



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 C-1: 0.2...16 A, AC 250 V
contact connection C-2: 0.2...16 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

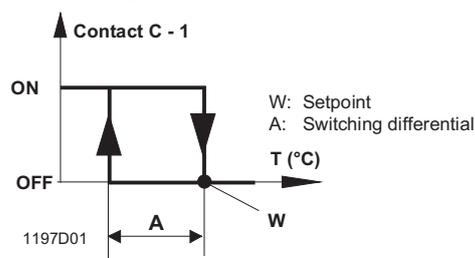
Changeover switch
(S.P.D.T)

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

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

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

Changeover contact



Type summary

Standard set	Setpoint or switch-off temperature range	Scope of delivery
RAM-TR.2000M	0...90 °C, externally adjustable	Fixing spring, Mounting Instructions
RAM-TW.2000M	0...90 °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

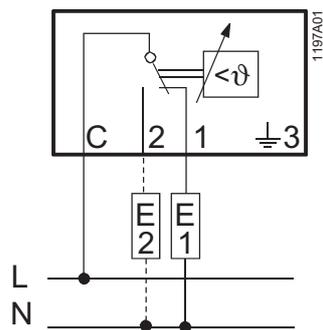
Wiring must be made in accordance with the connection diagram and in compliance with local regulations.

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

Technical data

Switching mechanism	Switching capacity		
	Nominal voltage range	AC 24...250 V	
	Nominal current range I (I _M)	Terminals C-1	0.2...16 A
		Terminals C-2	0.2...16 A
	External fuse	16 A	
	Life expectancy at nominal rating	min. 200,000 switching cycles	
	Safety class	II to EN 60 730	
	Degree of protection	IP 40 to EN 60 529	
	Adjustable temperature range		
	RAM-TR and RAM-TW	0...90 °C	
	Thermal switching differential	approx. 8 °C ± 2 °C	
Norms and standards	 conformity		
	Electromagnetic compatibility	2004/108/EC	
	Low-voltage directive	2006/95/EC	
	C-tick	 N474	
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	
Connection	Influence of the ambient temperature	-0.2 °C / °C	
	Electrical connection	screw terminals for wires 0,75 to 1,5 mm ²	
General data	Cable entry	cable 7.5 mm dia.	
	Housing color	RAL 7035 (light-grey)	
	Sensing element	bimetal	
	Weight of standard set RAM-TR	0.13 kg	
RAM-TW	0.13 kg		

Connection diagram



Dimensions

