

Double thermostat

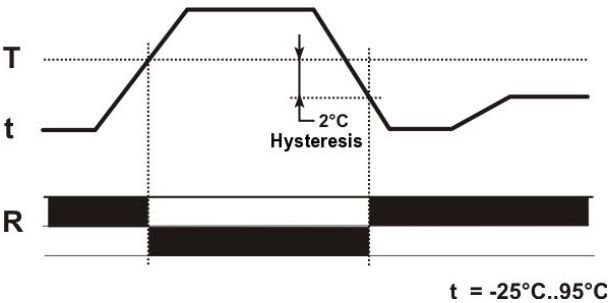
1. Device description

DTR01 keeps independently for both channels set reference temperature with hysteresis 2°C. Relay has two output contacts 16 A.

Terminal description	Terminal placement	Connection diagram
1 Supply voltage 2 Terminals for probe connection 3 2nd channel output indication 4 1st channel output indication 5 1st channel of target temp. 6 Fine temp. adjustment for 1st channel 7 Fine temp. adjustment for 2nd channel 8 2nd channel of target temp. 9 2nd channel output 10 1st channel output	The diagram shows the physical layout of the DTR01 terminal block. It is a DIN rail mountable device. Callout 1 points to the top terminal for supply voltage. Callout 2 points to the probe connection terminals. Callout 3 points to the 2nd channel output indication. Callout 4 points to the 1st channel output indication. Callout 5 points to the 1st channel target temperature potentiometer. Callout 6 points to the fine temperature adjustment for the 1st channel. Callout 7 points to the fine temperature adjustment for the 2nd channel. Callout 8 points to the 2nd channel target temperature potentiometer. Callout 9 points to the 2nd channel output terminal. Callout 10 points to the 1st channel output terminal. A DIN rail is shown on the left. A wiring diagram below shows the internal connections: L and N are connected to the top terminal; T1 and T2 are connected to the bottom terminal; C is connected to the 1st channel output terminal; 15 and 25 are connected to the 2nd channel output terminal.	The wiring diagram shows the electrical connections for the DTR01. It includes two temperature sensors: Temp. sensor channel 1 (T1) and Temp. sensor channel 2 (T2). The sensors are connected to the T1 and T2 terminals. The control relays are connected to the R1 and R2 terminals. The control relays are labeled R1 and R2. The control relays are connected to the 15 and 18 terminals for channel 1, and the 25 and 28 terminals for channel 2.

2. Function

If the set temperature value T is not reached, output relay R is closed. When requested set temperature is reached, relay R is disconnected. Re-connection of relay R is made at the moment of measured value decline under the set level T minus hysteresis 2°C. Hysteresis eliminates relay bouncing at boundary values of temperature. Every channel is totally independent.



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Notice

1.

While both relays are disconnected, green LED is blinking (indication of device under operation).

2.

If during normal regulation any of relay failed, both output relays disconnect (green LED blinking) and yellow LED starts blink to indicate probe failure.

3.

Position TEST on the turn knob is reserved for probe test. If probe is without any failure, only green LED is blinking, yellow LED is off. If probe is broken, yellow LED is blinking. If there is short circuit on probe, yellow LED is on. If the turn knob will be set on TEST position for both probes, only the first probe is indicated. Second probe is ignored.

4.

Minimum time of output connection is 5 second. Minimum time of output disconnection is 5 second.

3. Technical features

Parameter	Value
Supply voltage	230 VAC, 50 Hz
Supply terminals	L, N
Power consumption	Max. 1.5 VA
Measuring temperature range	-25°C ... +95°C
Measuring terminals	T1 – C, T2 – C
Sensor type	BMR RT_P, NTC 3k3
Supply voltage indication	green LED blinking
1 st channel output relay indication	yellow LED
2 nd channel output relay indication	green LED
Output parameters	
Number and type of contacts	2 x switching contact (one per channel)
Nominal current	16 A
Switching power	max. AC 4000 VA
Trigger current	30 A
Nominal voltage / max. switching voltage	250 VAC / 440 VAC
Mechanical lifetime	3 x 10 ⁷ cycles
Electrical lifetime	1 x 10 ⁵ cycles (250 VAC, 8 A)
Others	
Working temperature	-20 ... +55 °C
Storage temperature	-40 ... +70 °C
Working position	any
Mounting	IEC 60715 (DIN 35)
Protection degree	IP 40 on panel / IP 20 terminals
Electrical strength	4 kV
Conductor rigid and flexible	0.2 ... 2.5 mm ²
Weight	75 g
Dimensions	90 x 18 x 65 mm
Standards	IEC 60255-6, IEC 61010