TH 140

Installation and operating instructions

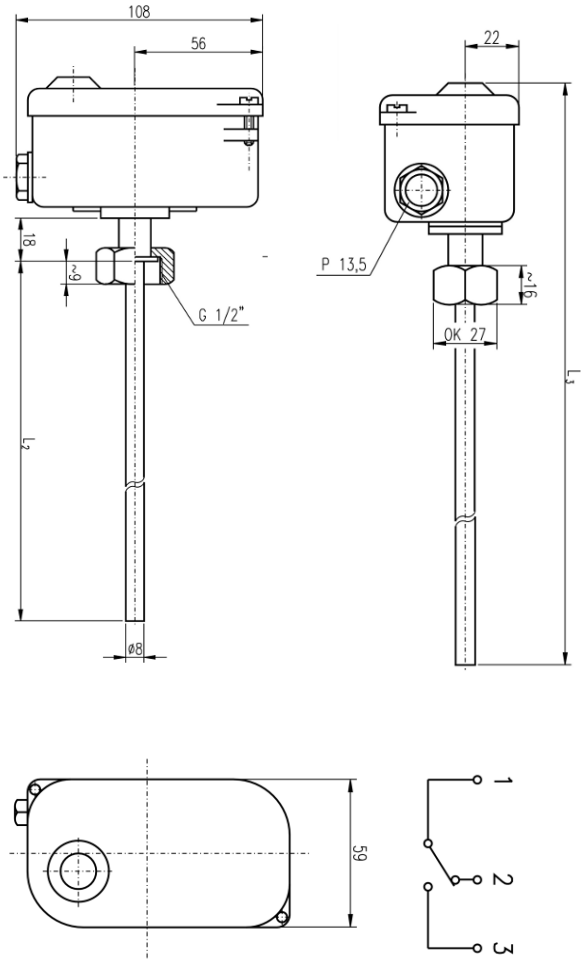
2025/08a

THERMOSTATS SERIES TH 140

Description

TH 140 series thermostats are temperature dependent single pole switches, working on the principle of unequal thermal dilation of two different metals. The temperature sensitive element is the thermostat stem, which consists of a brass tube for the TH 140 and TH 143 and an anticorrosive tubes for the TH 141. The control knob for setting the desired temperature can be locked to prevent, for example, the switching temperature form being adjusted due to shocks. The thermostats are manufactured in a switching (three-clamp) design with a protective earth terminal on the cover.

Dimensional drawings



Type	L_2	L_3
TH 140	350	440
TH 141	303	393
TH 143	350	440
TH 144	303	393

Installation

Installation and connection of the thermostat to the electrical circuit may only be carried out by a person qualified in accordance with Decree NO. 50/1978 min. §6 or a service technician. The following recommendations must be followed during installation:

- The thermostat is equipped with a ground terminal and must be grounded with a protective conductor
- The thermostat must be installed in such a way that it is not damaged during installation or adapted to the installation conditions. Particular care must be taken to ensure that the thermostat stem is not dislodged from the base plate
- Installation is done by sliding and screwing into the well. The position of the thermostat head has to be determined before tightening the coupling nut. Secure the head against rotation with using the mounting wrench no. 12. Turning the head to tighten the union nut could damage the thermostat
- When using the thermostat in a liquid environment, it is necessary to use a well
- Thermostats must be installed in AB7, AE3, AM1, AN1, BE1 environments that are free of fumes or gases of chemicals that may damage thermostat parts
- The thermostat switch is designed for electrical circuits with ohmic loads up to minimum power factor of 0,85
- Conductors to be fitted with pressed brass sleeves according to ČSN 37 1366

Method of use

Thermostats are used to switch electrical circuit, but not as the main switch. The TH 140 and TH 141 thermostats are designed for DC loads and therefore the switching contacts are bridged with quench capacitors. Thermostats TH 143 and TH 144 are designed for AC voltage. The stem must not be mechanically stressed during installation and must be placed so that it can expand freely. When mounting in a liquid environment, a protective well must be used. The thermostats are designed for temperature control in the following equipment:

- TH 140 and TH 143 for temperature control and limitation of liquid filled electronic radiators
- TH 141 and TH 144 for operational control and temperature limitation in liquid and low pressure steam heaters (not used as safety equipment)

Other uses must be consulted with the manufacturer. After installing the TH, follow the instructions in the manual of the device in which the TH is installed.

Effect on other products

As a result of the operation of the TH contacts, there is a short-term voltage fluctuation at the contacts, which is superposed to the power supply wave shape.

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Technical data

Type	TH 140	TH 141	TH 143	TH 144	TH 140 ZP 16
Control range	20÷140°C	100÷200°C	20÷140°C	100÷200°C	20÷140°C
Switching temperature differential	1÷4°C	1÷6°C	1÷4 °C	1÷6°C	4÷12°C
Settings accuracy	±10% from control range				
Stem length [mm]	350	303	350	303	124
Temperature of the stem	-30 ÷ 140°C	-30 ÷ 300°C	-30 ÷ 140°C	-30 ÷ 300°C	-30 ÷ 140°C
Temperature of the thermostat head	0 ÷ 120°C				
Impact resistance	5g 1÷2 c/s	5g 2÷2,5 c/s	5g 1÷2 c/s	5g 2÷2,5 c/s	5g 1÷2 c/s
Contact load	60V=, 1A= 120V=, 0,5A=		250V~, 15A~		
Weight	approx. 0,75 kg				
Ingress protection	IP 44				

Storage conditions

Storage can be done in closed ventilated areas in the temperature range 0-40°C with a maximum relative humidity 80%. Storage and handling must not cause mechanical damage to the instrument. The thermostats must be handled gently, without strong shocks and impacts.

Disposal

Dispose of TH as follows: Take the TH to a scrap yard.

Possible minor faults and their removal

The thermostat may be repaired only by the manufacturer.

Warranty

Provided that the thermostat is installed, wired and used in accordance with the instructions in the installation and operating instructions, the manufacturer warrants the thermostat in accordance with the applicable code, unless otherwise agreed.

The manufacturer will refuse warranty repairs if the unit has been damaged:

- During transport and storage by the customer or his customers
- During installation or dismantling in the equipment of the customer or his customers
- In case of improper handling and installation in equipment other than that specified in the instructions
- If the thermostat has been exposed to an environment other than specified in the instructions

Warranty and post-warranty repairs

Warranty and post-warranty repairs are provided by the manufacturer. Pack the defective product and send it to following address:

APATOR POWOGAZ CZECHIA s.r.o.
Havlíčkova 919/24
787 01, Šumperk
Czech Republic

Tel.: 583 718 261
E-mail: prodej@metra-su.cz
www: www.metra-su.cz