
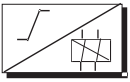


**Thermistor Trip Relay**  
Protector Trip Relay Series  
ANSI No. 49



© Ziegler Instruments Order No. Thermistor Trip Relay Data sheet-E1.R0-920827-47-2013-EN

### Models available

	
Function / System	Product Type
Automatic reset	252-PMT
Manual reset	252-PMM

### Applications

Thermistor Trip Relay, when used in conjunction with positive temperature co-efficient thermistors, will help protect against:-

- Sustained overload
- Single phasing
- Locked rotor
- Blocked ventilation
- High ambient temperature

### Features

- LED trip indication
- 2 pole relay contacts
- Auto/Manual reset

### Introduction

The protector operates by de-energising a relay when the thermistors fitted into a motor stator 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 total resistance at normal working temperature is less than 1500 ohms.

### Specifications

<b>Input</b>	: Positive temperature coefficient thermistors (series connected) 1500W maximum at normal temperature)
<b>Range</b>	: Trip 2500-3500Ω Reset 1500-2300Ω

#### Output Relay

<b>Type</b>	: D.P. Changeover
<b>Rating A.C.</b>	: 240V, 5A non-inductive
<b>D.C.</b>	: 24V 5A resistive
<b>Operations</b>	: 0.2 million at the above load
<b>Status</b>	: Normally energised - green LED illuminated. De-energised above trip point
<b>Reset</b>	: PMT - Automatic PMM - Manual. Fit link R1-R2 Reset via push

<b>Auxiliary supply</b>	: A.C. 50/60Hz 110, 120, 220, 230 & 240 v ± 20% D.C. 12V, 24V, 48V, 110V or 125V +/-20% including ripple.
<b>Voltage Burden</b>	: 4 VA approx. 3 kΩ is normal for the 3 thermistors in a 3 phase motor to trip at 160°C (=750Ω at 23°C)

#### Other Specifications

<b>Operating temperature</b>	: 0°C to +60°C
<b>Storage temperature</b>	: -20°C to +70°C
<b>Temp. co-efficient</b>	: 0.05% per°C
<b>Interference immunity</b>	: Electrical stress surge withstand and non function to ANSI/IEEE C37 90a
<b>Enclosure style</b>	: DIN-rail with wall mounting facility
<b>Material</b>	: Flame retardant polycarbonate /ABS
<b>Enclosure integrity</b>	: IP 50
<b>Model 252 dimensions</b>	: 55mm(2.2")wide x 70mm(2.8")H x 112mm (4.4") deep
<b>Weight</b>	: Approximately 0.4Kg

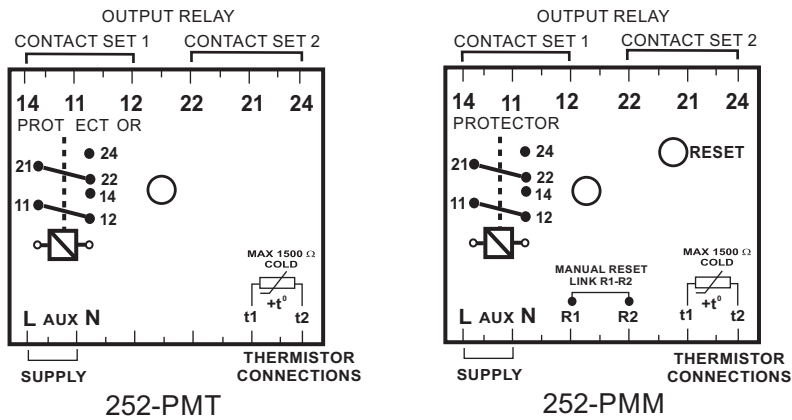
### Principle of Operation

The protector comprises a voltage level detector which detects the voltage across the thermistor. At normal temperature, when the thermistor resistance is low, a command signal energises a change-over relay and a green LED showing 'safe' condition.

At a pre-determined temperature, the thermistor resistance increases rapidly, which de-energises the relay. The actual trip temperature is governed by the thermistor characteristic, which can be obtained from the manufacturer's data.

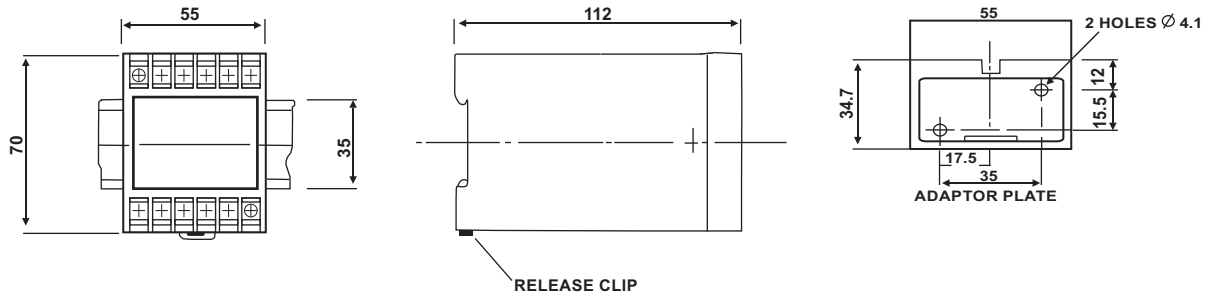
Failure of the supply to the unit or open circuit in thermistor winding will cause the relay to de-energise, thereby providing a fail safe facility.

## Connection diagrams



## Dimensions

Model 252



## Ordering Information

Please quote :

1. Product Type.
2. Auxiliary Voltage where required.
3. Preset Differential where required.
4. On temperature trips quote temperature span and sensor type and set points and trip temperatures.

## ZIEGLER INSTRUMENTS

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