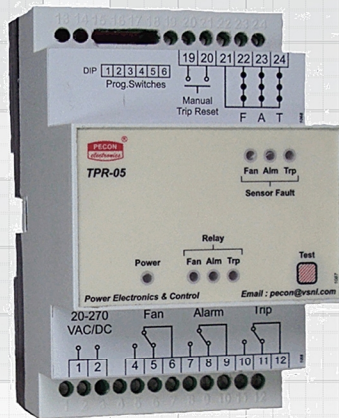


Power Electronics & Control

Since 1973

An ISO 9001:2008 Company



TPR-05

Thermistor Relay

Protection relay for Transformers & Motors

Standard Features:

- ❖ Provision to connect upto 3 PTC thermistor sensors in series for Alarm, Trip & Fan.
- ❖ Facility for Remote & Local Manual Trip reset (Auto reset can be done by shorting remote reset push-button terminals).
- ❖ Facility to test LEDs and Relays.
- ❖ Capable to detect sensor fault (Open or Short-circuited).
- ❖ Provisions to allow user to select / set :
 - * Fan sensors connected (Yes / No)
 - * Fan off delay (0 / 10 mins.)
 - * In sensor fault conditions, Alarm & Fan relay (on / off)
 - * Alarm Relay to energize at power on (healthy condition) and de-energize on fault **OR** Alarm Relay to de-energize at power on (healthy condition) and energize on fault.
 - * Trip Relay to energize at power on (healthy condition) and de-energize on fault **OR** Trip Relay to de-energize at power on (healthy condition) and energize on fault.
 - * Relay operations in Test mode (Yes / No).

TPR-05 is specifically designed for safe operation of transformers & motors. It is suitable for marshalling box installation and is built for long and trouble-free operation under extreme conditions for service associated with transformers & motors.

TPR-05 accepts three sensors in series for giving Alarm, Trip and to operate Fan. These sensors are to be installed in the windings. These sensors are sensitive devices and respond to specific temperature only. User therefore has to select appropriate sensors in line with requirement of their application.

Doc no. : 12010801



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Technical Specifications

Inputs : Upto 3 nos. thermistors in series for Fan, Alarm and Trip.

Mechanical

Dimension Standard : DIN 43880
Overall Dimensions : 70 (W) x 110 (H) x 75 (D) mm.
Material : Cover - Polycarbonate (FR-UL94V-0) & Base - Noryl (FR-UL94V-0)
Mounting : DIN rail TS-35 / TS-35D as per DIN 46277-3
Weight : 300 gms approx. (unpacked)

Electrical

Supply Voltage : 20 - 270 VAC/DC (40-400 Hz)
Outputs : Three relay contacts (one C/O contact for – Fan, Alarm & Trip)
Contact Rating : For resistive load, 5A @ 230VAC & 0.6A @ 125VDC
For inductive load, 5A @ 230VAC ($\cos\phi = 0.4$) & 0.3A @ 125VDC (L/R=7msec).
Insulation : Will withstand for 1 minute when 2.5 KVAC applied between
Relay contacts & Sensor terminals
Relay contacts & Auxilliary supply terminals
Auxilliary supply & Rensors terminals
Power consumption : Max. 10VA

Electromagnetic compatibility (EMI / EMC)

Interference Immunity to : IEC 61000-6-2
Electrostatic Discharge : IEC 61000-4-2, level 3 (8KV with Contact & 815KV in Air)
Electrical Fast Transient : IEC 61000-4-4, level 4 (4KV, 5KHz)
Surge : IEC 61000-4-5, level 4 (4KV, 1.2/50 μ S)

Environmental

Operating conditions : Amb. Temp. : -20 °C to 70 °C, R.H. : 95% Max non-condensing.
Storage Temp. : -20 °C to 85 °C
Test conditions : Amb. Temp. : 27 °C \pm 5 °C, R.H. : 20 - 80% non-condensing.
Vibration : 10-150 Hz, 0.004" displacement
Shock : 15g, hafl sine wave, in 3 orthogonal planes
Ingress Protection : IP-20

Sensor

Type : PTC Thermistor
Assembly : Single Sensor
Sensor Diameter : Max. 4 mm.
Lead Length : 500 mm. (\pm 10 mm.)

Response Temp °C	Wire Color (DIN 44081)	PECON Part No.
70	White / Brown	PTS-70
80	White / White	PTS-80
90	Green / Green	PTS-90
100	Red / Red	PTS-100
110	Brown / Brown	PTS-110
120	Grey / Grey	PTS-120
130	Blue / Blue	PTS-130
140	White / Blue	PTS-140
150	Black / Black	PTS-150
160	Blue / Red	PTS-160

Terminal Details

