



VULCANIC S.A. - 48, rue Louis Ampère
 Zone Industrielle des Chanoux - F 93330 NEUILLY / MARNE (France)
 Tél. (33) 01.49.44.49.20 - Fax (33) 01.49.44.49.41



OWNER'S MANUAL

POSITIVE SAFETY DEVICE ROD THERMOSTAT AND LIMITER

REFERENCE 9030-41

1 - USE :

Temperature control and limitation of liquids or gases.
 Can be removed without draining the tank provided the protective well sheath is left in place.

2 - DESCRIPTION :

A temperature thermostat and limiter are fitted side by side in the same box.
 Their juxtaposed respective bulbs (made from copper with a 6 mm diameter) are to be inserted in the copper protective well sheath (diameter 16 mm, length 120 mm on the 1/2" BSPT screw union) supplied with the instrument. The instrument is attached to the protective well sheath by a perpendicular locking screw on the threaded union.

2-1 - THERMOSTAT CHARACTERISTICS :

- Liquid expansion bulb thermostat.
- Load temperature range: 10 - 90°C, maximum temperature on the bulb: 120°C.
- Adjustment of temperature set value by indexed button.
- Change-over contact with rapid power cut-out.
- Cut-out power on a resistive load: 15 amps at 250 volts a.c., 10 amps at 400 volts a.c.
- Differential : 6°C ± 1°C.

2-2 - LIMITER CHARACTERISTICS :

- Liquid expansion bulb limiter.
- Preset fixed temperature cut-out device: 100°C (+0∞C -6°C).
- Manual reset.
- Positive safety device: breakage of the bulb or capillary causes the circuit to break (contact opens) : the instrument therefore needs to be replaced.
- Change-over contact with rapid power cut-out.
- Cut-out power on a resistive load: 15 amps at 250 volts a.c., 10 amps at 400 volts a.c.

2-3 - GENERAL CHARACTERISTICS :

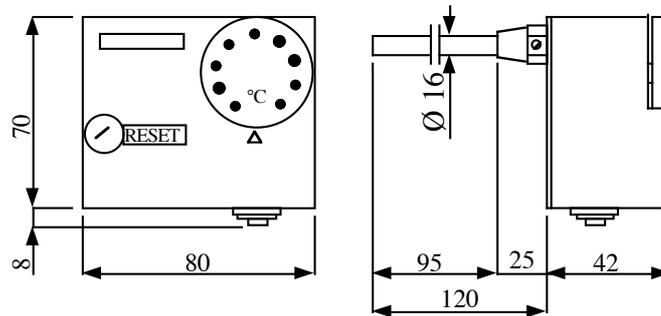
- Connections to screw terminals + earth, inside the box.
- Protection index : IP 40.
- Reminder: comes with a protective well sheath (see above).
- Maximum load pressure : 10 bar.
- Load temperature: 0 - 100°C.
- Storage temperature: -10 - 120°C.

3 - PRECAUTIONS BEFORE USE : Check that :

- The boss provided to take the protective well sheath has a 1/2" BSPT thread.
- The bulb is made of a material compatible with the fluid controlled.
- Adequate clearance will allow the thermostat to be removed (tunned side: 120 mm).
- The unit must only be powered up when the box lid is in place.

4 - **INSTALLATION AND ELECTRICAL CONNECTION :**

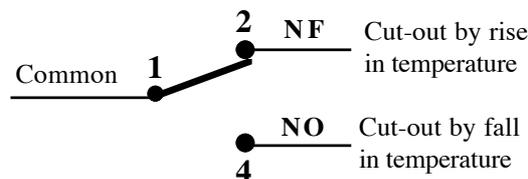
4.1. - **INSTALLATION :**



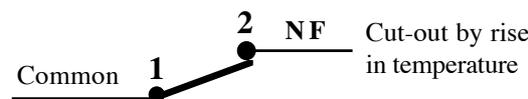
- Screw the protective well sheath (having first removed it) on to the boss provided for this purpose.
- Insert the bulb into the protective well sheath and tighten the locking screw located on its union.

4.2. - **ELECTRICAL CONNECTION :**

- Remove the box lid after removing the control knob, the loosened screw and the "RESET" plug.
- Follow the diagrams below, paying particular attention to the terminal numbers :
 - on the thermostat (situated to the right of the instrument) :



- on the limiter (situated to the left of the instrument):



- Do not omit to connect the earth terminal to the earth point.
- Make sure the screws on each terminal are tight.
- Replace the lid and fasten it with its screw, replace the control knob and tighten the "RESET" plug.

5 - **COMMISSIONING PROCEDURE :**

- Using the set value control knob, set the required temperature opposite the dial index.
- Power up the heating unit having first checked that all operating conditions have been complied with.
- Before the nominal temperature is reached, make sure that the movement of the thermostat's control knob stops and restarts the heating. Reset at the load temperature.

PLEASE NOTE : Information on the vernier of the thermostat's control knob is not precise enough to guarantee temperature reading accuracy. Adjust the set point gradually until the required temperature is obtained, measuring it with a thermometer.

- If the liquid temperature exceeds the safety temperature: 100°C (+0 -6), the contact opens, cutting out the heating irreversibly. To switch the heating elements back on, unscrew the "RESET" plug then press the accessible blue reset button (using a suitable screwdriver). This operation shall only be carried out after having rectified the fault which caused the thermal safety device to trigger.

6 - MAINTENANCE :

- Periodically (at least once a year, and more often if necessary) :
 - Check that the terminals are tight.
 - Remove the protective well sheath :
 - check that the bulbs and capillaries on the instrument are in good condition,
 - clean it carefully, without damaging it, if sediment or lime have been deposited on it (risk of impairing regulation by obstructing measurement).

7 - GUARANTEE :

Our guarantee is in accordance with inter-union electrical construction agreements and our general conditions of sale.

We cannot be held liable for any damage caused by :

- use of the appliance over 10% above the design rating,
- exceeding the instrument's cut-out power,
- corrosion or scale,
- lack of maintenance, impact, rough handling or inexperience on the part of the user.