250 Series DIN-rail and Wall Mounted Relays

Thermistor Trip

Many motors, transformers and generators are fitted with positive temperature co-efficient thermistor temperature sensors. The addition of a thermistor trip relay will provide full protection against sustained overload, single phasing, locked rotor, blocked ventilation and high ambient temperature. Thermistor trip relays continuously monitor the working temperature inside electrical equipment. When the temperature exceeds a safe limit, the relay can be used to shut down equipment until it regains a safe operating temperature.

Operation

Thermistors are simple low cost temperature sensors. The thermistor trip protector operates by de-energising a relay when the thermistors detect a critical temperature condition. An illuminated green LED indicates when the temperature is within normal working limits. Any number of thermistors may be used in series connection providing the resistance at normal working temperature is less than 1500 ohms.

There are no user adjustments on this relay.

Model 252-PMT will automatically reset when temperature returns to normal. For model 252-PMM, fitting a link between terminals R1 and R2 will latch the product in its tripped state when an over-temperature condition is detected. The relay can be reset by pressing the front panel reset switch, opening the R1–R2 link, or interrupting the auxiliary supply.

Features

Trip range 2500 to 3500 ohms
Reset range 1500 to 2300 ohms
LED trip indication
Automatic or manual reset options
Double-pole relay contacts

Benefits

High temperature protection
Sustained overload protection
Single phasing protection
Locked rotor protection
Blocked ventilation protection

Applications

Switchgear
Distribution systems
Generator sets
Control panels
Process control
Motor protection
Transformers
Overload protection

Product Codes

Relay	Protection	ANSI no.	Cat. no.
PTC thermistors	Over-temperature, manual reset	49	252-PMM
PTC thermistors	Over-temperature, automatic reset	49	252-PMT

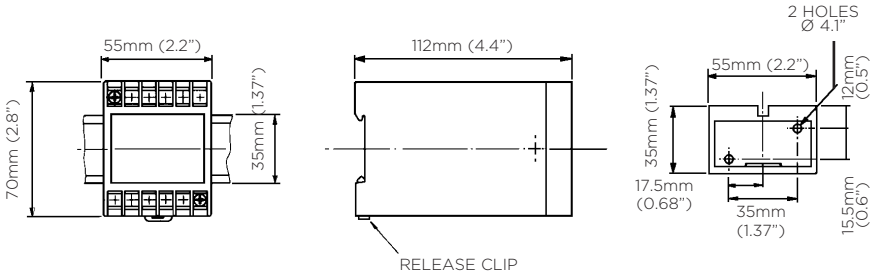
Please specify system voltage, frequency and required options at time of ordering.

Specification – Thermistor Trip

Nominal voltage	110V, 120V, 220V, 230V or 240V ac ±20%
Input	Positive temperature coefficient thermistors (series connected 1500Ω at normal temperature)
System frequency	50/60Hz
Voltage burden	2VA approx.
Overload	1.2 x rating continuously
Trip level	2500 to 3500Ω reset 1500 to 2300Ω
AC auxiliary supply voltage	100V, 110V, 120V, 208V, 220V, 240V, 480V, ±20%
DC auxiliary supply voltage	12V, 24V, 48V, 110V or 125V, ±20%. Including ripple
Auxiliary voltage burden	4VA (max)
Output relay	2-pole change over
Relay contact rating	AC: 240V 5A non inductive DC: 24V, 5A resistive
Relay mechanical life	0.2 million operations at rated loads
Relay reset	Model 252-PMT: Automatic Model 252-PMM: Manual
Operating temperature	0°C to +60°C (0°C to +40°C for UL models)
Storage temperature	–20°C to +70°C
Temperature co-efficient	0.05% per °C
Interference immunity	Electrical stress surge withstand and non-function to ANSI/IEEE C37 90a
Enclosure style	DIN-rail with wall mounting facility
Material	Flame retardant polycarbonate/ABS
Enclosure integrity	IP50
Model 252 dimensions	55mm (2.2") wide x 70mm (2.8") high x 112mm (4.4") deep
Weight	0.4Kg approx.

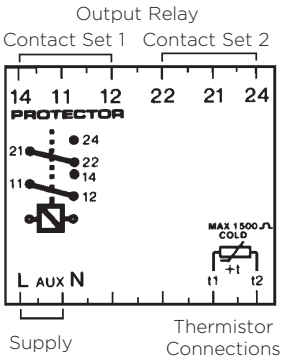
Dimensions

Model 252



Connections

252-PMT



252-PMM