

Thermistor

The Thermistor protector trip relay monitors the temperature of a motor using the PTC sensor (positive temperature coefficient resistor) or thermostat (TK) switch built in to the motor winding. Relay contacts can be used to disconnect the supply to the motor should it overheat. LEDs indicate mains on and fault status.



Basic Parameters

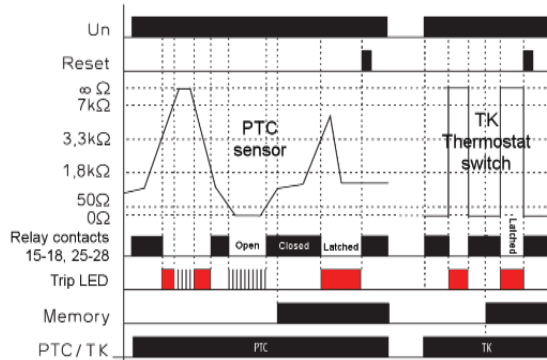
- Selectable PTC or TK modes
- Reset function
- Selectable memory function for latching
- Power on LED (green)

Part no.	Type	Protection
PMM/T	PTC, TK thermistors	Over-temperature

Operation

The Thermistor protector trip relay operates by de-energising a relay and illuminating a red LED when the thermistor detects a critical temperature condition. Should the motor overheat and the PTC resistance go above the 3.3kOhms, the relays de-energise. The contacts remain de-energised until the PTC resistance falls to 1.8kOhms. The selectable memory switch allows the option of latching the relay and the red LED stays illuminated until the reset button is pressed or triggered via the external reset switch. Any number of thermistors may be used in series connection providing the resistance at normal working temperature is less than 1500 ohms.

Characteristics

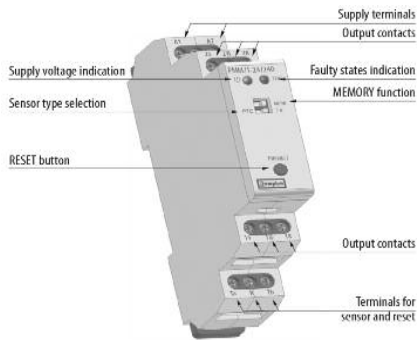


Thermistor

Technical parameters	PMM/T-24/240
PTC, TK thermistor	•
System type	Monitoring temperature of motor winding
Supply terminals	A1, A2
Input/thermistor terminals	Ta, Tb
Supply voltage	AC/DC 24-240V (AC 45-65Hz)
Supply voltage burden (max)	2VA max
Supply voltage tolerance	-15/10%
PTC sensor ranges	
Cold	50Ω - 1.5 kΩ
Lower limit	1.8 kΩ
Upper limit	3.3 kΩ
Sensor failure indication	Red LED flashes
Repetition accuracy (mech)	<5%
Switching error	35%
Temperature dependence	<0.1%/°C
Output relay-contact	2x change over (AgNi) plated
Output relay-contact terminals	15, 16, 18 & 25, 26, 28
Load capability of relay contact AC	250V/8A, max.2 KVA
Load capability of relay contact DC	24V 8A 500mW min
Mechanical life	3x10 ⁶ by rated load
Electrical life (AC1)	7 x 10 ⁶
ANSI no.	49
Operating temperature	-20 +55°C
Storage temperature	-30 +70°C
Electric strength (supplying -contact relay)	4kV/1min.
Oversvoltage category	III.
Pollution degree	2
Enclosure integrity	IP40 from the front panel/IP20 terminals
Enclosure style	DIN-rail, 1 module
Case material	Flame retardant polycarbonate
Connecting conductors profile (mm ²)	max.2x1.5mm ² /1x2.5mm ²
Dimensions	H90xW17.6xD64mm
Weight	83g approx
Standards	EN 60255-6, EN 60255-27, EN61000-6-2, EN6100-6-4

Protector Overview

PMM/T



Connection

PMM/T

