



ENGLISH

Analogue universal thermostat with adjustable hysteresis and fine tuning of the temperature scales, for Pt1000 and NTC sensors.



DANGER: VITAL INFORMATION CONCERNING ELECTRICAL SAFETY AND THE ENVIRONMENT

This product may contain dangerous voltage. The product's housing is not meant to be removed. When powered by a supply voltage of 230V AC the product must be connected to a nearby mains switch marked Mains Switch for CAT thermostat. The product's relay switch can be powered by 230V. The power must be switched off during maintenance. The product is intended for indoor use only. The product must not be subjected to liquid or moisture. The product's exterior can be cleaned using a damp cloth. The product is intended for mounting on a DIN rail / Norm enclosure in a protected space.

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1. TECHNICAL DATA

Voltage supply: 230V AC $\pm 10\%$ 50-60 Hz
Relay output: 250V ~ 16 A resistive loading, potential-free changeover

Power consumption: 4.5W
Temperature range: -10 to +50°C
Ambient temperature: 0 to +50°C

Selectable temperature sensors: Pt1000 and NTC (Calectro type: 22/33/44/55/99)

Switching differential: 1-10°C

Fine adjustment of temperature: -5 to +5°C

Mounting: DIN rail, Norm enclosure

Dimensions WxHxD: 52.5 x 86 x 62mm

Weight: 220 g.

Protection class: IP20

2. FUNCTION

CAT is powered by 230V AC and has one potential-free changeover relay output with the capacity of up to 16A, 250V. See fig. 2.

The thermostat can be used together with a Pt1000 or an NTC sensor (the same type as previous Calectro thermostats), making it backwards compatible with parts of Calectro's previous thermostat programme. See fig. 2.

The hysteresis (switching differential) is centred over the setpoint and is adjustable between 1 to 10°C. Example: Setpoint 20°C and hysteresis 1°C. The relay switches the heating on at 19.5°C and off at 20.5°C.

CAT has an energy saving feature that lowers the setpoint by 4°C by short circuiting terminals 9 and 12 using a timer. See fig. 2.

CAT has two light emitting diode indicators. Steady green diode indicates normal mode. Flashing green diode indicates an interruption or short circuit in the temperature sensor circuit. Yellow diode indicates that the relay is activated, which happens when the temperature falls below the setpoint (minus half the hysteresis / switching differential). See fig. 3.

In addition to the dial knob for temperature setting, the thermostat also has two potentiometers for setting the hysteresis and fine adjusting the temperature scale. The potentiometer for setting the hysteresis is adjustable between 1 to 10°C. See fig. 2. The potentiometer for the fine adjustment of the temperature scale is used to point the temperature scale arrow at the correct setting on the temperature scale. This is useful when long sensor cables are used. Long cables affect the sensor circuit resistance and give a wrong reading of the temperature. The recommended maximum length of a sensor cable is 100 metres. See fig. 2.

Fine adjustment of the temperature scale: Measure the temperature at the thermostat's temperature sensor using a reference thermometer. Lower the hysteresis to 1°C (turn the potentiometer anti-clockwise to the closing position). Set the temperature at +50°C then turn the knob slowly until the arrow is just under the reference thermometer's measured value. The relay should now be deactivated with the amber diode switched off. If not, fine-adjust the potentiometer until the relay is deactivated and the amber diode is switched off. The temperature scale is now fine-adjusted.

CAT monitors the temperature sensor circuit and turns the heating function off at an interruption or short circuit.

Note! This monitoring feature does not work when CAT is used to control cooling.

3. USE

CAT is an analogue universal thermostat for all types of 1-step temperature control between -10 and +50°C, e.g. for underfloor heating and freeze protection.

4. INSTALLATION

CAT is mounted on a DIN rail and is suited to Norm enclosures.

5. MAINTENANCE

CAT requires no maintenance.

6. FIGURES

FIG. 1

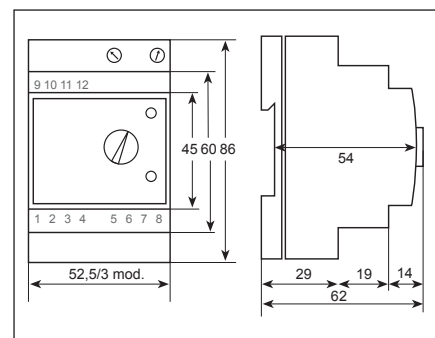


FIG. 2

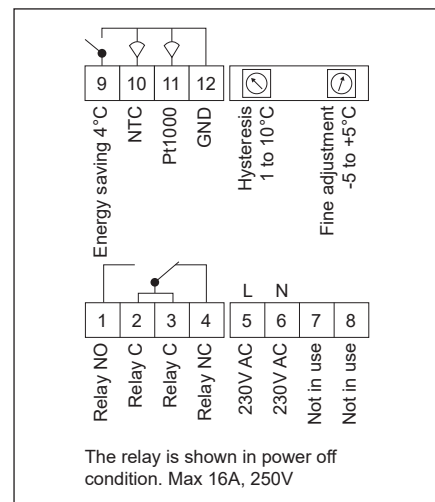
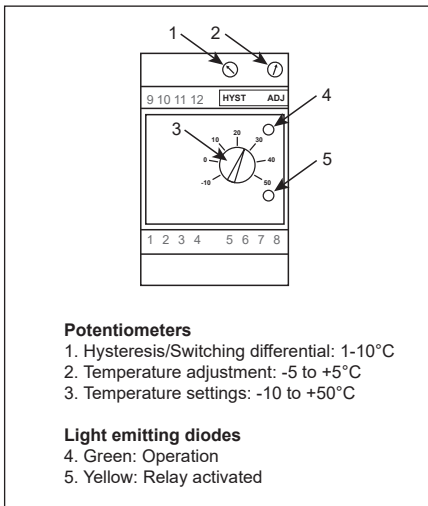


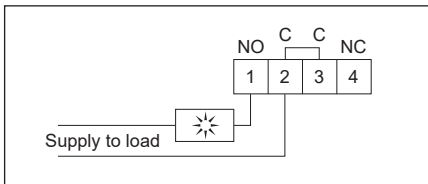
FIG. 3



7. CONNECTION EXAMPLES

The relays are shown in no power on condition.

Application for heating thermostat



Application for cooling thermostat

