

Product Information

► Temperature Monitoring

Electric motor and machine protection:

Thermistor motor protection relay

Type: TMS

TMS-PTC-LB



- Basic information

The thermistor motor protection relay monitors the temperature of windings in electrical machines (as motors, generators and transformers) in conjunction with PTC/ thermistors. It provides safety protection against thermal overload.

- Application

The thermistor motor protection relay is used for:

- Heavy duty starting (Overloading).
- Restricted cooling.
- Frequent switching.
- Blocked rotor.
- Phase failure, with a consequent increase in the windings temperature.
- Heating and ventilating.
- Operating with a frequency converter.

- General function

The thermistor motor protection relay monitors up to six PTC-thermistors connected in series. Three phase AC motors are usually equipped with three sensors, pole-changeable three phase AC motors, with separate windings, require six sensors.

In normal operation the relay is activated, e.g. there is no thermal overload of the device. When the temperature of the PTC thermistor exceeds the tripping point, the motor protection relay is deactivated, (e.g. relay switches off) and triggers the power cut-off to the equipment, which it is monitoring. A fall in temperature causes re-activation of the relay (e.g. the relay switches on).

According to the internationally standardized tripping points the device provides switching-on and switching-off automatically.

Breaks in the sensor circuit, are indicated by the motor protection relay is deactivated.

- Advantages

- Internationally standardized on and off switch points.
- Universal interchange of the PTC thermistors.
- PTC thermistors, of all standardized operating temperatures, and conforming to DIN 44081 und DIN 44082 standards, are suitable for connection.
- Wire breakage in the sensor circuit indicated.
- The device operates according to the closed circuit current principle. This guarantees the secure stopping of the electrical machine, even in the event of a power blackout.
- Extremely cost effective.

Product Information

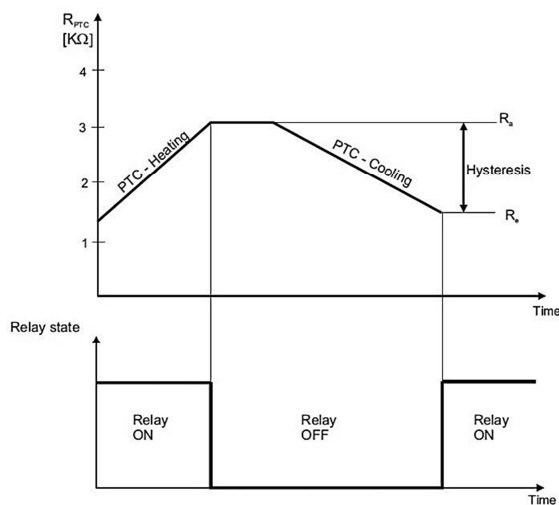
Temperature Monitoring

Electric motor and machine protection:

Thermistor motor protection relay

Type: TMS

TMS-PTC LB
with automatic re-activation



- Mechanical data

housing: plastic: Black
 material: ABS
 flammability: HB (UL94)
 housing dimensions: 52,5 x 76,3 x 50,2mm \pm 1,0
 (width x height x length)
 mounting: fixed to the mounting rail
 TS 35
 protection factor: IP 20

terminals: screwless type
 5,08mm pin spacing
 terminal size: 0,05 – 1,31mm²
 (solid and strands wire) 30 – 16 AWG
 Wire stripe length: 10mm

- Electrical data

supply voltage: 230VAC \pm 10% 50-60Hz
 (potential separation)
 max. 3VA

number of sensors: 1 channel
 (max. total resistance of Sensor: < 750 Ω)

Relay contact: 1 change-over contact
 switching capacity: 250V AC/5A / 1250VA
 30 V DC/5A / 150VA

ambient temperature: 0°C ... 60°C
 storage temperature: -40 ... +75°C
 Temperature tripping point:
 switch-off resistance R_a : 4,0 k Ω
 switch-on resistance R_e : < 1,65 k Ω

Identification to order: TMS – PTC – LB 230V

Order No.: 005062

Product Information

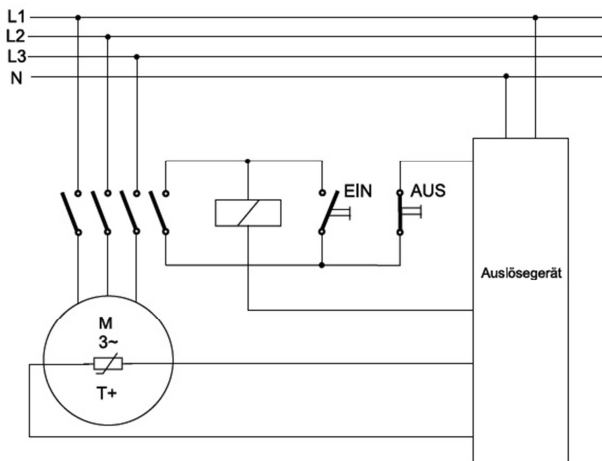
► Temperature Monitoring

Electric motor and machine protection:

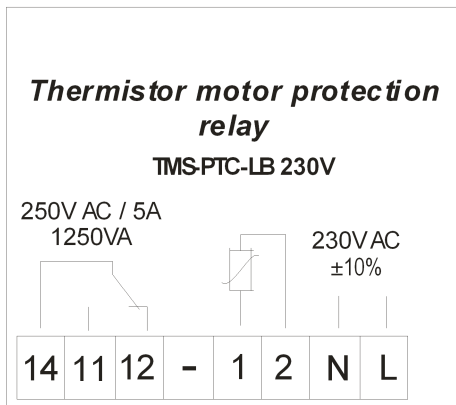
Thermistor motor protection relay

Type: TMS

Functional Diagram



Pin assignment



Attention:

- Never perform installation, maintenance or repair under voltage
- Check electrical components before installation for damage
- Not bring electrical components with liquids in combination
- To avoid injury or damage, only qualified personnel may work on the devices

Product Information

► Temperature Monitoring

Electric motor and machine protection:

Thermistor motor protection relay

Type: TMS

Responsibility:

No responsibility will be accepted for thermistors which have not been installed and tested according to the relevant standards as previously listed in our data sheet.

Due to the ongoing research and development program, product specification may be subject to change, at the manufacturers discretion.

For further advice and information contact: