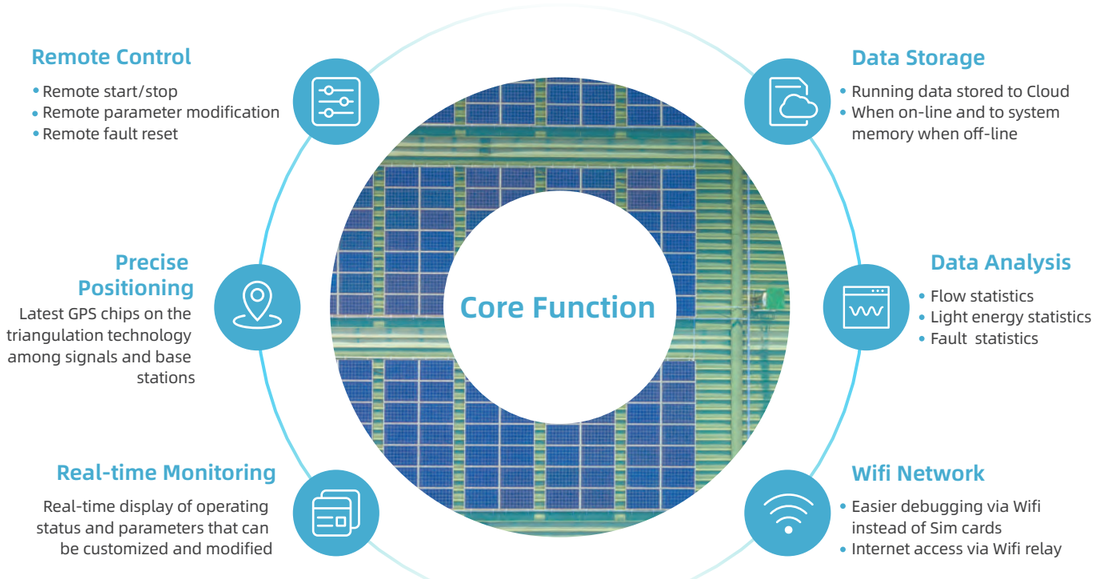
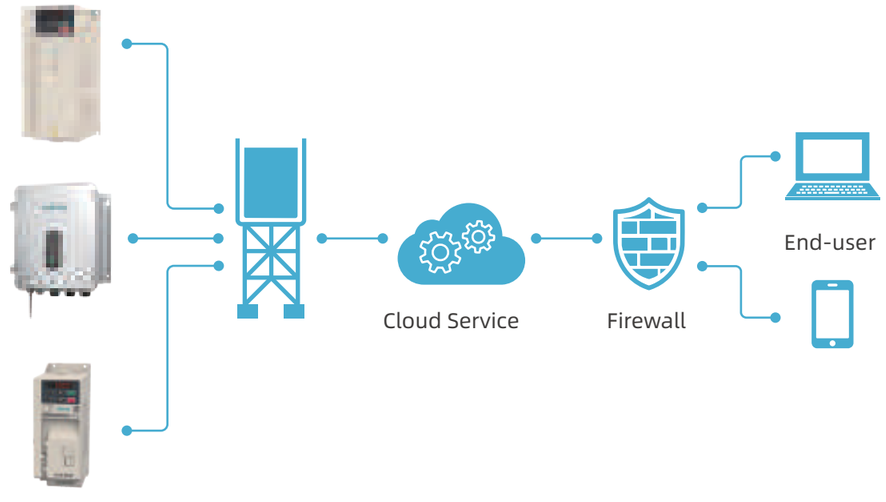
Core Functions of IOT Products and System



Topological Graph of GPRS and Cloud Platform



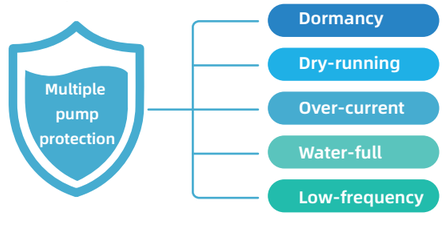
SI30 Series Solar Pump Inverter

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

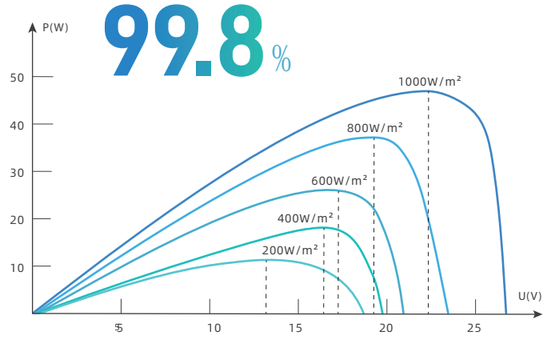
- AC Pumps：One key start/stop.
- PM synchronous pumps：Vector control, accurate Self -tuning of stator parameters .
- Single Phase: Single-phase/three-phase quick setting, simple operation .

Hige-efficient MPPT

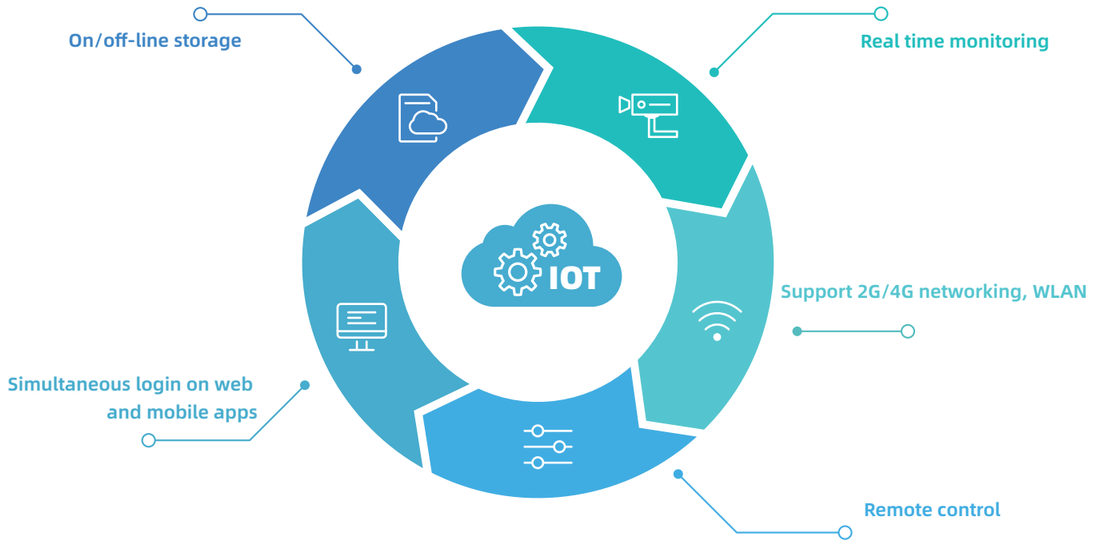
The software can quickly detect changes in bus voltage and then ensure the maximum output power of Solar panels when sunlight and temperature change .

MPPT efficiency up to:

99.8%



Smart IOT Platform

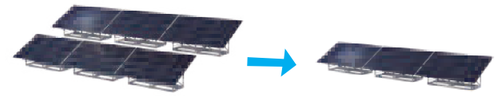


Comply With Multiple International Standards Certification

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.

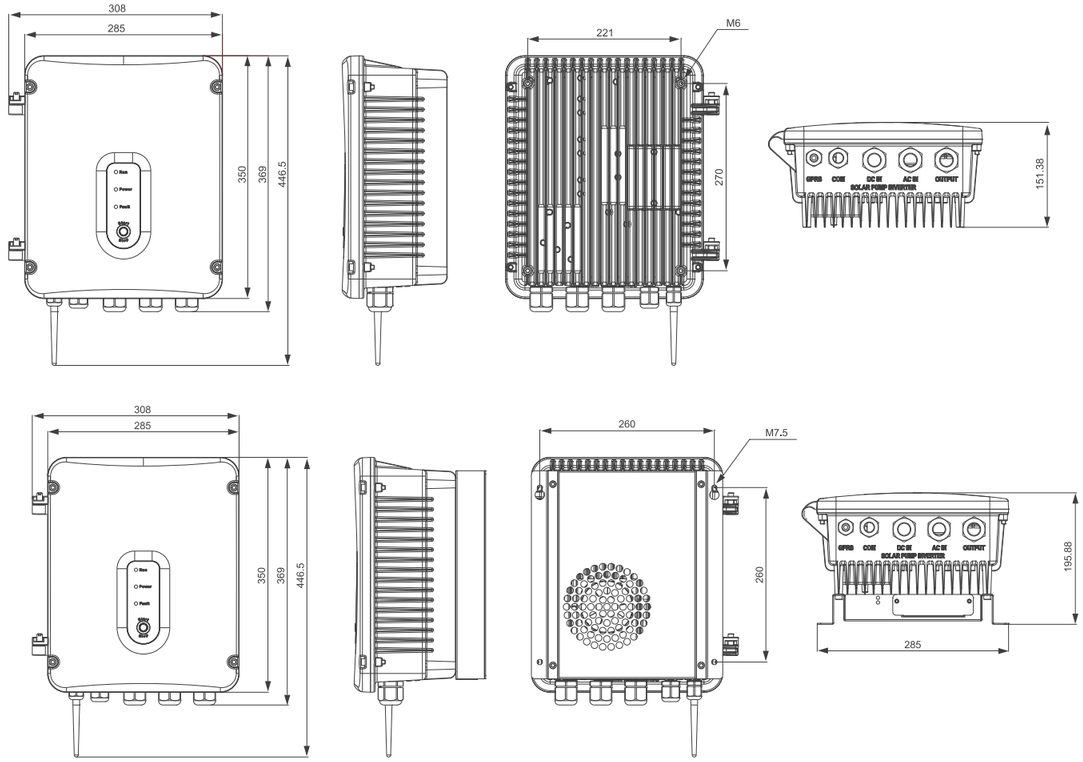
Rated Output Power
R75G=0.75KW
1R5G=1.5KW
004G=4KW
011G=11KW

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	0~600Hz	0~600Hz	0~600Hz
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						