

TLC: Thermostat with room sensor, for industrial use

How energy efficiency is improved

Demand-led controlling and monitoring without auxiliary energy.

Areas of application

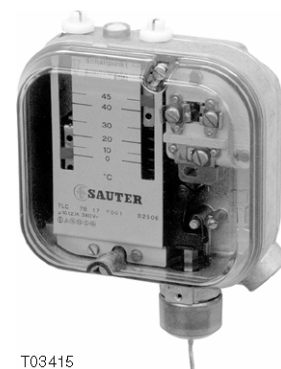
For controlling and monitoring the temperature, especially suitable for equipment that is subject to vibrations and for halls, large rooms and industrial premises.

Features

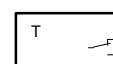
- Temperature range: 0 to 45 °C setting
- Contact rating: 1 mA, 6 V to 10 A, 400 V
- Gold-plated silver contacts
- Upper and lower switching points can be set independently
- Sealable
- 8 min. time constant at 0.5 m/s

Technical description

- Light-alloy housing with transparent cover
- Splash-proof
- Ambient temperature: -40 to +55 °C
- IP 54 with accessories

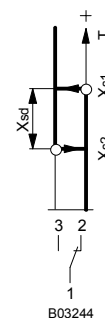


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Type	Setting range °C	Smallest switching difference ¹⁾ K	Weight kg
TLC 7B17 F001	0...45	1,0...2,2	0,65
Contact rating as silver contacts ²⁾ for higher loading		Transport and storage temp. -40...55 °C Perm. ambient temp. -40...55 °C	
max.	10(2) A, 400 V~	Degree of protection IP 44 (EN 60529)	
min.	25 W, 250 V=	Protection class I (IEC 60730)	
as gold contacts ³⁾ for lower loading		Wiring diagram A01497	
max.	100 mA, 24 V	Dimension drawing M259248	
min.	200 mA, 50 V	Fitting instructions MV 23157	
Time constant at 0,15 m/s	12 min		
at 0,5 m/s	8 min		



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Variants (otherwise as F001)

TLC 7B17 F021 Degree of protection IP 67 (EN 60529). Cover of aluminium, with inspection window and seal. Cable screw fitting Pg 13,5.

Accessories

- 0044529 000** Plug spanner for the setting screws
- 0233310 000** Aluminium cover with window (with accessory 0259299 000 = IP 54)
- 0259189 000*** Bracket for off-wall mounting
- 0259299 000** Cable screw fitting Pg 13,5
- 0259409 000*** Bracket (for 3-point fixing when used with 0259189)
- 0259735 000** Sheath for sensor (for TLC 7B17 only)

*) Dimension drawing or wiring diagram are available under the same number

- 1) The small values apply to the high setting points, the large values to the low ones.
- 2) If under inductive load, take RC circuit into account.
- 3) If the contacts are ever loaded higher than 200 mA and 50 V, the gold plating will be damaged. The contacts are then classed only as silver contacts, since they lose the properties of gold contacts.

Operation

Whenever the temperature exceeds the upper switching point (which can be set on the right-hand scale), the contacts switch over from 1-2 to 1-3.

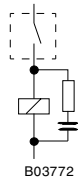
When the temperature falls below the lower switching point (which can be set on the left-hand scale), the contacts switch over from 1-3 to 1-2.

The vibration-proof snap-action switch has a pre-loaded spring which prevents the change-over mechanism from operating until the switching point has been attained. This ensures that the contacts remain fully closed right up to the switching point, even if operation is very slow.

Additional technical data

Complies with:-

Directive 2006/95/EC	EN 60730-1/ EN 60730-2-9
EMC directive 2004/108/EC	EN 61000-6-1/ EN 61000-6-2 EN 61000-6-3/ EN 61000-6-4



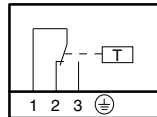
Technical notes

RC circuit under inductive load

For the optimum RC circuitry, refer to the specifications supplied by the manufacturers of the relays, contactors etc. If these are not available, the following rule of thumb can be applied in order to reduce the inductive load:-

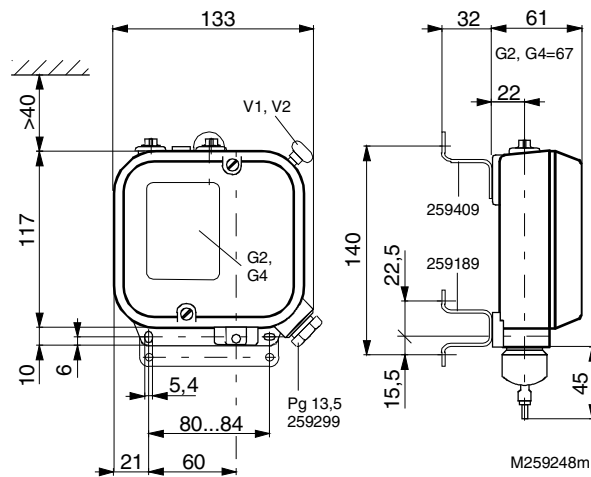
- Capacitance of the RC circuit (μF) is equal to or greater than the operating current (A).
- Resistance of the RC circuit (Ω) is approx. equal to the resistance of the coil (Ω).

Wiring diagram



A01497a

Dimension drawing



Accessories

