

INSTRUCTIONS

FOR INSTALLING AND USING

the Temperature differential switch

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inta ECO

Installation information

This device is a basic temperature differential switch to control a simple solar thermal circuit.

Description

The TD switch operates by comparing the difference in temperatures between a black sensor (collector sensor) and a grey sensor (cylinder sensor) to control a solar circulation pump in a solar thermal system. It also has an anti-freezing function.

Technical specification

- Power supply with internal transformer (110 or 220V ac 50/60Hz)
- Control temperature: -50 to 105°C
- Load current: 16A (resistive load)
- Dimensions: 100 x 72.8 x 36.8mm)
- Turn-on differential range: 2 to 10°C
- Turn-off differential range: 1 to 10°C
- Min/Max ambient temperature: 0 to 60°C
- Min/Max ambient humidity: 10 to 90%RH

Installation instructions

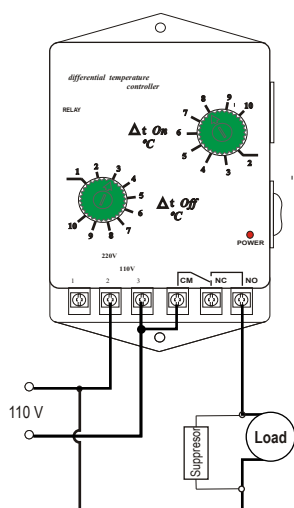
Install the TD switch as per the wiring diagrams below and in accordance with all current IEE regulations and any other relevant regulations.

It is recommended that this switch is wired in series, through a suitable temperature thermostat. It should also be installed within a suitable electrical enclosure.

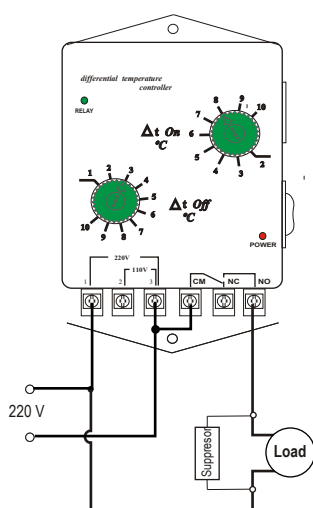
Install a suppressor in parallel to the load to increase the useful life of the relays.

description	product code
Temperature differential switch	9032.89.82

for Power Supply 110V



for Power Supply 220V



Operating instructions

Switch pump on adjustment = Δt On

Switch pump off adjustment = Δt Off

The set values of Δt On and Δt Off are taken from the difference in temperatures between the two temperature sensors, sensor blk - sensor grey Δt .

Example

Δt On setting = 8°C

Δt Off setting = 3°C

Whenever the temperature difference between the black sensor and the grey sensor is greater than 8 °C, the pump is turned on. Once this temperature drops below 3°C it switches the pump off.

LEDs

If the "RELAY" LED is lit, this indicates that the "NO" output is activated and the pump should run.

If the "POWER" LED flashes, this indicates either a: one of the sensors is disconnected or b: the Δt Off setting is higher than the Δt On setting.

Anti-freeze

If the collector sensor (black sensor) reaches 5°C, the solar pump is switched on to prevent the water in the pipes and collectors from freezing.

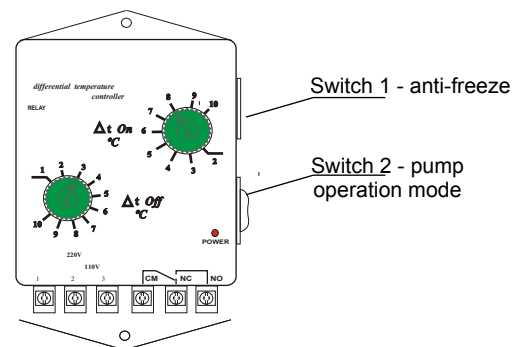
Pump operation mode (On/Off/Auto)

Use switch 2 to select the pump operation mode.

ON: Manual mode always on.

OFF: Manual mode always off.

AUTO: Automatic mode using the temperature differential switch.



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