

Models Covered

252-PMM	252-PMT	252-PSF	252-PSG
253-PH3	252-PMM	252-PMT	

Introduction

Thermistor Trip Relay (252-PMM & 252-PMT).

The trip inputs are monitored within settable limits. In the event of the input moving outside these limits, the unit will initiate a trip signal via a double pole changeover relay. An illuminated green LED indicates when the thermistor temperature is within normal working limits. The unit is designed such that the alarm relay is energised when normal temperatures are reached.

Model 252-PMM has the facility for manual resetting, so that the trip condition remains after normal operating temperature is reached, until manual intervention occurs.

Phase Balance Relay (252-PSF & 252-PSG)

Trip inputs are monitored within settable limits. In the event of the input moving outside these limits, the unit will initiate a trip signal via a double pole changeover relay. An illuminated red LED indicates that the supply is within limits.

Speed Sensing Relay (253-PH3)

Trip inputs are monitored within settable limits. In the event of the input moving outside these limits, the unit will initiate a trip signal. The illuminated red LED's indicates that the single pole output relays are in an energised state and at normal running speed all three relays should be energised. Units are factory adjusted for normal running speed = 0.75mA output. The meter adjust pot on the product front is used for this requirement, which also ensures the trip levels are set to the calibrated values. Terminal 8 is connected to terminal 5 internally. Terminals 15 and 16 give a 0/1mA signal proportional to speed.

- No.1 Relay energises on rising speed
- No.2 Relay energises on rising speed
- No.3 Relay de-energises on rising speed

This product is designed for use only with magnetic coil inductive sensors.

Warning

- During normal operation, voltages hazardous to life may be present at some of the terminals of this unit. Installation and servicing should be performed only by qualified, properly trained personnel' abiding by local regulations. Ensure all supplies are de-energised before attempting connection or other procedures.
- It is recommended adjustments be made with the supplies de-energised, but if this is not possible, then extreme caution should be exercised.
- Terminals should not be user accessible after installation and external installation provisions must be sufficient to prevent hazards under fault conditions.
- This unit is not intended to function as part of a system providing the sole means of fault protection - good engineering practice dictates that any critical function be protected by at least two independent and diverse means.

Never open circuit the secondary winding of an energised current transformer.

Protector Trip Relays
DIN Rail & Wall Mounted 250 Series
Thermistor Trip, Speed Sensing &
Phase Angle

Installation

The Protector should be installed in a dry position, not in direct sunlight and where the ambient temperature is reasonably stable and will not be outside the range 0 to 60 degrees Celsius. Mounting will normally be on a vertical surface but other positions will not affect the operation. Vibration should be kept to a minimum. The Protectors are designed for mounting on a 35mm rail to DIN 46277. Alternatively they may be screw fixed; a special adaptor is supplied to mount 252 types.

To mount a protector on a DIN rail, the top edge of the cutout on the back is hooked over one edge of the rail and the bottom edge carrying the release clip clicked into place. Check that the unit is firmly fixed. Removal or repositioning may be achieved by levering down the release clip and lifting the unit up and off the rail.

Connection diagrams should be carefully followed to ensure correct polarity and phase rotation where applicable. External voltage transformers may be used on 252-PSF and 252-PSG to extend the range.

252-PMM, 252-PMT & 253-PH3

Pick up, input and output leads should be kept separate from any other wiring.

Setting Controls (252-PSF, 252-PSG)

These products have two calibration facilities that can be set to suit operating requirements and they are factory calibrated as follows:-

1. % unbalance set points
Voltages of and below 380 volts L-L are calibrated to 1.0% class index of rated voltage. Voltages above 380 volts L-L are calibrated to 1.5% class index of rated voltage.
2. Time Delay
For all voltage ranges 10% maximum delay.
3. Voltage Withstand
Continuous overload = 1.35 x rated voltage

Setting Up (all other models)

The calibration marks around the controls are provided as a guide if the installer does not have access to accurate equipment. The maximum error of the calibration marks is typically 10% of the span of the control concerned.

Maintenance

The unit should be inspected to normal standards for this class of equipment. For example remove accumulations of dust and check all connections for tightness and corrosion. In the unlikely event of a repair being necessary it is recommended that the unit be returned to the factory or to the nearest Crompton Instruments Service Centre

Electromagnetic Compatibility

This unit has been designed to provide protection against EM (electro-magnetic) interference in line with requirements of EU and other regulations. Precautions necessary to provide proper operation of this and adjacent equipment will be installation dependent and so the following can only be general guidance:-

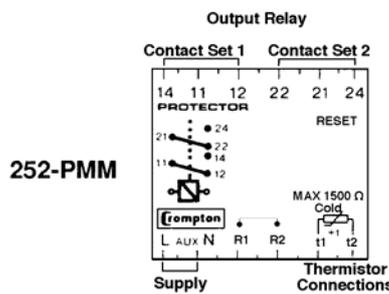
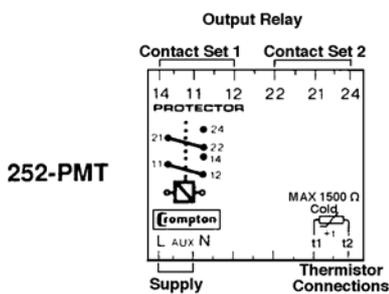
- Avoid routing wiring to this unit alongside cables and products that are, or could be, a source of interference.



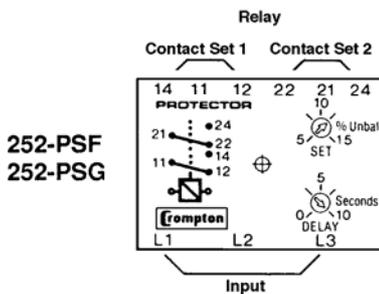
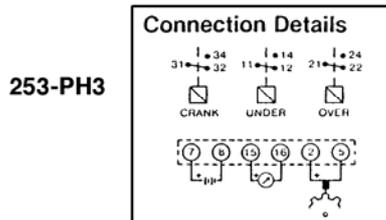
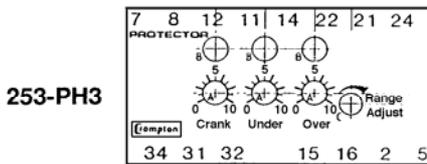
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Protector Trip Relays DIN Rail & Wall Mounted 250 Series Thermistor Trip, Speed Sensing & Phase Angle

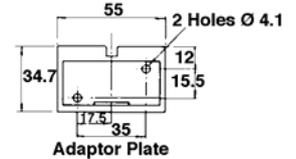
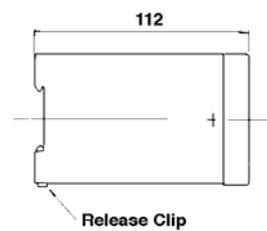
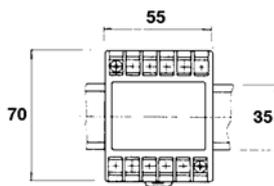
- The auxiliary supply to the unit should not be subject to excessive interference. In some cases, a supply line filter may be required.
 - To protect the product against incorrect operation or permanent damage, surge transients must be controlled. It is good EMC practice to suppress differential surges to 2kV or less at the source. The unit has been designed to automatically recover from typical transients, however in extreme circumstances it may be necessary to temporarily disconnect the auxiliary supply for a period of greater than 5 seconds to restore correct operation.
 - Screened communication and small signal leads are recommended and may be required. These and other connecting leads may require the fitting of RF suppression components, such as ferrite absorbers, line filters etc., if RF fields cause problems.
- It is good practice to install sensitive electronic instruments that are performing critical functions in EMC enclosures that protect against electrical interference causing a disturbance in function.



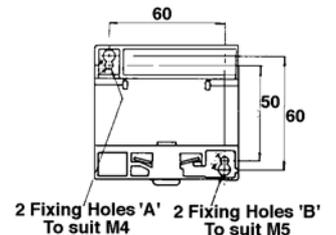
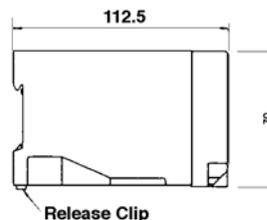
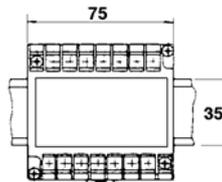
252-PMM can operate in either an automatic or a manual reset mode. For automatic the reset link R1-R2 is to be disconnected. For manual the reset link R1-R2 must be inserted.



Model 252



Model 253



The Information contained in these installation instructions is for use only by installers trained to make electrical power installations and is intended to describe the correct method of installation for this product. However, Tyco Electronics has no control over the field conditions, which influence product installation. It is the user's responsibility to determine the suitability of the installation method in the user's field conditions. Tyco Electronics' only obligations are those in Tyco Electronics' standard Conditions of Sale for this product and in no case will Tyco Electronics be liable for any other incidental, indirect or consequential damages arising from the use or misuse of the products. Crompton is a trade mark.



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