

Dear user:

Thank you for choosing INAA pressurized solar water heater controller. It is our great honor that you can be our customer. You will realize the convenience of the superior performance during the course of using. Before installing and using this product, please read the manual carefully to ensure the proper use and to give full play to its superior performance. The manual is a random accessory, please keep it in a safe place for future maintenance.

Safety Guide

We have checked the text and the pictures in this manual to ensure the best description of our product and provide the best understanding for our clients. We will not be held responsible for any incorrect or incomplete information and its consequences.

Installation

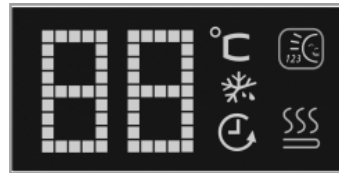
- ◆ When laying cables, please ensure that no damage occurs to any of the constructional fire safety measures presented in the building.
- ◆ The controller must not be installed in rooms where easily inflammable gas mixtures are present or may occur.
- ◆ The permissible environmental conditions can't be exceeded at the site of installation.
- ◆ Before connecting the device, make sure that the energy supply matches the specifications that controller requires.
- ◆ All devices connected to the controller must conform to the technical specifications of the controller.
- ◆ All operations on an open regulator are only to be conducted cleared from the power supply. All safety regulations for working on the power supply are valid. Connecting and /or all operations that require opening the regulator (e.g. changing the fuse) are only to be conducted by specialists.

Liability waiver

The manufacturer cannot monitor the compliance with these instructions or the circumstances and methods used for installation, operation, utilization and maintenance of this controller. Improper installation can cause damages to material and persons. This is the reason why we do not take over responsibility and liability for losses, damages or cost that might arise due to improper installation, operation or wrong utilization and maintenance or that occurs in some connection with the aforementioned.

Moreover we do not take over liability for patent infringements or infringements – occurring in connection with the use of this controller- on third parties rights. The manufacturer preserves the right to put changes to product, technical date or installation and operation instructions without prior notice. As soon as it becomes evident that safe operation is no longer possible (e.g. visible damage). Please immediate take the device out of operation. Note: ensure that the device cannot be accidentally placed into operation –

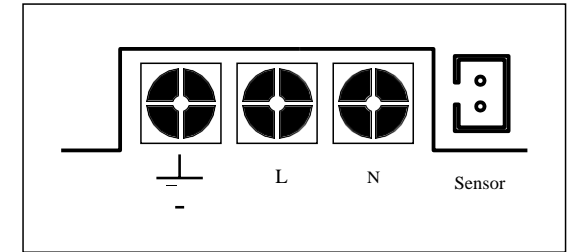
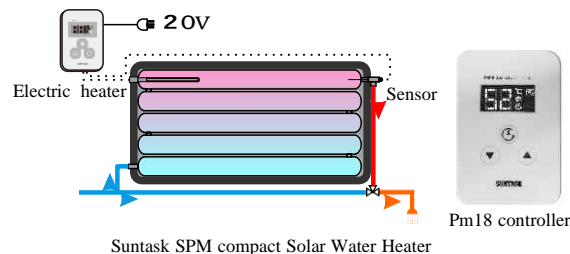
Product Drawing



Product features












1. The color screen displays the water temperature, countdown and working status. Two large digital displays the water temperature of 88°C and the pattern shows the working status. 2. Pre-set the upper limit of electric heating temperature (20°C ~ 70°C, the default is 55°C).
3. Pre-set countdown closing time of electric heating (0 ~ 99min, the default is 55min).

System Diagram



Pm18 connect to electric heater

Product Operations & Settings

1. **Power-on self-test:** After the “drop” is turned on, the full screen lights up 3S and enters the standby mode. Any button can display the temperature and running status.
 2. **Electric heating countdown off function:** short-click the button , enter the time setting state after hearing “drop”, the timing flashes, the up and down keys adjust the timing, the countdown range is (00-99 minutes), the factory setting is 30 minutes for turn off the electric heating; press   to set the countdown time. When it is set to 00 turn off the countdown function (turn off the countdown function and turn on the electric heating, the electric heating will run to the set upper limit temperature and then turn off). After confirming, count down the electric heating to turn on ( electric heating icon lights up); during the set time period, the electric heating is to maintain the constant temperature function. If the heating short-stroke  key is turned off during this time period, the electric heating can be turned off ( the electric heating icon is extinguished).
 3. **Electric heating temperature setting:** long press the  button 3S to enter the heating temperature upper limit setting, the temperature and heating icons and the °C icon (°C icon indicates the temperature setting) flash simultaneously, press   to set the electric heating temperature, the range is (20 ° C), the factory setting is 55 ° C, short-click the  button or wait for 5 seconds to automatically confirm.
- Anti-freeze function:** water tank temperature $\leq 3^{\circ}\text{C}$, electric heating insulation will open automatically; when water tank temperature $\geq 30^{\circ}\text{C}$, turn off the electric heating. Antifreeze icon,  lighted during anti-freeze electric heating operation, and extinguished in non-freezing state.

Water tank temperature sensor failure prompt: When the water tank temperature sensor is short-circuited or open-circuit fault, the electric heating is forcibly turned off. After 5 sounds are continuously alarmed, "--" is displayed and flashes. When the system detects that the temperature loop is normal, it resumes its normal working state by itself.

High temperature protection function: When the water tank temperature is detected above 80 °C, the temperature flashes and the electric heating is turned off.

Power-off memory function: All parameters are permanently retained once set.

8.Standby function: Press and hold the "▲" or "▼" button to turn off the controller, enter standby mode, and turn off all functions.

Alarm and fault resolution

Fault phenomenon	Reason	Handling method
No self-test does not display when booting	Crash	Reconnect after 10 seconds
Show - -	Temperature probe failure	Tighten the temperature probe or replace it

Quality Assurance

In general, the warranty is 12 months. Through reasonable quality assurance clauses, it can effectively protect the legitimate rights and interests of users who have signed the purchase contract without being affected.

Product technical parameters

External dimension of controller	Size: 134 * 90 * 32 mm
power supply	AC 100V~240V
The power consumption of the host	≤2W
Temperature measurement accuracy	±1%
Temperature measurement range	0°C~99°C
Controlled electric heating	≤2000W
Sensor type	Metal head 5*25 10-meter wire with insert 105°C sheath wire NTC3435, 10K,1%
Operating environment	Temperature -10°C~50°C, humidity ≤85%, no condensation

Delivery list	
Controller	1 set including power cable
Customer manual	1 piece
Temperature sensor	1 piece (metal head 5*25 cable length 10m, 105°C 10K)
Hanger	1 piece
Expansion screws	1package

Important remark

1. It is forbidden to install the controller in a place where it can be washed by water;
2. Professional installation is required, and the user's power socket must be reliably grounded;
3. The measuring and controlling instrument itself has lightning protection, but for safety reasons, please unplug the power plug during the thunderstorm;

Solar controller operation instruction



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Please read the manual carefully before the installation.