

Temperature Limit Value Switch

Characteristics (type TEX0... with normally open or normally closed contact)



Input:	Pt100 / Pt500 / Pt1000 / 4...20 mA / NTC / PTC / thermocouple type K / J / L
Output:	relay point (make contact or break contact) 250 VAC / 5A
Supply:	24 VDC +/- 20%
Indication:	status of relay with LED red
Accuracy:	< ± 0,5% FS
Hysteresis:	adjustable for 20% of range
Protection:	IP 00
Mounting:	connection head B-HD / BUS / BUZ / adaptor top hat rail

Characteristics (type TEX1... with changeover contact)



Input:	Pt100 / Pt500 / Pt1000 / 4...20 mA / NTC / PTC / thermocouple type K / J / L
Output:	relay point (changeover contact) 250 VAC / 5A
Supply:	24 VDC +/- 20%
Indication:	status of relay with LED red
Accuracy:	< ± 0,5% FS
Hysteresis:	adjustable for 20% of range
Protection:	IP 00
Mounting:	connection head B-HD / BUS / BUZ / adaptor top hat rail

Technical data

Input

Sensor:	Pt100 / Pt 500 / Pt 1000 (2-wire) / NTC / PTC thermocouple type K / L / J (other types on request)
Adjustment:	any set point within the whole measuring range with 1 potentiometer

(factory-set sensor input and preselect of range with solder bridge)

Output

Relay:	TEX0...: 1 potential free contact (250 VAC / 5 A) (make contact or break contact is factory-set with solder bridge)
	TEX1...: 1 potential free changeover contact (250 VAC / 5 A)
switching behaviour	see page 2
Hysteresis:	for 20 % of measuring range adjustable

Indication

Status relay:	LED 3 mm, red
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Accuracy

Error of measurement:	< ± 0,5 % FS
Temperature coefficient:	50 ppm/K

Power supply:

Supply voltage:	24 VDC ± 20 % (reverse battery protected)
Current consumption:	approx. 30 mA

Ambient conditions:

Operating temperature:	-20 bis + 70 °C
Storing temperature:	-20 bis + 80 °C

Mechanics:

Enclosure:	ø 49,5 mm x 28,5 mm
Mounting:	2 borings for M 4
Material enclosure:	synthetic blue
Protection:	IP 00 (when not built-in)
Weight:	approx. 100 g
Connection:	terminal screws on top, up to 1,5 mm ²
Mounting:	in connecting head type B-HD / BUZ / BUS with adaptor on top hat rail

Applications

For use as a low-cost limit value switch or as an on-off controller (substitution for a thermostat or thermal time delay switch). Mounted in a suitable enclosure it is for use in all ranges.



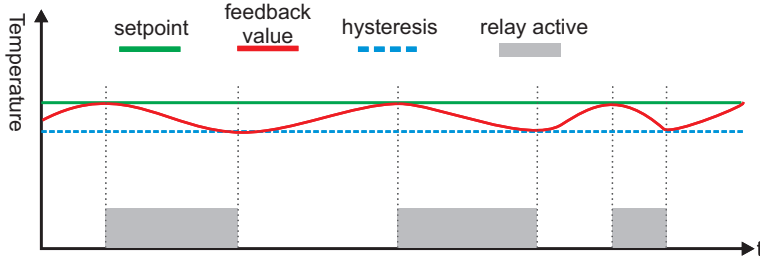
Ordering Code

T	E	X	X	X	X	X	X	-	X	X	X
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Input:	Pt 100 (2-wire), TC type K other* (please indicate)	A B									
Output:	1 make contact / break contact** (please indicate) 1 changeover contact		0 1								
Switching behaviour:	maximum (switching when feedback value becomes > setpoint) minimum (switching when feedback value becomes < setpoint)		0 1								
Range switch point:	Pt 100 from -90 to +100°C other range*** (please indicate)				0 1						
Switch point:	not adjusted adjusted ****(please indicate)					0 1					
Other / accessories:	special model adaptor for top hat rail									0 1	

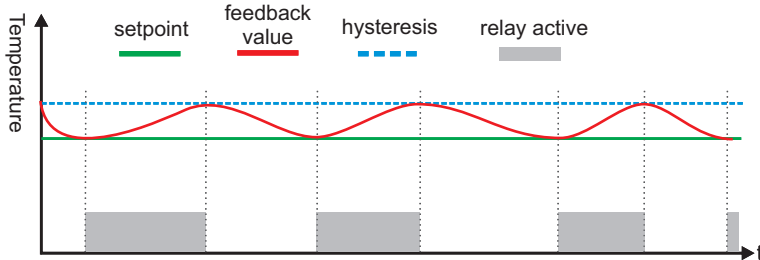
*Input: Pt500 / Pt1000, thermocouple type J / L, NTC / PTC / other sensors on request
 **Output: make contact or break contact
 ***Range switch point: Pt 100: 60...260°C / 230...460°C / 390...650°C, thermocouple type K: -200...+800°C, other ranges on request
 ****adjusted: eg +65°C and a short description about the function of the limit value switch in the installation

Behaviour of relay maximum



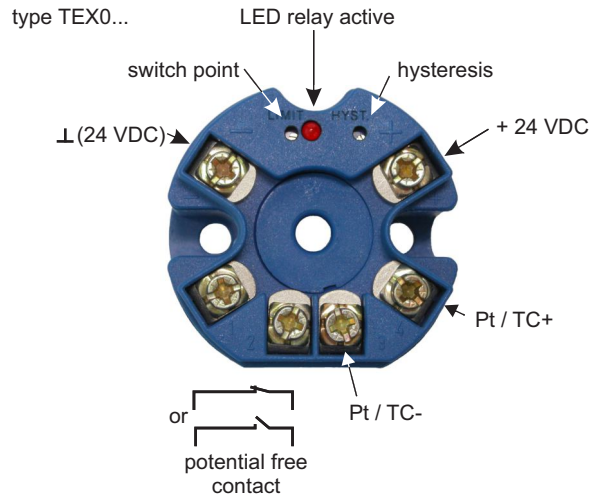
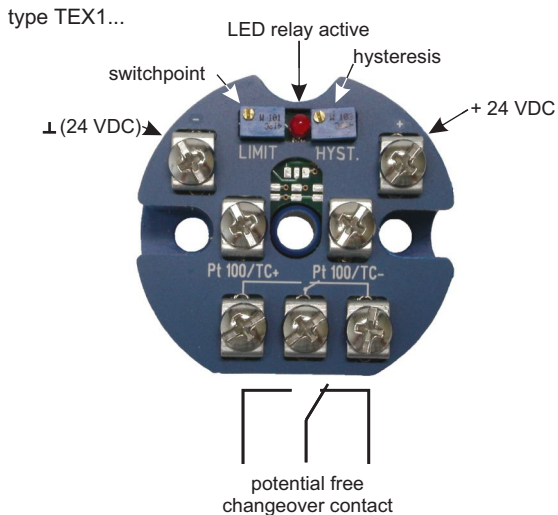
The relay becomes active, when the increasing feedback value has reached the setpoint and remains active until the feedback value has gone down to the adjusted value of hysteresis (feedback value becomes less than setpoint). Example closed loop: relay with break contact. The temperature increases, until the setpoint is reached. The relay operates (contact breaks, heating stops). The temperature decreases to the value of the adjusted hysteresis and the relay is released. The heating circuit is closed again and the temperature increases. Tip: when hysteresis is adjusted too small the relay possibly flutters.

Behaviour of relay minimum



The relay becomes active, when the decreasing feedback value reaches the setpoint and remains active until the increasing feedback value reaches the adjusted value of hysteresis (feedback value is more than setpoint). Example closed loop: relay with make contact. The temperature increases until the feedback value reaches the value of the adjusted hysteresis. The relay releases (contact breaks, heating stops). The temperature goes down to the setpoint and the relay operates. The heating circuit is closed again and the temperature increases. Tip: when hysteresis is adjusted too small the relay possibly flutters.

Connection



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