



RAM-TR



RAM-TW

Strap-on Thermostats

Electromechanical TR and TW

RAM-TR...
RAM-TW...

- **Temperature control or limitation with single-pole changeover microswitch**
- **Switching capacity contact connection 1-2: 0.2...16 A, AC 250 V**
contact connection 1-3: 0.2...2.5 A, AC 250 V
- **Mounting choices: surface-mounted on pipes or storage tanks**

Use

Typical applications:

- In heat generation plant (control or supervision of the water temperature, control of pumps, valves, etc.)
- For general use in heating, ventilation and air conditioning plant

Function

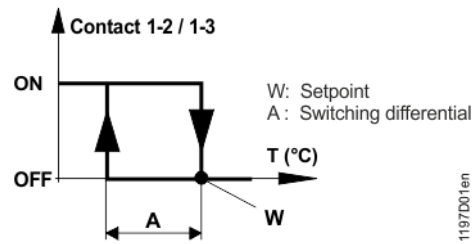
Changeover switch
(S.P.D.T)

When the externally adjustable setpoint of the control thermostat (TR) is reached on rising medium temperature, contact connection 1-2 changes over to 1-3.

When the internally adjustable switch-off temperature of the thermal reset limit thermostat (TW) is reached on rising medium temperature, contact connection 1-2 changes over to 1-3.

When the temperature of the medium falls by the value of the switching differential, the contact connection reverts (1-2 closes, 1-3 opens).

Changeover contact



Type summary

| Standard set | Setpoint or switch-off temperature range | Scope of delivery |
|--------------|---|--------------------------------------|
| RAM-TR.2000M | 20...90 $^{\circ}\text{C}$, externally adjustable | Fixing spring, Mounting Instructions |
| RAM-TW.2000M | 20...90 $^{\circ}\text{C}$, internally adjustable | Fixing spring, Mounting Instructions |

Ordering

When ordering, please give type reference according to <<Type summary>>.

Mechanical design

The housing of the thermostat is made of PA6 (reinforced) and is designed for surface mounting. The bimetal sensing element is mounted on a steel plate.

Notes

Mounting aid


Installation Instructions are enclosed in the package.

Mounting location

Ensure that there is sufficient clearance above the thermostat for adjusting the setpoint resp. the switch-off temperature and for removing and replacing the device, if required.

Pipe mounting

Attach the fixing spring to the mounting plate. It must be properly tightened to ensure that the entire length of the sensing element is in close contact with the pipe's surface. With the delivered spring clip the thermostat can be mounted on pipes with diameters between 16 mm and 115 mm.

 Temperature adjustment

With the TW, the switch-off temperature may only be adjusted by qualified staff.

 Wiring

The thermostat must be wired by qualified staff. The cables used must meet the insulation requirements for mains voltage.

Stripping



Max. 9 mm

 Max. AC 250 V

Wiring must be made in accordance with the connection diagram and in compliance with local regulations.

Caution: Before opening the housing, disconnect the thermostat from the mains supply.

Disposal



The device is considered electrical and electronic equipment for disposal in terms of the applicable European Directive and may not be disposed of as domestic garbage.

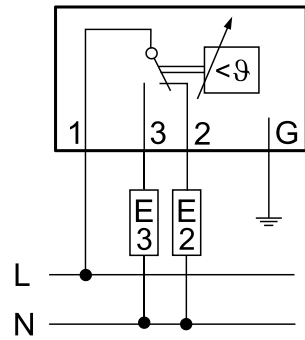
- Dispose of the device via the channels provided for this purpose.
- Comply with all local and currently applicable laws and regulations.

Technical data

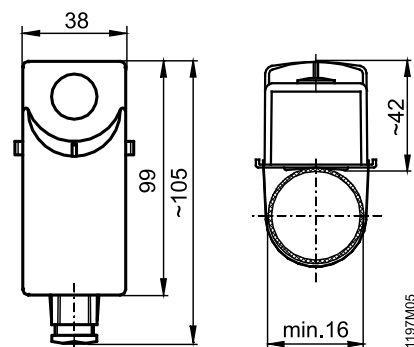
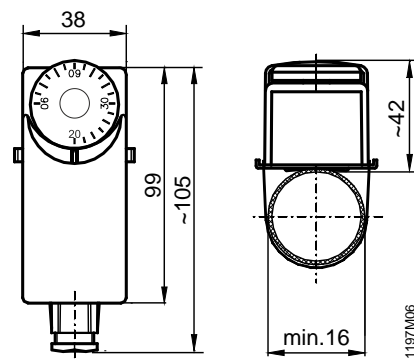
| | | | |
|--------------------------------------|---|---|--------------------|
| Switching mechanism | Switching capacity | | |
| | Nominal voltage range | AC 24...250 V | |
| | Nominal current range I (I _M) | Terminals 1-2 | 0.2...16 A |
| | | Terminals 1-3 | 0.2...2.5 A |
| | External fuse | 16 A | |
| | Life expectancy at nominal rating | min. 200,000 switching cycles | |
| | Safety class | I to EN 60 730 | |
| | Degree of protection | IP20 to EN 60 529 | |
| | Adjustable temperature range | | |
| | RAM-TR and RAM-TW | 20...90 °C | |
| | Thermal switching differential | approx. 8 °C ±2 °C | |
| | Norms and standards | EU conformity (CE) | CE1T1198xx *) |
| | | EAC conformity | Eurasia conformity |
| Product standards | Automatic electrical controls for household and similar use | EN 60 730-11 | |
| | Special requirements for temperature-dependent controls | EN 60 730-2-11 | |
| | Type 2 action | BL | |
| | Radio interference protection | click rate N ≤5 to EN 55 014 | |
| Environmental conditions | Operation | class 3K5 to IEC 60 721-3-3 | |
| | Max. temperature at the sensing element | 110 K | |
| | Ambient temperature | max. 85 °C (T85) | |
| | Humidity | <95 % r.h. | |
| | Mechanism | class 3M2 to IEC 60 721-3-3 | |
| | Storage and transport | class 2K3 to IEC 60 721-3-2 | |
| | Ambient temperature | -25...+70 °C | |
| | Humidity | <95 % r.h. | |
| | Max. temperature at the base | 110 °C | |
| | Degree of pollution | 2 normal to EN 60 730 | |
| Accuracy | Controlled medium: | water, oil | |
| | Calibration deviation | ±2 °C | |
| | Manufacturing deviation temperature range | T.Min. ± 4 °C / T.Max. ±6 °C | |
| Influence of the ambient temperature | | -0.2 °C / °C | |
| | | | |
| Connection | Electrical connection | screw terminals for wires 0,75 to 1,5 mm ² | |
| | Cable entry | cable 7.5 mm dia. | |
| General data | Housing color | RAL 7035 (light-grey) | |
| | Sensing element | bimetal | |
| | Weight of standard set RAM-TR | | 0.13 kg |
| | | RAM-TW | 0.13 kg |

*) The documents can be downloaded from <http://siemens.com/bt/download>.

Connection diagram



Dimensions



Published by:
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www.siemens.com/buildingtechnologies

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