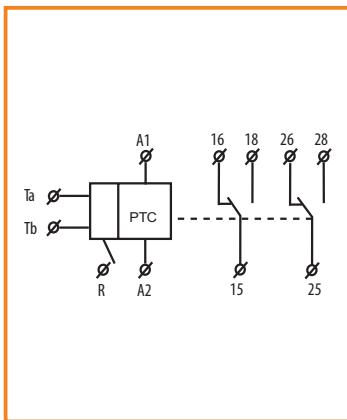


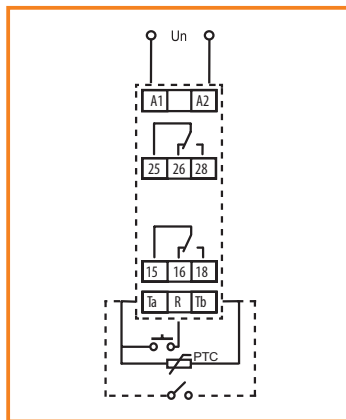


- Monitors temperature in range of PTC thermistor
- Fixed levels of switching
- PTC sensor is used for sensing, It is in-built in motor winding by its manufacturer
- MEMORY function - active by DIP switch
- RESET of faulty state:
 - a) button on the front panel
 - b) by external contact (remote by two wires)
- Function of short-circuit or sensor disconnection monitoring, red LED flashing indicates faulty sensor
- Output contact: 2x changeover / DPDT 8 A / 250 V AC1
- Red LED shines and indicates exceeded temperature
- Terminals of sensor are galvanically separated, they can be shorted out by terminal PE without damaging the device
- Multivoltage supply AC / DC 24-240 V
- 1-MODULE, DIN rail mounting

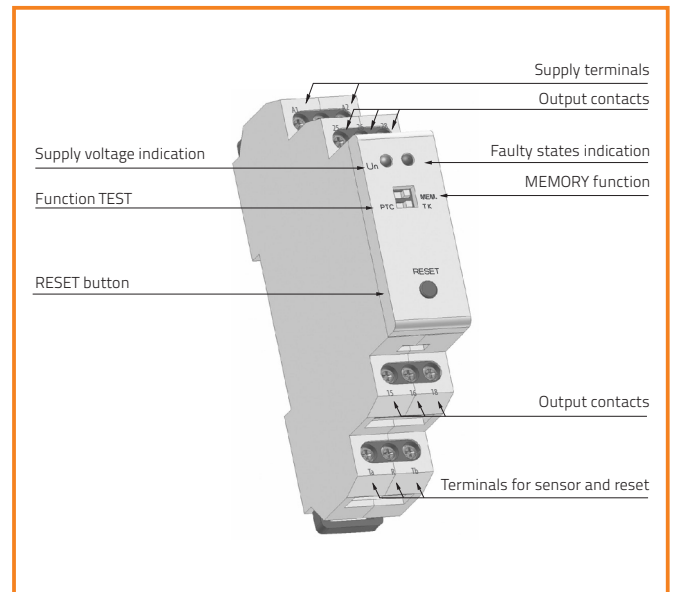
Symbol



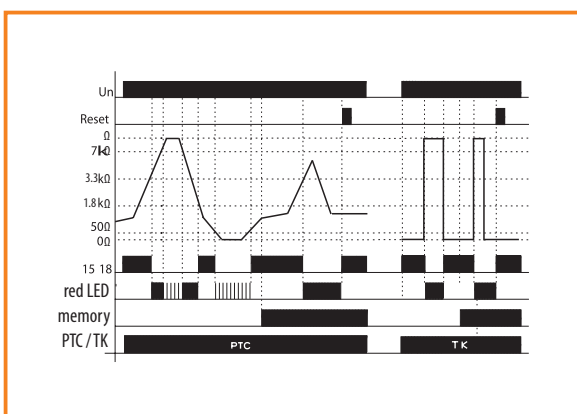
Connection



Description



Connection



Note: Sensors could be in series in abide with conditions in technical specification - switching limit.

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

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 possible 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).

Thermostat for monitoring temperature of motor winding TZ 220 E

Technical data		TZ 220 E
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	
Operating range	-15 % ; + 10 %	
Measuring circuit		
Measuring terminals	Ta - Tb	
Cold sensor resistance	50 - 1.5 k	
Upper level	3.3 k	
Bottom level	1.8 k	
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	2 x changeover / DPDT (AgNi / Silver Alloy)	
Current rating	8 A / AC1	
Breaking capacity	2000 VA / AC1, 192 W / DC	
Inrush current	10 A / < 3 s	
Switching voltage	250 V AC1 / 24 V DC	
Min. breaking capacity DC	500 mW	
Mechanical life	3 x 10 ⁷	
Electrical life (AC1)	0.7 x 10 ⁵	
Other information		
Operating temperature	-20 ... +55 °C	
Storage temperature	-30 ... +70 °C	
Electrical strenght	4 kV (supply - output)	
Operating position	any	
Mounting	DIN rail EN 60715	
Protection degree	IP 40 from front panel / IP 20 terminals	
Overvoltage category	III.	
Pollution degree	2	
Max. cable size (mm ²)	solid wire max. 1x2.5 or 2x1.5 / with sleeve max. 1x1.5	
Dimensions	90 x 17.6 x 64 mm	
Weight	83 g	
Standards	EN 60730-2-9, EN 61010-1	

Efficient installations