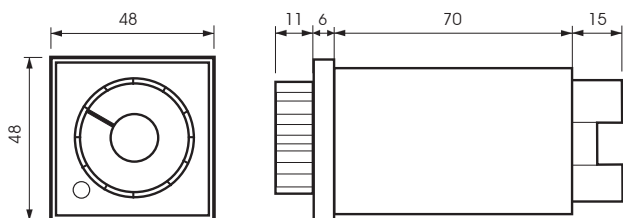


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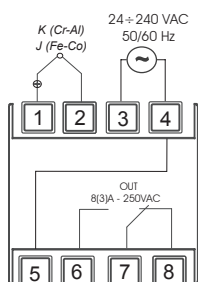
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DIMENSIONS

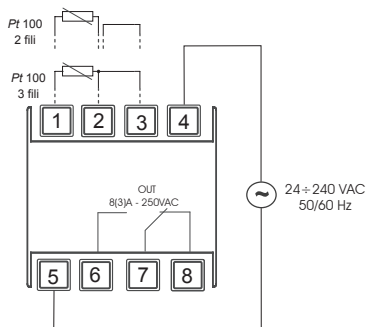


CONNECTION DIAGRAMS

Mod. AHT-J / AHT-K



Mod. AHT-Pt100



User manual

ANALOG HEAT REGULATORS

Read all instructions carefully

- AHT heat regulators are compact analog temperature regulators sized **48x48 mm**, that are destined for 1B type actions (EN 60730-1 standard) and that perfectly suit applications that require ease of use and sturdiness, thanks to the temperature regulation and the rapid connections via faston. The triggering of the output relay is signalled by the red LED placed on the front panel.

SAFETY WARNINGS

During the installation and operation of the instrument, proceed in accordance with the instructions below:

- 1) The instrument should be installed by a competent operator following the installation diagrams carefully
- 2) The instrument should be installed in a panel from which no access can be gained to the terminals after installation
- 3) Do not power or connect the instrument if any part of it is damaged
- 4) The electrical system of the building in which the instruments is to be installed should have a switch and a protective device against over-currents
- 5) The instruments guarantee a main insulation between low voltage parts (250Vac) and ultra low voltage parts
- 6) The instrument is designed for installations with over-voltage category III and pollution level 2, in accordance with the EN 61010-1 standard
- 7) Any external switches connected to the heat regulator must guarantee, at the operating temperatures, a minimum insulation of 250Vac or must be protected by an equivalent insulation

Code	Model	Description
VE253100	AHT-Pt100 1P4U	48x48 Heat regulator for Pt100 probes
VE254900	AHT-J 1P4U	48x48 Heat regulator for Fe-Co(J) probes
VE255600	AHT-K 1P4U	48x48 Heat regulator for Cr-Al (K) probes

TECHNICAL CHARACTERISTICS

- Power supply: 24÷240 Vac (-10% ÷ +10%) 50/60 Hz
- Current input: ~ 3 VA
- Power supply terminals: 6.3 mm faston terminals
- Output: a change-over relay 8(3)A / 250 Vac
- Relay terminals: 6.3 mm faston terminals
- Regulation type: ON/OFF (with microprocessor)
- Hysteresis: 10°C approximately centred on the Set point
- Output activation delay: about 2-3 sec.
- Precision: ± 5% full-scale
- Measurement scale: 0 ÷ 350°C for AHT Pt100
0 ÷ 600°C for AHT J
0 ÷ 1200°C for AHT K
- Connectable probes: Pt100 for AHT Pt100
J (Fe-Co) for AHT J
K (Cr-Al) for AHT K
- Weight: 200 gr
- Operating temperature: 0 ÷ +50°C
- Operating humidity: 30 ÷ 95% noncondensing R.U.
- Protection degree: IP54 front panel
- Container: in self-extinguishing plastic material V0 in accordance with UL94

INSTALLATION

- To install the heat regulator drill a 45.5x45.5 mm square hole.
- Make sure that the instrument is suitably ventilated to avoid overheating.
- Install the heat regulator as far as possible from sources that can generate electromagnetic disturbances, such as motors, telebrakers, relays, solenoid valves, etc.
- Use 6.3 mm female fastons for connections to the heat regulator.
- Make sure that the cables of the probe are kept separate from the power supplying cables or the positive leads to avoid electromagnetic disturbances.
The use of shielded probe cables is recommended; the shielding must be earthed only in one point, usually near the instrument.

OPERATION

- AHT heat regulators work in reverse-heating mode, which means that they activate the output if the temperature measured is lower than the set one (setpoint). To avoid the continuous conditioning of the connected load, they work with a hysteresis of about 10°C centred on the setpoint value.
- The output relay switching occurs with a delay of 2-3 seconds to avoid any false switching that may be due to disturbances.
- To use the heat regulators simply set the setpoint by rotating the knob placed on the front. The triggering of the relay is signalled by the switching on of the red LED.

PROBE FAILURE

If during the operation of the instrument a failure occur when connecting the probe to the heat regulator, there are two possibilities:

- If the connection is discontinued, the relay remains on OFF (open contact between 6 and 7)
- If the connection is short circuited, the relay remains on ON (closed contact between 6 and 7).

REFERENCE STANDARDS

Compliance with Community Directives:

2006/95/EC (Low voltage - LVD)

2004/108/EC (Electromagnetic compatibility - EMC)

is declared with reference to the following Harmonised Standards:

- EN 61010-1
- EN 61326