InToJon

THERMOSTAT ITJ-01

Specification:

- Controller measurements:100mmx100mmx50mm;
- Power supply: AC230V ± 10%
- Temperature measurement accuracy: ±1°C
- Collector temperature measurement range: -20°C - +200°C
- Relay output: for pump: AC230V 5A; DC12V 10A
- Inputs: 2pcs. Sensors NTC 10k, 3435
- Sensor cable length: 2m (can be extended to 50m)
- Controller operating temperature: 0-50 °C

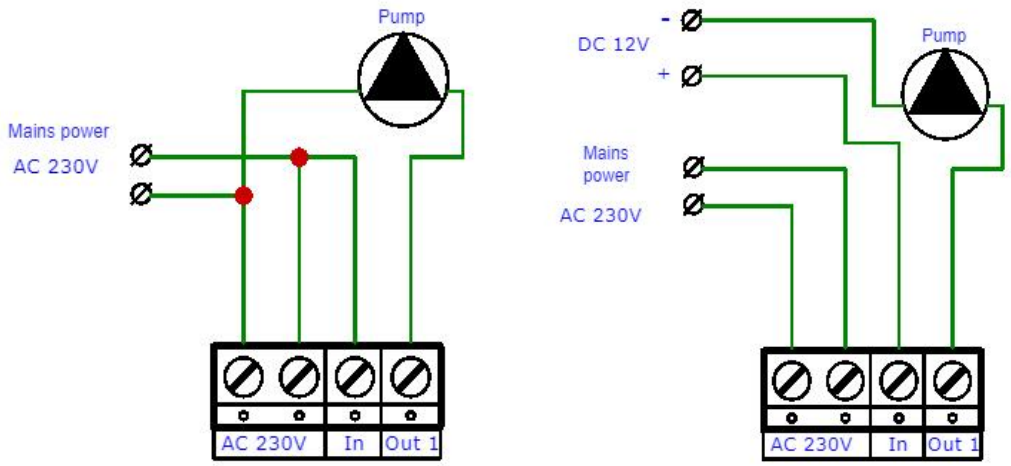
Solar controller (thermostat) for:

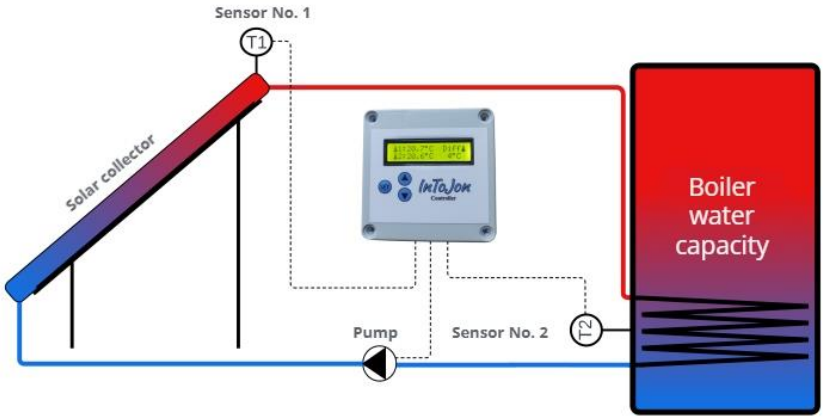
- Using solar panels to heat water. In winter, a combined boiler can heat water from storage tanks or a solid fuel boiler.
- The controller switches the circulation pump and then forces the warm water to flow into the boiler or other water tank where the warm water is stored.
- The controller measures the temperature at the boiler and at the solar panel. Based on the difference between these temperatures, it switches the circulation pump on or off (differential operation).
- Suitable for use in systems with water or non-freezing liquids such as glycol.

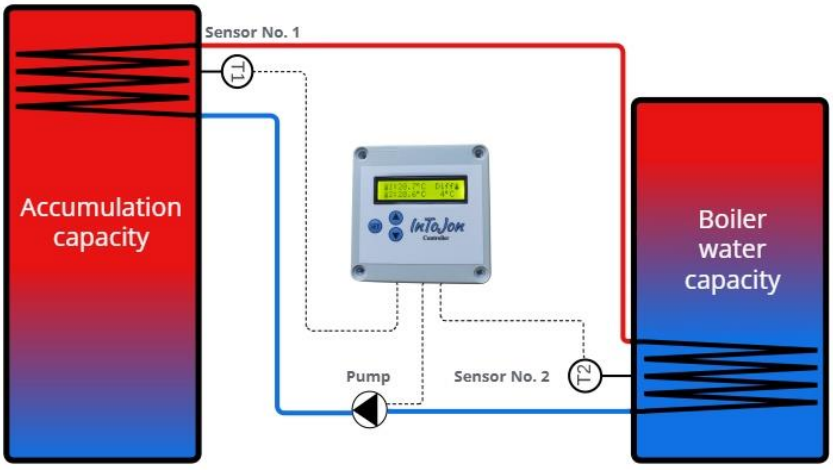
Connection diagram:

Once you have unscrewed the screws of the cover and opened it, you will find the terminal plugs to connect the water pump to.

There are 2 connection methods. Choose which one you need. In and Out1 are the relay contact terminals and AC230V is the controller power supply terminal. You can control the pump with both AC230V and DC 12V. If there is a need to control a more powerful pump than 5A or 10A, you need to build an additional contactor.







Setting parameters:

Pressing the SET button for 5 seconds will take you to the settings.

- **D1** – This is the temperature difference when to start the pump.
-  (Sensor1) +D1 >  (Sensor2).
- **D2** – This is the temperature difference when the pump is switched off.
-  (Sensor1) +D2 >  (Sensor2).
- **D3** –  (Sensor1) Calibration.
- **D4** –  (Sensor2) Calibration.

  Calibration is usually done by lengthening the sensor cable. After extending the cable, it would be a good idea to put both sensors in the water together and calibrate them so that they both give the same reading.
- **D5** – Disconnecting the pump from set temperature  (Sensor2), this is necessary to prevent overheating of the water tank or boiler.
- **D6** – Freeze function. If disabled, the controller will not react to low temperatures of the sensors. If enabled:  (Sensor1)< 5ºC, When the temperature drops below 5 ºC a pump is started to carry warmer water to the colelctor. There is also an audible signal to tell you that a low temperature has been reached in the collector.

After all settings have been made and no more buttons have been touched for 5 seconds, the settings will automatically save and the controller will return to the start window.

Additional information:

The controller has a no-stagnation function. This means that from the last operation, a time is counted which will start the pump briefly for 15 seconds every 5 days. This prevents the pump from stalling after a long break.

After installation, there is an option to run the pump for 15 seconds to make sure everything is connected properly. This function can be activated by pressing the up and down arrows at the same time.

When you see the following symbol next to the Diff setting on the screen  means the pump is running.

 this sign will always represent the operating status of the pump, if you don't see it on the display it means the pump is disconnected, if you see it, it means the pump is running.