TH 160

installation and operation manual 2021/01

TERMOSTATS SERIES TH 160

CE

Description

Thermostats series TH 160 are temperature-dependent single pole switches working on a principle of different dilatation of two different metals. The temperature-sensitive element is the stem of the thermostat with a metal pipe. Thermostats are made in switch off (two terminals) or switch over (three terminals) version with protective grounding terminal on the cover. The standard version is with cover of terminals to prevent accidental contact of terminals (upgrading IP rating to IP 20). If a customer demands a thermostat without the cover of the terminal they need to specify so in the order.

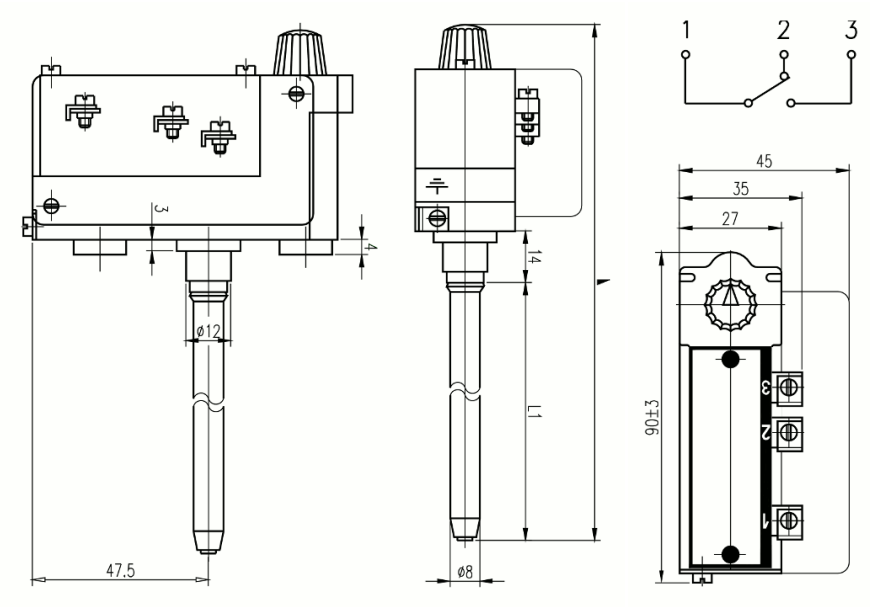
Technical drawings

Fixed settings

Type	L±3	L_1±3	Number of terminals
162	164	100	3
165	224	160	3

Adjustable

Type	L±3	L_1±3	Number of terminals
160	388	315	2
160.1	388	315	2
160.2	388	315	3
163	174	100	3
164	234	160	3
166	274	200	3
167	324	250	3
167.1	324	250	3
169	388	315	2



Technical details

Type	Adjustable range [°C]	Difference of switching temperature [°C]	Stem length [mm]	Terminals load	Number of terminals	Max. temperature of the head [°C]	Well L [mm]	Well L_1 [mm]
TH 160	20 ÷ 80	2 ÷ 8	315	250V~, 15A~	2	120	324	336
TH 160.1	20 ÷ 80	2 ÷8	315	250V~, 15A~	2	120	324	336
TH 160.2	20 ÷ 80	2 ÷ 8	315	250V~, 15A~	3	120	324	336
TH 162	20 ÷ 160	1 ÷ 16	100	250V~, 15A~	3	120	110	122
TH 163	50 ÷ 90	6 ÷ 16	100	250V~, 15A~	3	120	110	122
TH 164	30 ÷ 160	2 ÷ 10	160	250V~, 15A~	3	120	170	182
TH 165	20 ÷ 200	1 ÷ 10	160	250V~, 15A~	3	120	170	182
TH 166	100 ÷ 200	1 ÷ 10	200	250V~, 15A~	3	120	210	222
TH 167	20 ÷ 100	1 ÷ 10	250	250V~, 15A~	3	120	260	272
TH 167.1	-10 ÷ 50	1 ÷ 10	250	250V~, 15A~	3	120	260	272
TH 169	60 ÷ 120	2 ÷8	315	250V~, 15A~	2	120	324	336

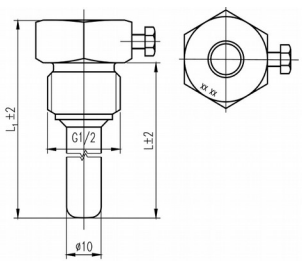
Accuracy of settings ±10% of the highest value of the nominal switch off temperature on the thermostat

Stem diameter 8 mm

Weight cca 0,25 ÷ 0,35 kg

Cover

Well



Installation

Installation and connection of thermostat to an electric circuit can be performed only person with qualification according to regulation No.50/1978 §6 or worker of professional service. Follow these recommendations:

- Thermostat has grounding terminal and has to be grounded
- Thermostat has to be installed so it is not damadged during installation. Stem of thermostat must not be bended.
- Installation is done by sliding into a well and fastening the srew. Orientation of the head needs to be set before fastening the screw. Rotating the head after fastening could damage the thermostat.
- When using thermostat in liquids, well has to be used.
- Thermostat has cover IP 00 (IP 20) therefore they need to be installed into an equipment that provides further coverage.
- Thermostats need to be installed in an evironment AB5, AE1, AM1, AN1, BE1 that must not contain vapours or gases of chemical substances that could damage parts of thermostat.
- Thermostat swich is intended for electrical circuit with load to minimal value of effect 0.95.
- Conductors need to be equiped with copper parts ČSN 37 1366.

Intended usage

Thermostats are intended to switch on electrical circuits, not as a main switch though. Thermostats are intended for alternating current. During installation, the stem needs to be placed in a way that it is not mechanically stressed and can dilate. In a liquid environment, a well needs to be used. Thermostats are intended to be used in the following devices:

- TH 160, 160.1, 160.2 and 163 for regulation and limiting temperature of water in non-flow through boilers with permanent power.
- TH 167.1 for regulation of temperature for air conditioning.
- TH 162, 164, 167 and 169 for regulation and limitation of temperature of electric radiators filled with a liquid.
- TH 165 and 166 for regulation and temperature limiting in liquid and low pressure steam heating (not intended as safety device).

Other usage needs to be consulted with the manufacturer. After installation of TH please follow instructions in the user manual of the equipment that TH is used in.

Effect on other products

The activity of the TH terminals causes momentary voltage fluctuations on the terminals which is superposed to the power supply wave shape.

Storage

TH may be stored in enclosed ventilated spaces in the temperature range of 0–40 °C with relative humidity of max. 80 %. Protect the thermostats from impacts.

Disposal

Take the product to a scrap yard.

Possible minor faults and their removal

The thermostat may be repaired only by the manufacturer.

Warranty

According to the current law unless otherwise agreed.

The manufacturer will refuse the warranty if the device has been damaged:

- during transport and storage by the purchaser or his customers
- during assembly or disassembly in the purchaser's or his customer's appliance.
- during incompetent handling and installation in another appliance than stated in the manual.
- if the thermostat was in a different environment than stated in the manual.

Warranty and post-warranty repairs

All repairs are provided by the manufacturer. Wrap the faulty product and ship to the address below:

APATOR METRA s.r.o.
Havlíčkova 919/24
787 01 Šumperk

Tel.: 583 718 263
Fax: 583 718 150
E-mail: prodej@metra-su.cz
www: http://www.metra-su.cz