

Installation Instructions



IW250PA

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Current, Voltage, Phase Sequence, Transducer, Millivolt & Thermocouple Trip Relays

Models Covered

| | | | |
|---------|---------|---------|---------|
| 252-PAO | 252-PVH | 253-PAV | 252-PAU |
| 252-PVJ | 253-PAP | 252-PBA | 252-PVK |
| 253-PBV | 252-PBB | 252-PVO | 253-PHD |
| 252-PBS | 252-PVP | 253-PVB | 252-PBT |
| 252-PVR | 253-PVE | 252-PHO | 252-PVS |
| 253-PVM | 252-PHU | 252-PVU | 253-PAD |
| 252-PTU | 252-PVV | 252-PTO | 252-PVX |
| 256-PHV | 252-PVA | 252-PVZ | 252-PVC |
| 252-PDU | 252-PDO | 252-PDE | 252-PBU |
| 253-EFR | 253-MPR | | |

Introduction

Protector 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 relay is energised. Relays normally energise on over or high and de-energise on under or low conditions. This function may be reversed on request when ordering.

Warning

1. 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.
2. It is recommended that adjustments be made with the supplies de-energised, but if this is not possible, then extreme caution should be exercised.
3. Terminals should not be user accessible after installation and external installation provisions must be sufficient to prevent hazards under fault conditions.
4. This unit is not intended to function as a 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.
5. Never open circuit the secondary winding of an energised current transformer.

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 0-60° C. Mounting will normally be on a vertical surface but other positions will not affect the operation and 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 cut-out 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. These products do not have internal fuses therefore external fuses **must** be used for safety protection under fault conditions.

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 and following can only be general guidance:-

1. Avoid routing wiring to this unit alongside cables and products that are, or could be, a source of interference.
2. The auxiliary supply to the unit should not be subjected to excessive interference. In some cases, a supply line filter may be required.
3. 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.
4. Screened communication and small signals 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.
5. 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.
6. Electro Static Discharge (ESD) precautions must be taken at all times when handling this product.

Earth/Ground Connections

For safety reasons, CT secondary connections should be grounded according to local codes of practice.

Setting Up

All Protectors have front mounted calibrated controls and these should be set to suit operational requirements. A red LED on the front indicates, when lit, that the output relay is in the energised state. **Note:** This means that it is necessary to know whether the output relay is arranged to energise or de-energise on trip before the tripped or un-tripped state of a protector can be determined from the condition of the LED. 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 nearest service centre. 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.

Low Voltage Directive:

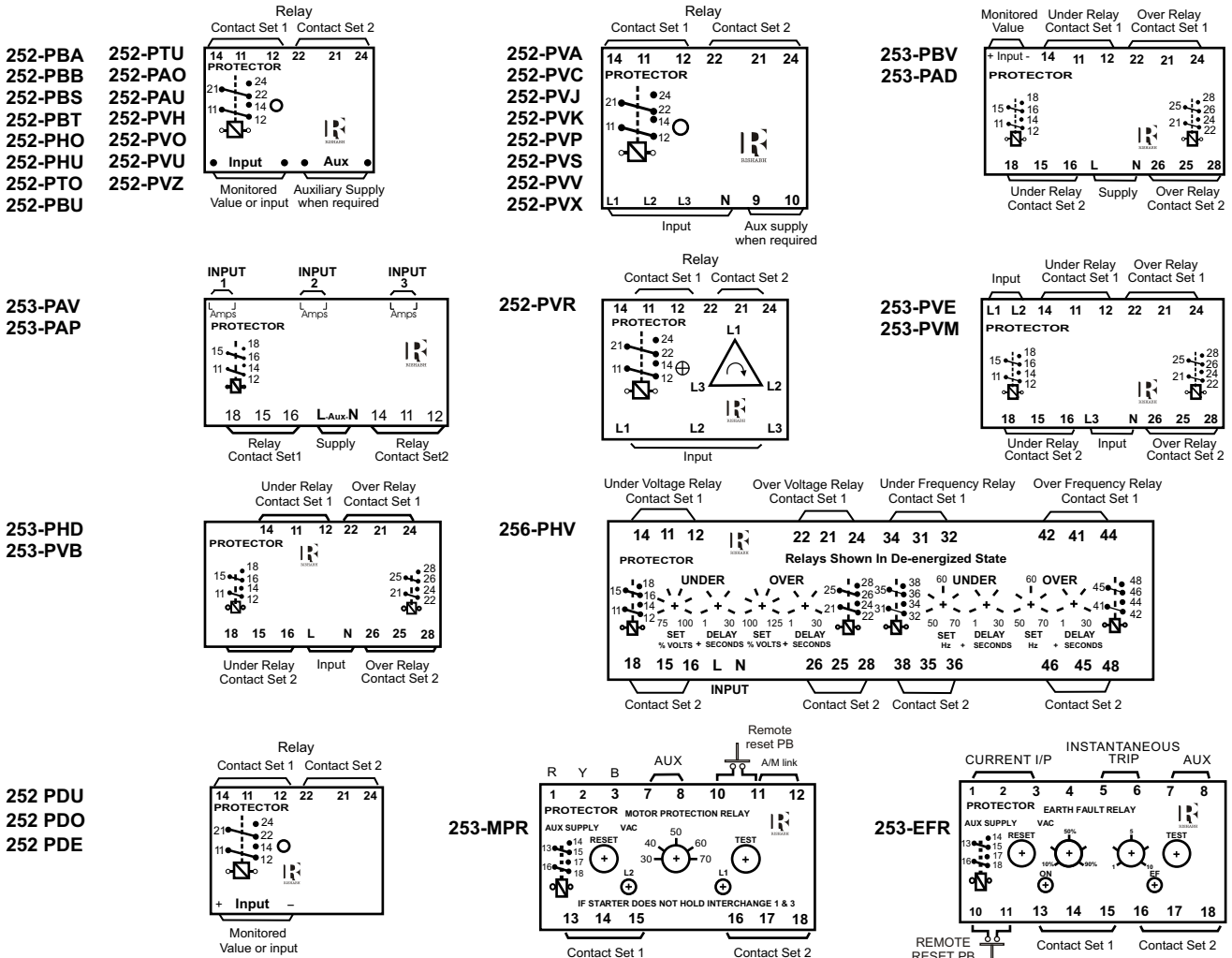
This product complies with BSEN61010-1

Installation Instructions

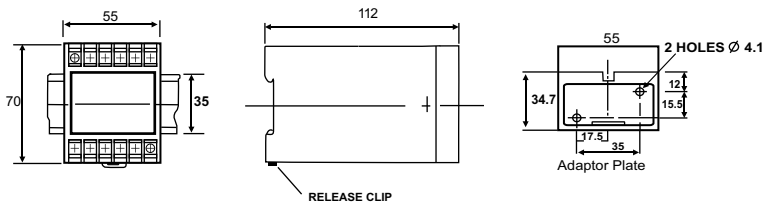


IW250PA

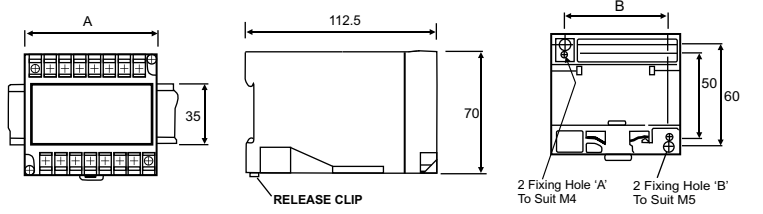
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Model 252



Model 253



Connection diagrams should be carefully followed to ensure correct polarity and phase rotation. External current and voltage transformers may be used to extend the range. Connection wires should be sized to comply with applicable regulations and codes of practice.

These products do not have internal fuses therefore external fuses must be used for safety protection under fault conditions.

| Model | A | B |
|-------|-----|-----|
| 253 | 75 | 60 |
| 256 | 150 | 135 |

Note:
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, we have 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. Our only obligations are those in our standard conditions of sale for this product and in no case we will be liable for any other incidental, indirect or consequential damages arising from the use or misuse of the products. Our policy is one of continuous development, and although the information is correct at the time of publication, we reserve the right to supply products differing in construction or dimensions from those illustrated and described.



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