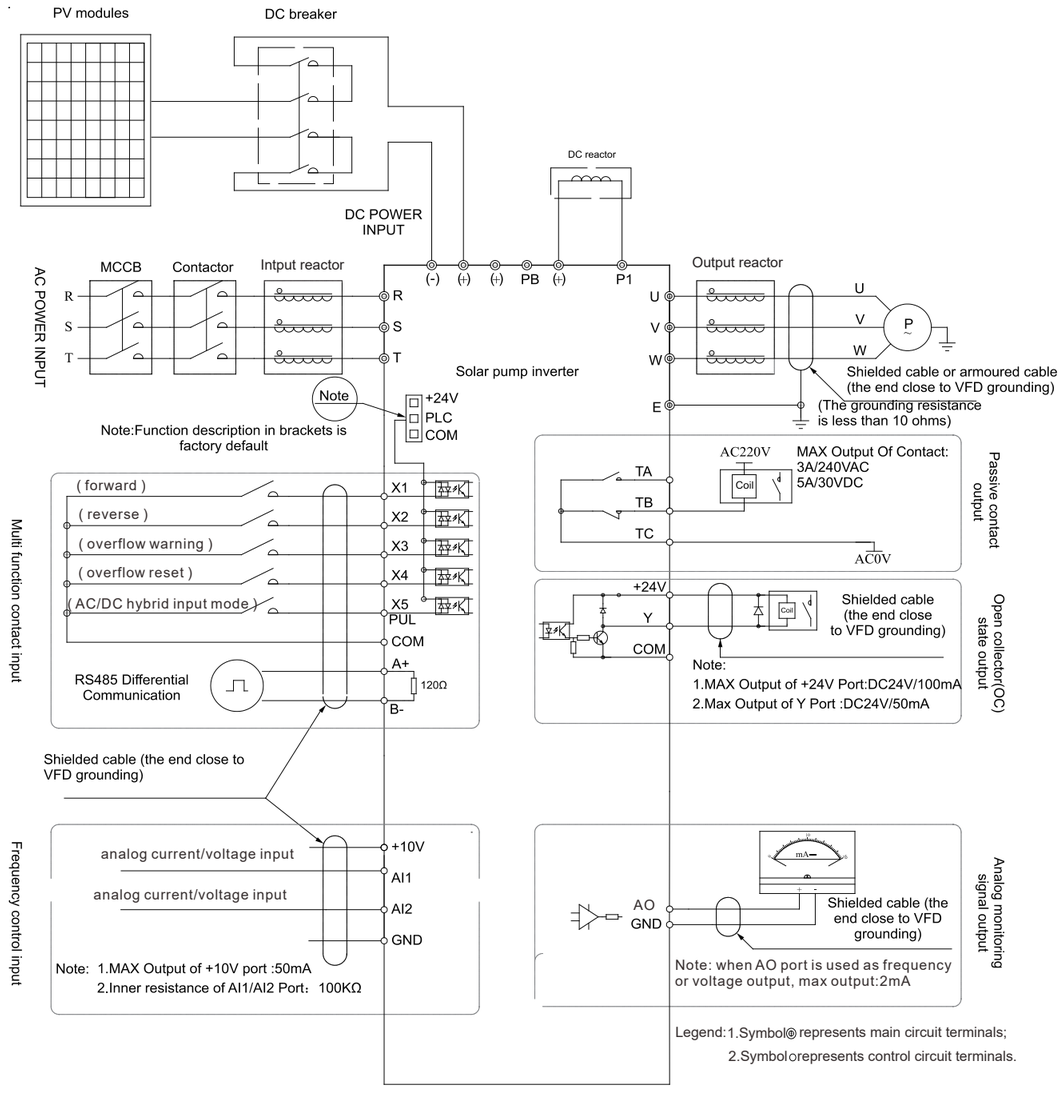

| Model | Overall dimension(mm) | | | | | Installation dimension(mm) | | | | | Installation aperture |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | W | H | H1 | D | D1 | W1 | W2 | H2 | A | B | |
| SI23-D3-7R5G-A<br>SI23-D3-011G-A<br>SI23-SS2-7R5G-A<br>SI23-D5-015G-A<br>SI23-D5-018G-A<br>SI23-D5-022G-A | 142 | 383 | 372 | 225 | 219 | 125 | 100 | 372 | 6 | | M5 |
| SI23-D3-015G-A<br>SI23-D3-018G-A<br>SI23-D3-022G-A<br>SI23-D5-030G-A<br>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<br>SI23-D3-037G-A<br>SI23-D3-045G-A<br>SI23-T3-045G-A<br>SI23-T3-055G-A<br>SI23-T3-075G-A | 240 | 560 | 535 | 310 | 176 | 544 | M6 |
| SI23-D3-055G-A<br>SI23-T3-090G-A<br>SI23-T3-110G-A | 270 | 638 | 580 | 350 | 195 | 615 | M8 |
| SI23-T3-132G-A<br>SI23-T3-160G-A | 350 | 738 | 680 | 405 | 220 | 715 | M8 |
| SI23-T3-185G-A<br>SI23-T3-200G-A | 360 | 940 | 850 | 480 | 200 | 914 | M16 |

## Standard Wiring Diagram




Note: When connect solar panel, both ACinput (R, T) and DCinput (+, -) is okay, ACinput is prefer.





# SI21 Series
# Solar Pump Inverter

Mini | Economic


## Product Features

### Flexible & Various Installation

- MINI & Various installation methods

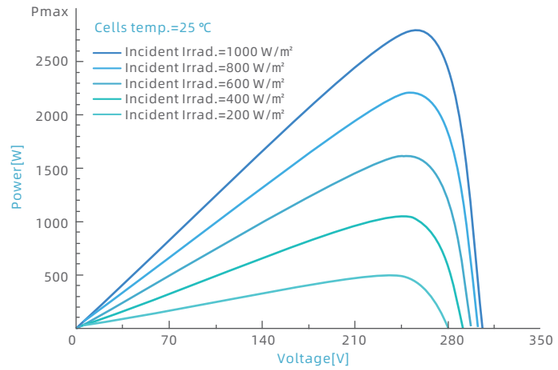
Side by side installation, no need to reserve clearance

Rail mounting, plug into it then use it

Side mounting, sideways installation if vertical space is not compatible

### MPPT Technology

- Whole voltage range .
- Efficiency up to 99.8% .



## Advanced Technology

- Suitable for asynchronous motors, permanent magnet synchronous motors, synchronous reluctance motors.
- Smooth operation, energy saving and high efficiency

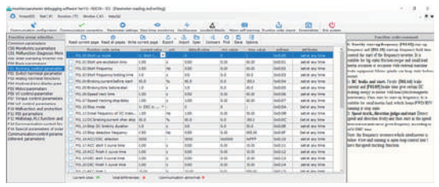
Synchronous reluctance motors

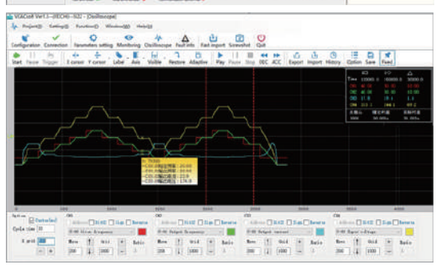
Permanent magnet synchronous motors

Asynchronous motors

## Functional PC Monitor Software

- Parameters monitoring & Settings .
- Virtual oscilloscope .





## Naming Rules of SI21 Series Model

**SI21 - D1 - 1R5G - A**

**Product category**
SI:stands for the solar pump inverter

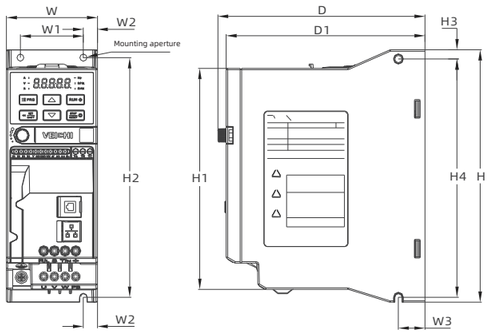
**Product series**
Different series are represented by different two-digit numbers

**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

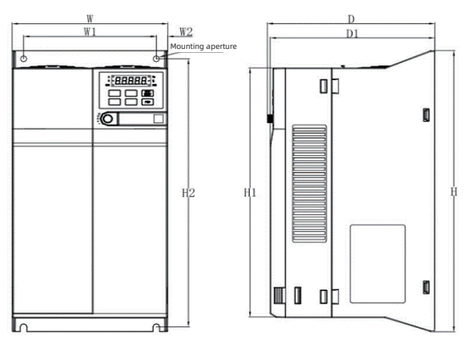
**Suffix**
"A" for VEICHI
Non-A for neutral brand

**Rated output power**
R75G=0.75KW
1R5G=1.5KW
004G=4KW

## Dimension of SI21 Solar Pump Inverter




| Model | Dimensions (mm) | | | | | Installation size (mm) | | | | | | Mounting aperture |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W | H | H1 | D | D1 | W1 | W2 | H2 | W3 | H3 | H4 | |
| SI21-D1-R75G-A | 65 | 177 | 155 | 148 | 142 | 45 | 10 | 168 | 19 | 6.5 | 167 | 3-M4 |
| SI21-D3-R75G-A | | | | | | | | | | | | |
| SI21-D3-1R5G-A | | | | | | | | | | | | |
| SI21-D5-R75G-A | | | | | | | | | | | | |
| SI21-D5-1R5G-A | | | | | | | | | | | | |
| SI21-D5-2R2G-A | | | | | | | | | | | | |
| SI21-D1-1R5G-A | 75 | 202 | 180 | 163 | 157 | 55 | 10 | 193 | 19 | 6.5 | 192 | 3-M4 |
| SI21-D3-2R2G-A | | | | | | | | | | | | |
| SI21-D5-004G-A | | | | | | | | | | | | |
| SI21-D5-5R5G-A | | | | | | | | | | | | |



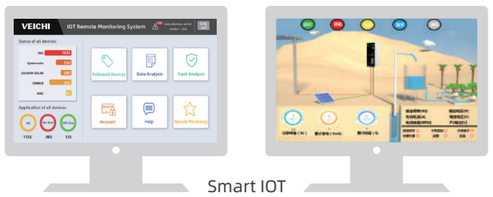

| Model | Dimensions (mm) | | | | | Installation size (mm) | | | | | | Mounting aperture |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W | H | H1 | D | D1 | W1 | W2 | H2 | W3 | H3 | H4 | |
| SI21-D5-7R5G-A | 130 | 320 | 286 | 161 | 158 | 105 | 12.5 | 302 | - | - | - | M5 |
| SI21-D5-011G-A | | | | | | | | | | | | |
| SI21-D5-015G-A | 170 | 342.5 | 303.5 | 183 | 180 | 145 | 12.5 | 326.5 | - | - | - | M5 |
| SI21-D5-018G-A | | | | | | | | | | | | |
| SI21-D5-022G-A | | | | | | | | | | | | |

## Various Specific Functions

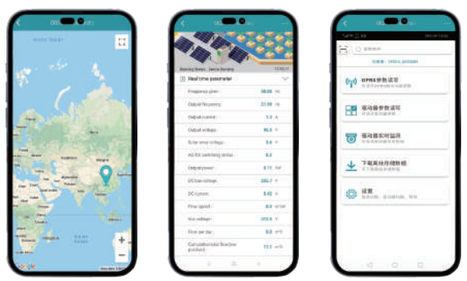
- One-key operation .
- Dormancy、dry run、low speed、minimum power、pump over current .
- Water fulfilled、output power limit、PQ curve、pump clean 、constant pressure control .

| | |
|---|---|
| 01. Dry Run | 06. Dormancy |
| 02. Low Speed | 07. PQ Curve |
| 03. Pump Over Current | 08. Pump Clean |
| 04. Minimum Power | 09. Water Fulfilled |
| 05. Constant Pressure Control | 10. One-key Operation |

## Intelligent IOT




Smart IOT



Various Mobile Applications

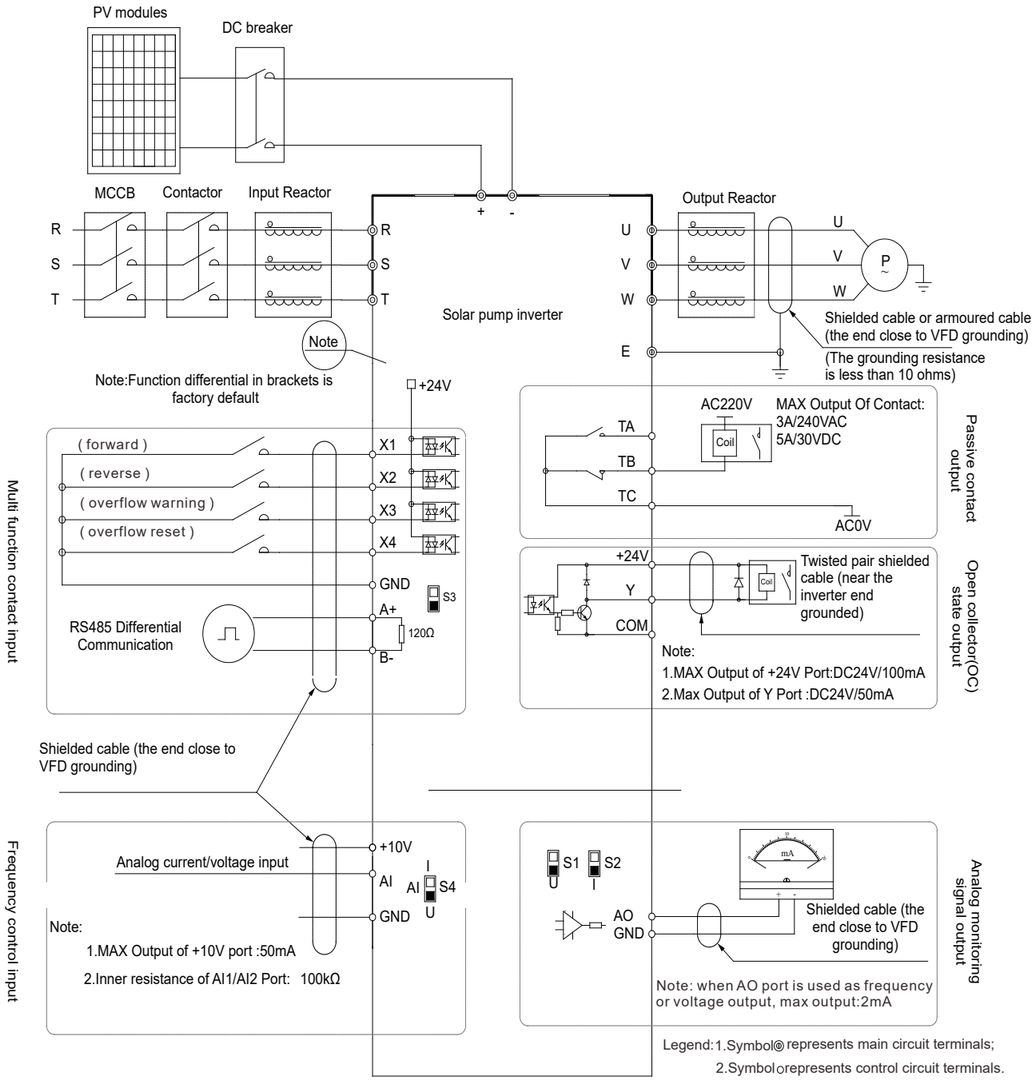
## Technical Specification

| MODEL | D1 | D3 | D5 |
|---|---|---|---|
| | | **PV Input** | |
| Input voltage range | 60~400V | 150~450V | 250~780V |
| Recommended Voc voltage | 175~380V | 360~430V | 620~750V |
| Maximum MPPT efficiency | up to 99.8% | up to 99.8% | up to 99.8% |
| | | **AC Input** | |
| Input voltage range | 1PH/3PH 110V | 1PH/3PH 220~240V | 3PH 380~480V |
| Input voltage frequency | 50/60Hz | 50/60Hz | 50/60Hz |
| | | **Output** | |
| Output voltage range | 110~230V | 150~230V | 230~460V |
| Output frequency range | 0~599Hz | 0~599Hz | 0~599Hz |
| Output power range | 0.75~1.5kW | 0.75~2.2kW | 0.75~22kW |
| **Power** | | **Rated output current** | |
| 0.75kW | 7A | 4A | 3A |
| 1.5kW | 10A | 7A | 4A |
| 2.2kW | - | 10A | 5A |
| 4kW | - | - | 9.5A |
| 5.5kW | - | - | 13A |
| 7.5kW | - | - | 17A |
| 11kW | - | - | 25A |
| 15kW | - | - | 32A |
| 18.5kW | - | - | 38A |
| 22kW | - | - | 45A |

| | | |
|---|---|---|
| | **Control Performance** | |
| Motor type | Asynchronous motor, 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 | √ | √ | √ |
| | Dry run | √ | √ | √ |
| | Min. power | √ | √ | √ |
| | Overflow | √ | √ | √ |
| | Sleep protection | √ | √ | √ |

## Solar Pump Inverter Standard Wiring Diagram



# BLDC pumping system

Photovoltaic pump specific | Plug and play | IP55


## Product Features

### Household PV Water Pump Inverter

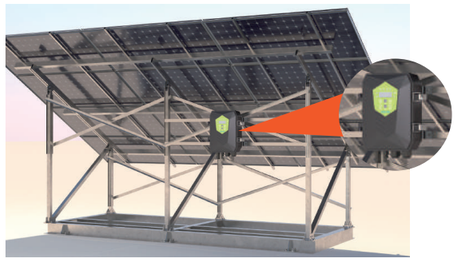
Designed for household use， and applied to screw pumps, plastic impeller pumps, stainless steel impeller pumps, ground pumps and more.

### Plug and play, friendly interface

- Real-time working status, output power, output voltage, current, pump speed ect are displayed on the LED screen for full control;
- Simple installation with easy plug-and-play function saves complicated and cumbersome wiring.

### Protection class：IP55

The SIV series has a high protection class and can be mounted on PV panel supports.



### Cost Saving

The cost of the SIV series inverters and the pumps is approximately the same as the price of a conventional inverter.


## Technical Specification



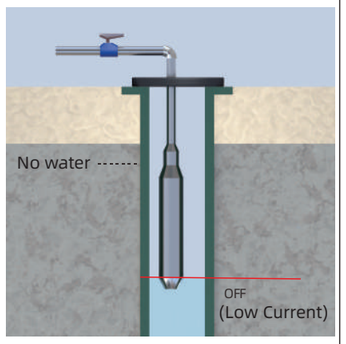


| Photovoltaic pump | Screw pump | Plastic impeller pump | Stainless steel impeller pump | Surface pump |
|---|---|---|---|---|
| Size(inch) | 3 | 3/4 | 3/4/6 | 1/2(outlet) |
| Max.flow($m^2$/h) | 2.2 | 20 | 40 | 45 |
| Max.range(m) | 180 | 195 | 203 | 65 |
| Voltage(V) | 24/48/72 | 24/48/72/110 | 24/48/72/110 | 24/48/72/110 |
| Power(W) | 80~1100 | 200~1500 | 300~1500 | 210~1500 |

## Exclusive Solutions For Water Pump Applications

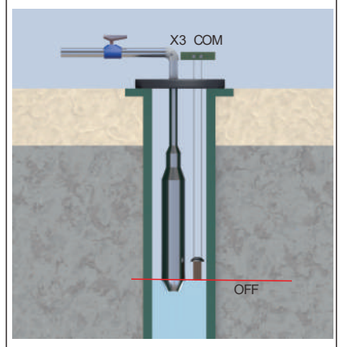
### Dry running protection(No sensor)

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



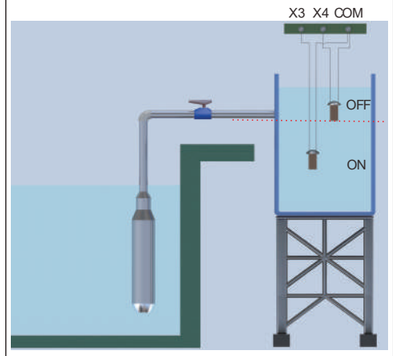

### Dry running protection(One sensor)

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



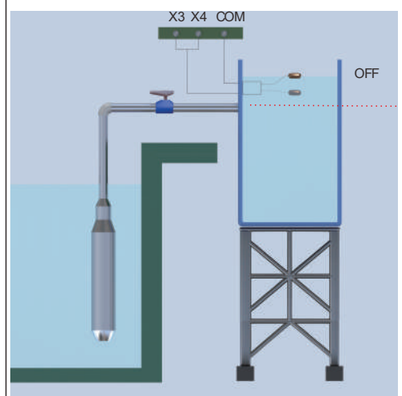

### Water fulfil protection(Dual level sensor)

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



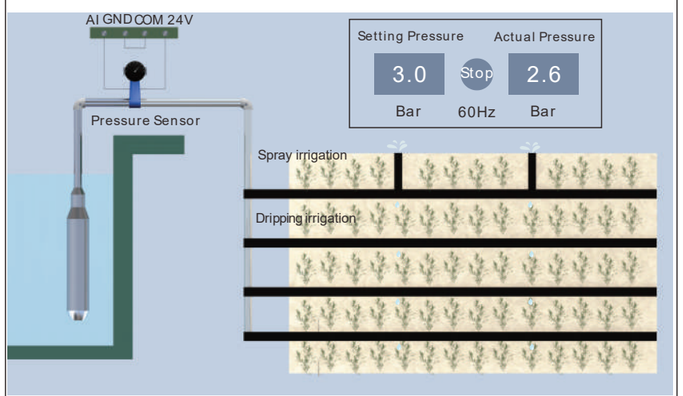

### Water fulfil protection(Float switch)

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

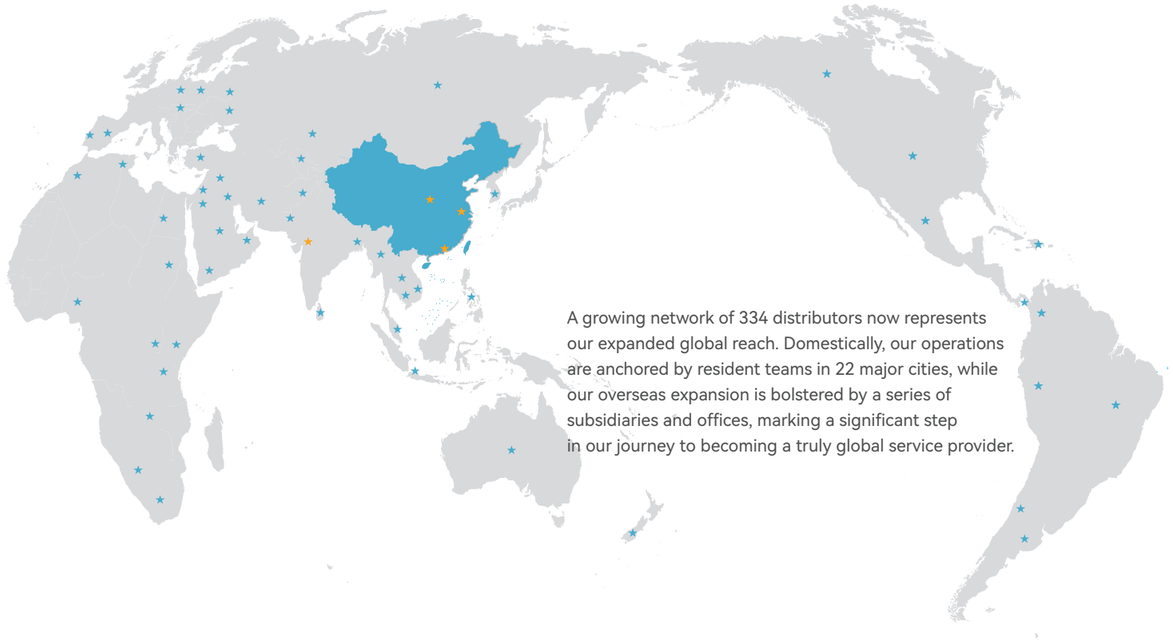



### Constant pressure irrigation solution

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