

DIFFERENTIAL THERMOSTAT DTC-01-A



General description

The DTC-01-A is a differential thermostat for thermal solar systems using a circulator. It is a fully programmable processor. The display shows the temperature in the thermal panel, the temperature in the storage tank and their differences. It has the ability to recognize faults of the sensors, stuck of the circulator and no flow in the circulator loop. **The display shows the cause of the faults and the controller activates a sound alarm that informs the user that there is no thermal solar gain. The voice alarm is a necessary operation if the user must avoid energy consumption from other sources (oil or electricity). Differential controllers without voice alarm will never pay off the cost of the solar system, as in the initial cost the cost of oil or electricity energy will be added that could be avoided if the user knew the failure of solar energy gain.**

Technical data

Housing: White metal box with internal mounting support for extra relay.

Power supply 250 V AC, 110 V AC

Outputs relay 10 Am.

Resolution 0,5 °C

Accuracy +/- 2%

Faults

Fault on the display	S1	S2	Voice alarm
F01	O.K.	Short circuit	Yes
F02	O.K.	Cable cut off	Yes
F03	Short circuit	O.K.	Yes
F04	Cable cut off	O.K.	Yes
F05	Short circuit	Short circuit	Yes
F06	Cable cut off	Short circuit	Yes
F07	Short circuit	Cable cut off	Yes
F08	Cable cut off	Cable cut off	Yes
F09	Very high temp. difference due to circulator stuck or no loop flow		Yes

In case the pump fails to circulate the fluid within 30 minutes the controller stop the supply and thus stuck or troubleshooting of the pump is avoided. The user will hear the alarm and the display will show him the cause of failure.