

Installation Instructions



IW250PM

Page 1 of 2

Thermistor Trip, Speed Sensing, Phase Angle Protector Relays

Models Covered

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

Introduction

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

The trip relay 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 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.

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 degree celsius. Mounting will normally be on a vertical surface but other positions will not affect the operation and vibrations 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.

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 outside 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.

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

Voltage 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 control 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 Rishabh Instruments Service Center (details on page 2). Should repair be attempted then replacement components must be of the same type, rating and tolerance as those used in the original circuits. It is important that should calibration be deemed necessary, say after repair, then this should only be attempted if the required high accuracy equipment is available. With any enquiry please quote the full model number found on the side of the label. The unit must be recalibrated after repair.

Electromagnetic Compatibility (EMC) Installation Requirements

This product range has been designed to meet the certification requirements of the EU Directives when installed to a good code of practice for EMC in industrial environments.e.g.

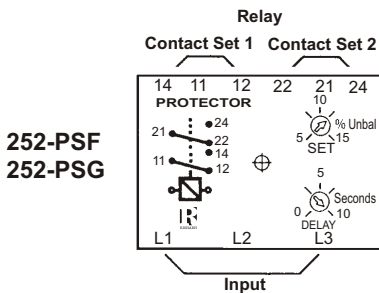
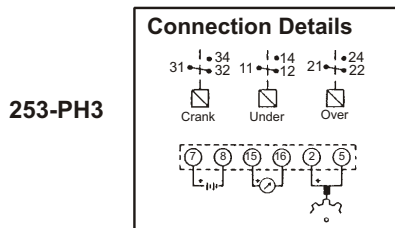
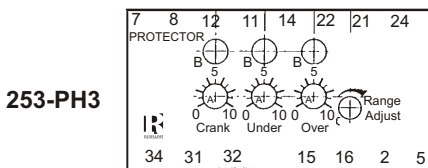
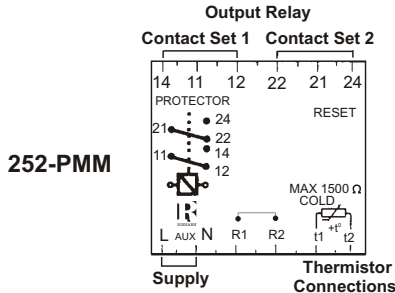
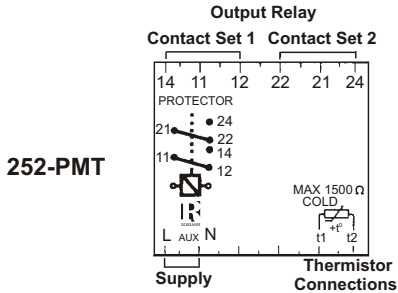
1. Screen output and low signal input leads. In the event of RF fields causing problems where screened leads can not be used, provision for fitting RF suppression components, such as ferrite absorbers, line filters etc., must be made.
- N. B. It is good practice to install sensitive electronic instruments that are performing critical functions in EMC enclosures that protect against electrical interference causing a disturbance in function.
2. Avoid routing leads alongside cables and products that are, or could be, a source of interference.
3. To protect the product against permanent damage, surge transients must be limited to 2KV pk.
4. Electro Static Discharge (ESD) precautions must be taken at all times when handling this product.

For assistance on protection requirements please contact your local sales office.

Installation Instructions



Connection Diagram



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.

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. Connection wires should be sized to comply with applicable regulations and codes of practice. These product do not have internal fuses therefore external fuses must be used for safety protection under fault conditions.

LOW VOLTAGE DIRECTIVES: This product complies with BSEN61010-1

WARNING

Voltages dangerous to human life may be present at some of the terminals of this unit. Ensure all supplies are de-energised before attempting any connection/disconnection. If it is necessary to make adjustments with the power connected then exercise extreme caution.

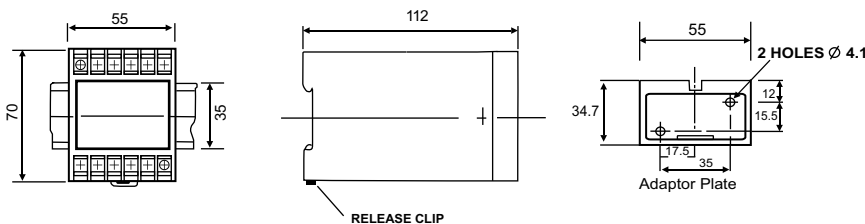
This product is manufactured by

Rishabh Instruments Pvt. Ltd.

F-31, MIDC, Satpur, Nasik-422007, India.

Our policy is one of continuous development, and although the information is correct at the time of publication, we reserve the right to supply product differing in construction or dimension from those illustrated and described.

Model 252



Model 253

