

SPI100 / SP1200

Solar pump inverter

☐☐☐☐ Functions Introduction



Shenzhen ADA Power Electronics Co., Limited

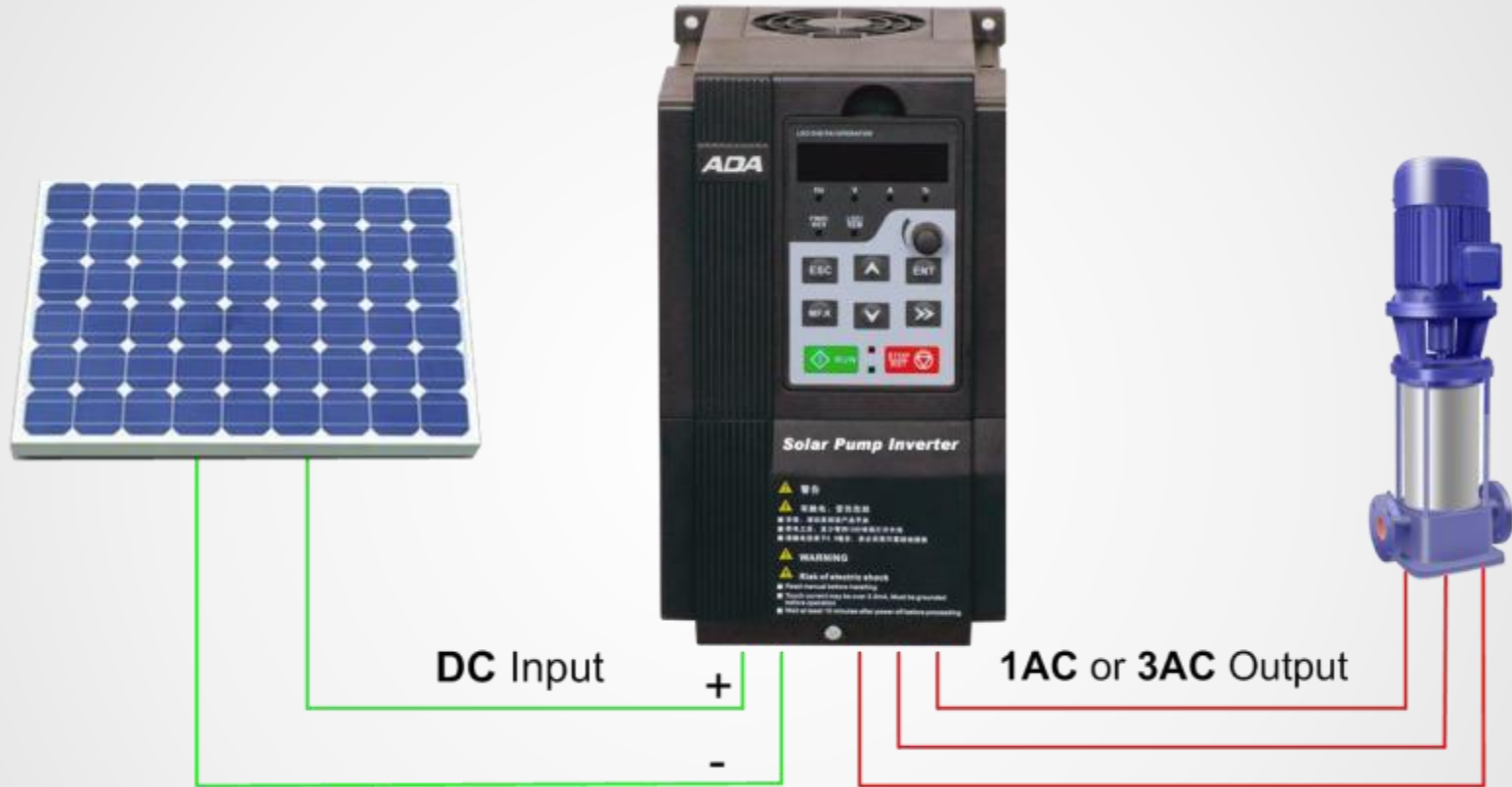
About ADA

- Professional designer and manufacturer of solar pump inverter
- Professional solution and system provider of solar pumping system
- National High-tech enterprise
- Top exporter of solar pumping system
- Full range products have achieved CE approval
- With independent software copyright



Solar Pumping system

◆ Wiring



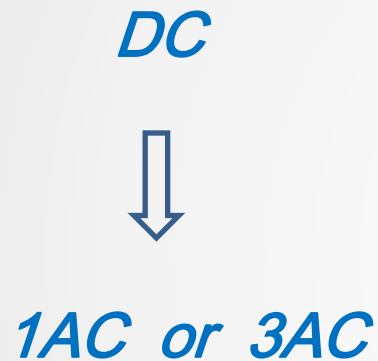
◆ System Members: Solar Panels, Solar Pump Inverter & Pump

Features of SPI100 / SPI200

MPPT

- ★ Build-in MPPT function
- ★ High efficiency
- ★ Optimized frequency output

Features of SPI100 / SPI200



- ★ Solar energy to AC power
- ★ Output 1AC or 3AC

Features of SPI100 / SPI200

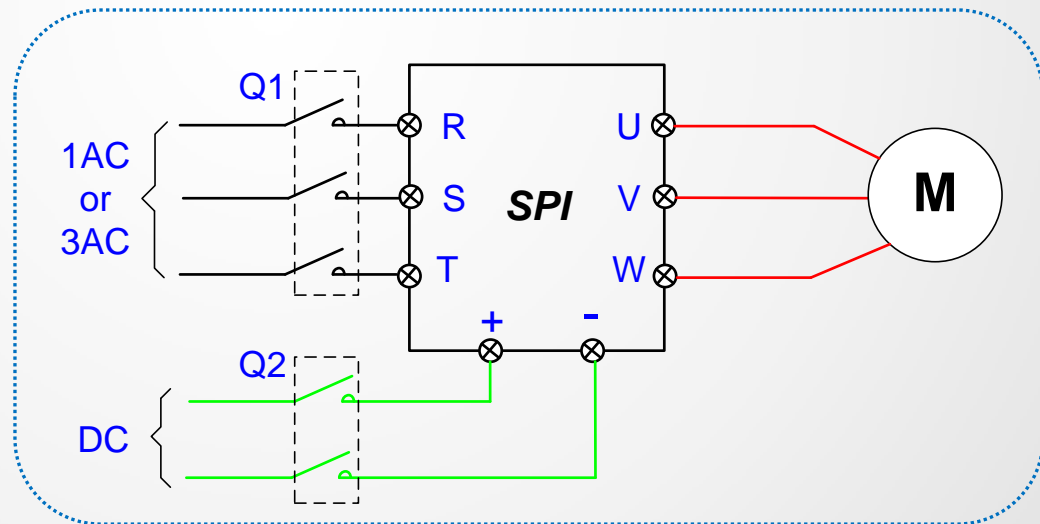
*Flexible
system
design*

- ★ Minimized solar panel solution
- ★ Off-grid power storage
- ★ GPRS based wireless monitoring & controlling

Features of SPI100 / SPI200

*Compatible
with both
DC & AC
input*

- ★ Humanism design
- ★ Compatible with both DC & AC input



Features of SPI100 / SPI200

Automatic control

- ★ Start in the morning automatically
- ★ Stop in the afternoon automatically
- ★ Dormancy and wake up automatically
- ★ Output speed change automatically

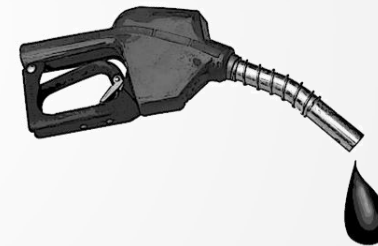
Features of SPI100 / SPI200



No staff care



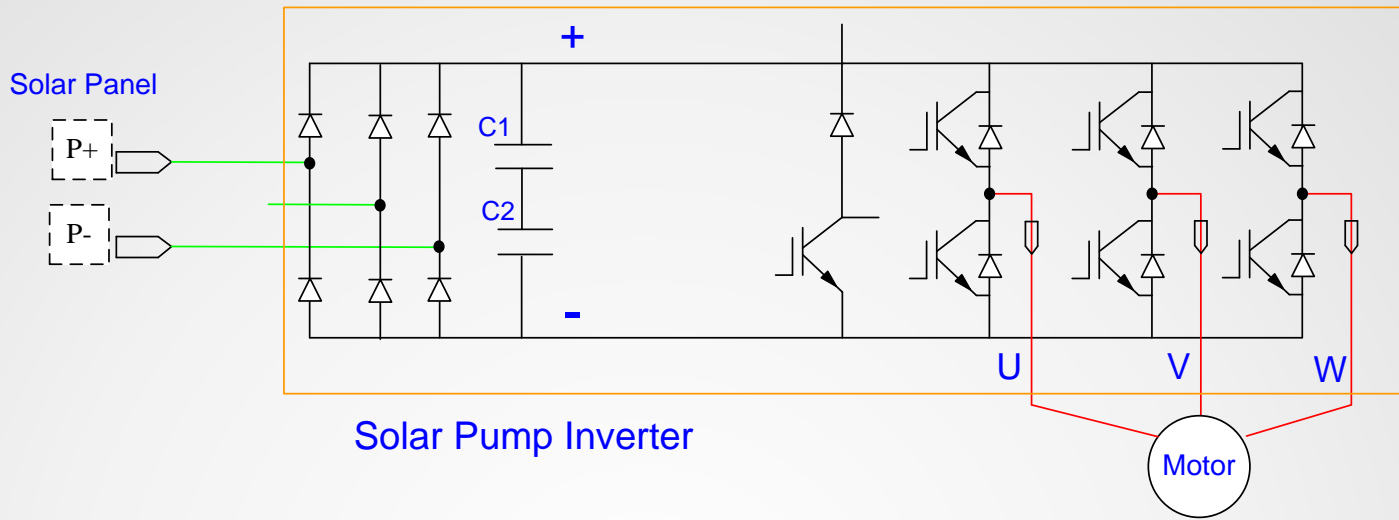
No diesel



No grid



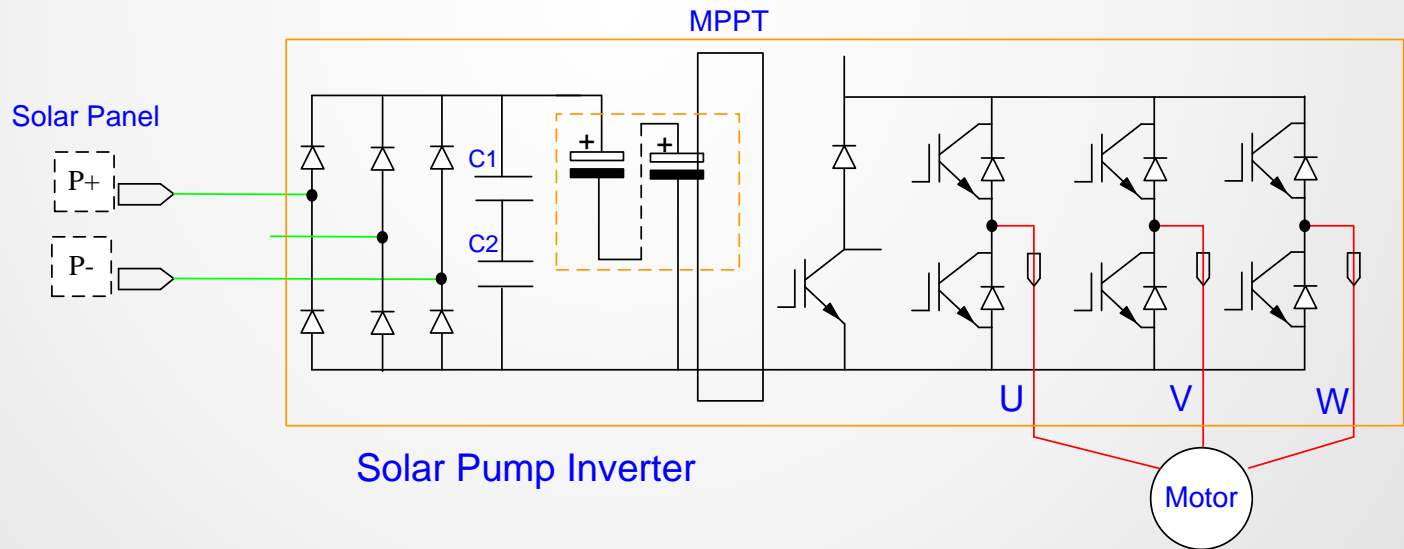
General Inverter



Solar Pump Inverter

VS

Solar Pump Inverter



Solar Pump Inverter

General Inverter

Hardwar: without MPPT circuit

Software: without MPPT function

Efficiency: low

Output frequency: fixed, no change

Problem: failure of under voltage always happen

VS

Solar Pump Inverter

Hardwar: built-in MPPT circuit

Software: build-in MPPT function

Efficiency: high

Output frequency: change automatically based on the sunshine strength

Problem: failure of under voltage will not happen

Specifications

Max input DC voltage	SPI100: 450VDC SPI200: 800VDC
Recommended MPPT voltage range	SPI100: 250~350VDC SPI200: 450~600VDC
Recommended input voltage	SPI100: 300~330VDC SPI200: 500~540VDC
Rated output voltage	1AC 220V & 3AC 220V / 380V
MPPT efficiency	99.9%
Max efficiency of the machine	97%
Output frequency range	0~600Hz
Protection degree	IP20
Altitude	Below 1000m; above 1000m, derated 1% for every additional 100m
Standard	CE

SPI100 Selection (standard)

Model	Output power (kW)	Max. DC input current (A)	Output current (A)
Single-phase 220V output			
SPI100-2S-0.2G	0.4	2.5	1.6
SPI100-2S-0.4G	0.4	4.5	2.5
SPI100-2S-0.7G	0.75	7.5	4.2
SPI100-2S-1.5G	1.5	10	7.5
SPI100-2S-2.2G	2.2	18	9.5
Three-phase 220V output			
SPI100-2T-0.2G	0.4	2.5	1.6
SPI100-2T-0.4G	0.4	4.5	2.5
SPI100-2T-0.7G	0.75	7.5	4.2
SPI100-2T-1.5G	1.5	10	7.5
SPI100-2T-2.2G	2.2	18	9.5

SPI200 Selection (standard)

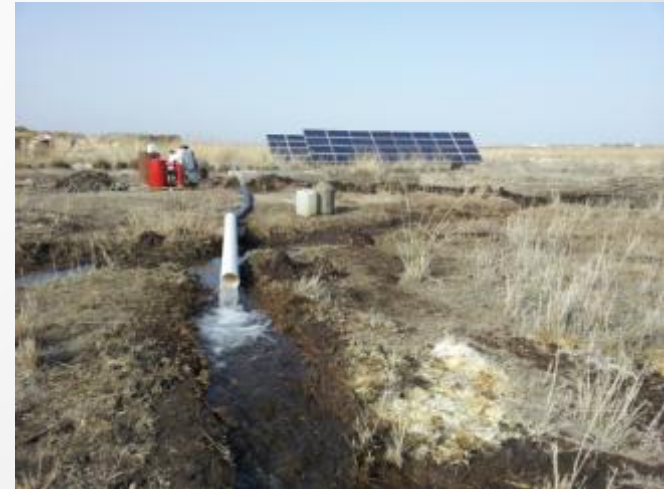
Model	Output power (kW)	Max. DC input current (A)	Output current (A)
Three-phase 380V output			
SPI200-4T-0.7G	0.75	4.5	2.5
SPI200-4T-1.5G	1.5	7.5	4.2
SPI200-4T-2.2G	2.2	10	5.5
SPI200-4T-4.0G	4.0	18	9.5
SPI200-4T-5.5G	5.5	20	13
SPI200-4T-7.5G	7.5	30	17
SPI200-4T-011G	11	40	25
SPI200-4T-015G	15	50	32
SPI200-4T-018G	18.5	60	37
SPI100-4T-022G	22	80	45
SPI100-4T-030G	30	100	60

Solar modules selection

item	Selection
Voltage	Recommended Value : SPI100 : 300 ~ 330VDC SPI200 : 500 ~ 540VDC
Power	Polysilicon :1.3 times of inverter rated power Amorphous silicon : same power of pump
PCS / String	SPI100 : 300 ~ 330V/ module voltage SPI200 : 500 ~ 540V/ module voltage
Total PCS	Total solar panel power / module power

Main application

Mainly used in the field of **agriculture, forestry, irrigation, desert control, grassland animal husbandry, urban water and so on.**



Case study



Case information: living water supply system in a factory.

Solar panel power rating: 2kW;

Submersible pump specifications: 1.5kW, 380V, 50Hz, 2800rpm, 4A.

Inverter: SPI200-4T-1R5G

ADA provides

1, Solar Pump Inverter

2, Solar Pumping System

(1), Solar Panels with good quality

(2), Pumps with different size

(3), Inverters of SPI100 and SPI200

System selection (necessary information)

Item	Information
Effective sunny time	Installation address/solar website
Water head	From the water level, vertical distance
Water request in one day	According to historical data or calculation
Working days in one year	To see how much money we can save per year
Pump power	According to water head and cubic
Inverter power	According to pump
Solar panel power	According to inverter and sunny time

Thanks

Thanks for your attention.

Warmly welcome to be our distributor and partner.



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