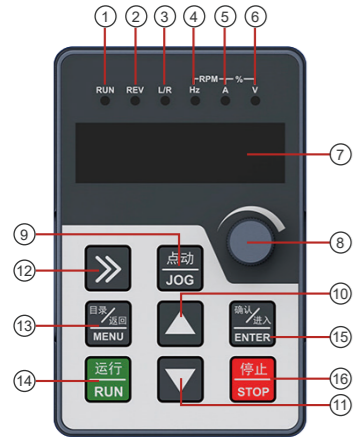# Solar Water Pump Inverter

PT100 Series (1.5-55KW)

Features

- Support single phase/three phase 220V, and three phase 380V solar water pump inverter, power from 1.5KW to 55KW.
- Simply connect the photovoltaic panel to the solar water pump inverter, and the PV pump can be automatically started after power-on.
- It has protection functions such as PV over-voltage protection, over-temperature automatic protect, etc., which can effectively extend the life of the product.
- Ensure solar power tracking efficiency can reach 99%.
- All series of products can realize automatic switching of PV DC input and grid AC input, which can meet 24 hours of no care work.
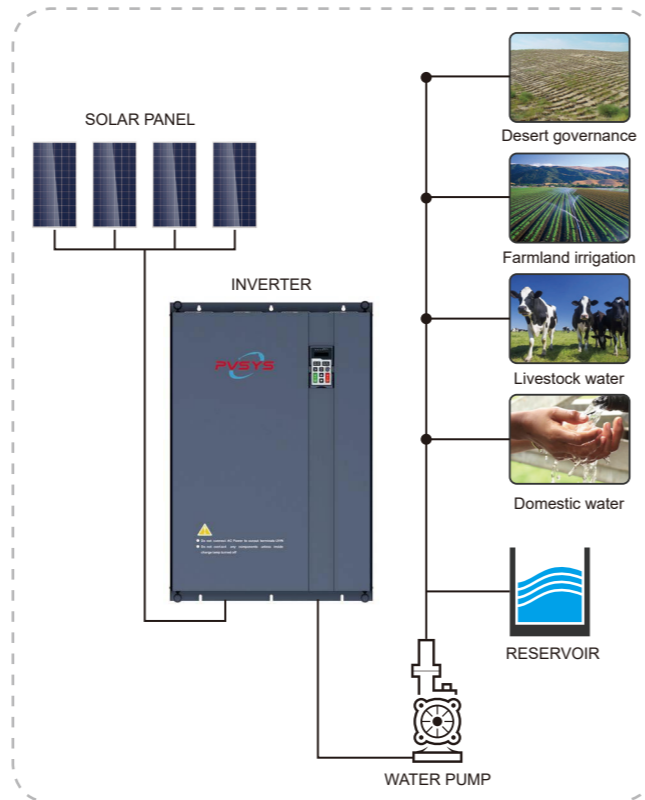- Supports IP20 grade cabinet solutions.

Introduction

PT100 series is PVSYS newly launches specially for solar pumping inverter applications. Based on the original solar pump inverter products, which optimizes the usability and performance, and extends applicable voltage levels and power range of the product. The voltage level can be applied to single phase/three phase 220V, three phase 380V pumps, power range from 1.5KW to 55KW.

Back panel printing description

1. Operating instructions
2. Reverse indication
3. Command source indication
4. Frequency indication
5. Current indication
6. Voltage indication
7. LED Display
8. Potentiometer
9. Jog command
10. Increment
11. Decrement
12. Shift key
13. Menu key
14. RUN
15. Enter/confirm
16. Stop/Reset

Solar system connection

SOLAR PANEL

INVERTER

Desert governance

Farmland irrigation

Livestock water

Domestic water

RESERVOIR

WATER PUMP

Specification

Functionality Description		PT100
TECHNICAL CONTROL PERFORMANCE	Control mode	SVC, V/F
	Motor type	Asynchronous motro
	Speed control accuracy	±0.5% (SVC)
	Starting torque	0.25Hz/150% (SVC)
	Torque boost	Automatic torque boost; manual torque boost 0.1%~30.0%
OPERATIONAL CONTROL PERFORMANCE	Frequency command	Digital setting, analog voltage setting, analog current setting, pulse setting, serial port setting, keyboard potentiometer setting. Can be switched in many ways.
	Auxiliary frequency command	Eleven kinds of auxiliary frequency commands, which can flexibly realize auxiliary frequency fine-tuning and frequency synthesis.
	Operation command	Operation command operator panel setting / Control terminal setting / Serial communication port setting / Can be switched in a variety of ways.
	Automatic voltage adjustment function	When the grid voltage changes, it can automatically keep the output voltage constant.
	Speed tracking restart function	Achieve shock-free and smooth start to the rotating motor
EFFICIENCY	MPPT tracking efficiency	99.5%max (PV mode)
PROTECTION	Loss phase protection	Input / output loss phase protection
	Instantaneous overcurrent protection	Stop at ≥250% of rated output current
	Over-voltage protection	Stop at ≥800V of main circuit DC voltage
	Low-voltage protection	The main circuit DC voltage will stop when undervoltage (different depending on the model)
	Over-temperature protection	Protection will be triggered when the inverter bridge over-temperature
	Overload protection	Over-load ≥150% 60s,inverter will shut own
	Over current protection	If rated current over 2.5 times, inverter will shutdown for protection
	Brake protection	Braking unit overload protection, braking resistor short circuit protection
	Short circuit protection	Output phase short circuit protection
CONTROL SINGLE	Communication interface	RS-485 interface
	Input terminal X	8 X terminals, more than fifty kinds of input function options. The X8 terminal supports high-speed pulse signal input.
	Output terminal	1 high-speed pulse output terminal (open-collector type is optional), supports 0~100kHz square wave signal output; 2 AO terminals; 2 relay output terminals.
	Control voltage source output	DC24V, 100mA
	Analog signal input	AI1: 0V~+10V; AI2: 0~+10V / 0~20mA, the main board dial switch selection. AI3: -10V~+10V;
	Analog signal output	2 ways, 0~+10V / 0~20mA output programmable, selected by the main board dial switch.
	Open-collector output	2 ways, multiple operating states are optional; the maximum output current is 50mA.
	Programmable relay output	2 ways, multiple states are available; contact capacity: 250VAC/3A or 30VDC/1A.
DISPLAY	Five-digit display	31 state parameters such as setting frequency, output frequency, output voltage, output current, motor speed, output torque, switch value terminal, etc., programming menu parameters and 25 fault codes, etc.
	Indicator light (LED)	Parameter unit, setting direction, RUN/STOP status, control mode
ENVIROMENT	Use occasions	The room is free from direct sunlight, dust, corrosive gas, combustible gas, oil mist, water vapor, dripping water or salt, etc
	Altitude	1000 meters below sea level (When the altitude exceeds 1000m, derate at a rate of 1% per 100m height)
	Ambient temperature	-10℃ ~+40℃ , it is not recommended to tun above 50℃ (when the ambient temperature exceeds 40℃ , derate at a rate of 3% per 1℃ derating)
	Humidity	5%~95%RH, no condensation
	Vibration	Less than 5.9m/s2 (0.6g)
	Storage temperature	-20℃ ~ +60℃ , air temperature change is less than 1℃ /min
	Protection class	IP20
STRUCTURE	Cooling method	Air cooling
	Installation type	Wall-mounted

The technical specifications of this document are subject to change without any notice