

TER-7 | Thermostat for monitoring temperature of motor winding



EAN code
TER-7: 8595188137164

Technical parameters		TER-7
Function:	monitoring temperature of motor winding	
Supply terminals:	A1-A2	
Voltage range:	AC/DC 24 - 240 V (AC 50-60 Hz)	
Burden:	max. 2 VA/1 W	
Max. dissipated power (Un + terminals):	2.5 W	
Supply voltage tolerance:	−15 %; +10 %	
Measuring circuit		
Measuring terminals:	Ta-Tb	
Cold sensor resistance:	50 Ω - 1.5 kΩ	
Upper level:	3.3 kΩ	
Botton level:	1.8 kΩ	
Sensor:	PTC temperature of motor winding	
Sensor failure indication:	blinking red LED	
Accuracy		
Accuracy in repetition:	< 5 %	
Switching difference:	± 5 %	
Temperature dependance:	< 0.1 %/°C	
Output		
Number of contacts:	2x changeover/DPDT (AgNi/Silver Alloy)	
Current rating:	8 A/AC1; 1/2 HP 240 Vac; PD. B300	
Breaking capacity:	2000 VA/AC1, 192 W/DC	
Inrush current:	10 A/< 3 s	
Switching voltage:	250 V AC/24 V DC	
Mechanical life:	30.000.000 ops.	
Electrical life (resistive):	100.000 ops.	
Other information		
Operating temperature:	−20 .. 55 °C (−4 .. 131 °F)	
Storage temperature:	−30 .. 70 °C (−22 .. 158 °F)	
Dielectrical strength:	4 kV (supply - output)	
Operating position:	any	
Mounting:	DIN rail EN 60715	
Protection degree:	IP40 from front panel/IP20 terminals	
Overvoltage category:	III.	
Pollution degree:	2	
Max. cable size (mm²):	solid wire max. 1x 2.5 or 2x 1.5/ with sleeve max. 1x 2.5 (AWG 12)	
Dimensions:	90 x 17.6 x 64 mm (3.5" x 0.7" x 2.5")	
Weight:	71 g (2.5 oz.)	
Standards:	EN 60255-1, EN 60255-26, EN 60255-27, IEC 60730-2-9	

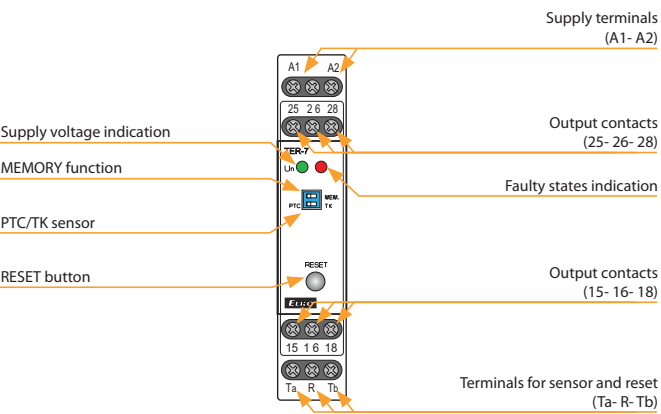
Note

Sensors could be in series in abide with conditions in technical specification - switching limits.

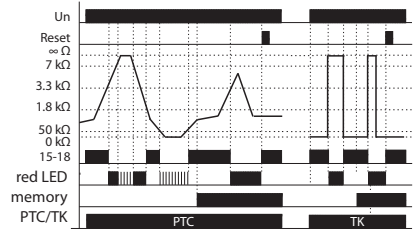
Warning:
In case of supply from the main, neutral wire must be connected to terminal A2!

- It monitors motor coil temperature.
- Fixed levels of switching.
- PTC sensor is used for sensing, it is in-built in motor winding by its manufacturer or there is used an external PTC sensor.
- MEMORY function - relay is blocked in an error state until until operator intervention (press RESET button).
- RESET of faulty state:
 - a) button on the front panel
 - b) by external contact (remote by two wires).
- Terminals of sensor are galvanically separated, they can be shorted out by terminal PE without damaging the device.
- In case device is supplied from network, neutral wire must be connected to terminal A2.

Description



Function



The device controls temperature of motor winding with PTC thermistor which is mostly placed in motor winding or very close to it. Resistance of PTC thermistor run to max 1.5 kΩ in cold stage. By temperature increase the resistance goes strongly up and by overrun the limit of 3.3 kΩ the contact of output relay switch off - mostly contactor controlling a motor. By temperature decrease and thereby decrease of thermistor resistance under 1.8 kΩ the output contact of relay again switches on. The relay has function "Control of sensor fault". This controls interruption or disconnection of sensor. When switch is in position "TK" monitoring of faulty sensor is not functional - it is possibel to connect bimetal sensor with only 2 states: ON or OFF. The device can work with bi-metal sensor in this position. Other safety unit is function "Memory". By temperature overrun (and output switches off) the output is hold in faulty stage until service hit. This bring the relay to normal stage (with RESET button) on front panel or by external contact (remote).

Connection

Symbol

