

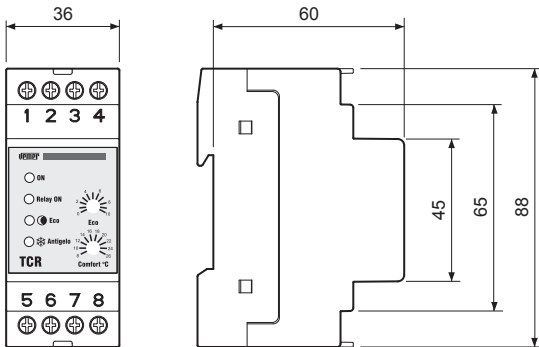
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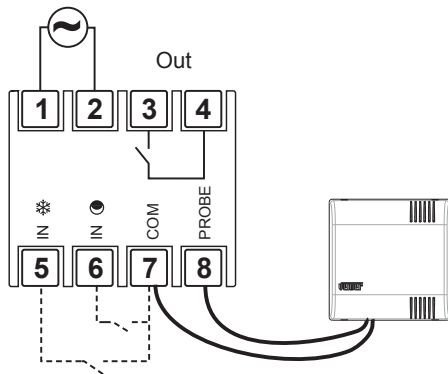
Mod. TCR



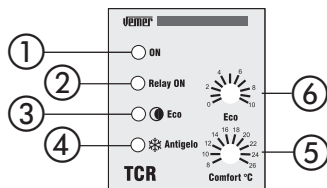
### Dimensions



### Wiring diagrams



### Description



- ① Led "power supply"
- ② Led "status output"
- ③ Led "economy mode contact status"
- ④ Led "antifreeze mode contact status"
- ⑤ Trimmer to set "setpoint comfort"
- ⑥ Trimmer to set "reduction for economy mode"

### Operating modes

	Comfort mode	Economy mode	Antifreeze mode
Input "Economy" (terminals 6-7)			indifferent
Input "Antifreeze" (terminals 5-7)			
Led ● Eco	○		indifferent
Led * Antifreeze	○	○	
Setpoint	$T_{comfort}$	$T_{comfort} - T_{eco}^*$	5°C

(\*) Note: the setpoint value can not be inferior to 8°C, even though  $T_{comfort} - T_{eco} < 8^\circ\text{C}$  (for example: if  $T_{comfort}$  is 12°C and  $T_{eco}$  6°C the set point will be not 6°C but 8°C).

## User Manual

### TEMPERATURE CONTROL RELAY

Read all instructions carefully

- DIN rail mounting electronic device for temperature regulation in heating and suitable for installations with overvoltage category III and pollution degree 2, according to EN 60730 standard.

### SAFETY WARNINGS

During product installation and operation it is necessary to observe the following instructions:

- 1) The instrument must be installed by a qualified person, in strict compliance with the connection diagrams.
- 2) Do not power or connect the instrument if any part of it is damaged.
- 3) After installation, inaccessibility to the connection terminals without appropriate tools must be granted.
- 4) The instrument must be installed and activated in compliance with current electric systems standards
- 5) Before accessing the connection terminals, verify that the leads are not live.
- 6) In the electrical system of the building where the instrument must be installed, a switch and a protection device from the overcurrents must be present.

Code	Model	Description
VE447900	TCR	Electronic thermostat 2 DIN with remote probe

### TECHNICAL SPECIFICATIONS

- Power supply: 230Vac (-10% ÷ +10%) 50/60Hz
- Absorption: max 4 VA
- Terminals for max 6 mm<sup>2</sup> cable section
- Output: normally open relay 16 (2)A / 230V (1B type actions)
- Type of regulation: ON/OFF with differential of 0,2°C (fixed)
- Precision: ± 1°C
- Temperature regulation range: 8°C ÷ 26°C
- Operating temperature: -10°C ÷ +55°C
- Storage temperature: -20°C ÷ +60°C
- Relative humidity: 15÷95% non-condensing
- Degree of protection: IP20
- Insulation: reinforced among accessible parts (frontal) and all other terminals
- NTC probe (10kΩ at 25°C) remotable up to a maximum distance of 100 meters
- Maximum wire size for connecting to the probe: 2.5 mm<sup>2</sup>

### AVAILABLE PROBES

Wall mounting	For immersion	For pipes
Included	cod. VE152500	cod. VE124400



### INSTALLATION

- TCR must be installed at a height of about 150 cm from the floor, on inner walls, protected from direct solar radiations and from any heat source (like lamps, heating pipes), away from positions with total lack of air inlet, niches, corners, doors, windows and not behind curtains.
- Connect power supply, probe, relay output contacts and any clean contacts as shown in the box "wiring diagrams".

### OPERATION

- The selection of operating mode (comfort, economy and antifreeze) occurs via through free of voltage contacts
- The setpoint of comfort and economy modes are set by trimmer while the antifreeze setpoint is fixed at 5°C
- The operation of the relay output is indicated by the switching on of the LED ② "Output Status"

The box "operating modes" shows the characteristics of each mode.

### Signaling probe error

In case of error of the probe the relay contact (terminals 3-4) is still open and flashes the led ② "output status". It happens in the following cases:

- open probe or short circuit;
- out-of-range-temperature- values (inferior to -15° or superior to +60°):

In case of out-of-range- measurement the recovery automatically happens when the temperature returns again the operating range.

### REFERENCE STANDARDS

Compliance with Community Directives: **2006/95/EC** and **2004/108/EC** is declared with reference to the following Harmonized Standards: **EN 60730-2-9**