

Installation Instructions

IW250PRC

Page 1 of 2

256 Series Hot Spot 3 & Hot Spot 6 Protector Trip Relays

Model	256-PRA	3 RTD inputs	3 set points
	256-PRB	3 RTD inputs	2 set points
	256-PRC	3 RTD inputs	1 set point
	256-PCC	6 RTD inputs	1 set point

Introduction

Hot spot 3 temperature trip relays (256-PRA, 256-PRB and 256-PRC) monitor three temperature zones, using Resistance Temperature Detectors. The highest of three temperatures is automatically selected and a 0 to 1mA signal produced for indication or record purposes. Model 256-PCC accepts up to six inputs from resistance temperature detector (RTD) elements. The temperature trip point, common to all channels, is user adjustable. The outputs are volt free contacts from a single pole changeover relay, with LED indication of normal (green) or tripped (red) conditions. Additional red LED's are fitted to show which of the inputs are exceeding the trip point.

Setting Up The 256-PRA, 256-PRB, 256-PRC

The working temperature range for the 0/1mA output is adjusted before despatch. The set points can be adjusted to any value within this working range. Adjustments are made via screw driver operated 20-turn potentiometer, accessible from the front panel. Turn this control anti-clockwise to raise the trip point, clockwise to lower it. Most products are supplied with the set points pre-set at the required values, If specific instructions were supplied at the time of ordering. Adjustment example: If the working range of the product is 0/100°C, and the set points were pre-set to 50°C, then one clockwise turn of the set point adjuster will lower this setting to 45°C (because $1/20^{\text{th}}$ of 100°C = 5°C).

If any of the three temperature inputs exceed a set point, a relay will trip and a red LED will illuminate to indicate the tripped condition.

Setting Up The 256-PCC

The working temperature range is adjusted before despatch. The set point can be adjusted to any value within this working range. Adjustment can be made via a screw driver operated 20-turn potentiometer, accessible from the front panel. Turn this control anti-clockwise to raise the trip point, clockwise to lower it. Most products are supplied with the set point pre-set at the required value, If specific instructions were supplied at the time of ordering. Adjustment example: If the working range of the product is 0/100°C, and the set point was pre-set to 50°C, then one clockwise turn of the set point adjuster will lower this setting to 45°C (because $1/20^{\text{th}}$ of 100°C = 5°C).

If any of the six temperature inputs exceed the set point, the relay will trip and a red LED will illuminate to indicate the tripped condition.

Installation

The protector should be installed in a dry position, not in direct sunlight and where the ambient temperature is reasonable stable and will not be outside the range 0 to 60 degree celsius.

Mounting will be normally on vertical surface but other positions will not affect the operation and vibration should be kept to a minimum. Protectors are designed for mounting on a 35mm rail to DIN 46277. 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. Input cables must be mounted away from high voltages and heavy current carrying cables any may require screening Connection diagrams should be carefully followed to ensure correct polarity. Connection wire 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 faulty conditions. Side lables show full connection information and data.

Electromagnetic Compatibility (EMC) Installation Requirments

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 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.

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 Rishabh Instruments Service Center, (details in 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 lable. The unit must be recalibrated after repair.

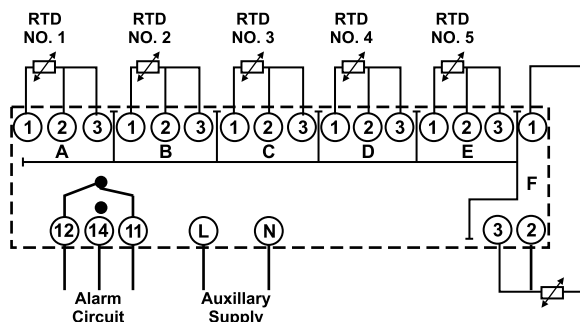
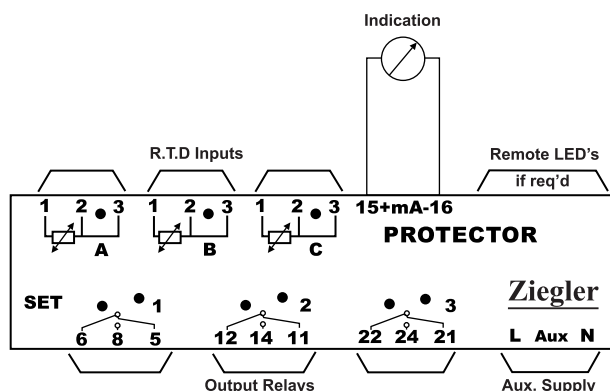
Installation Instructions

IW250PRC

Page 2 of 2

Connection Diagram

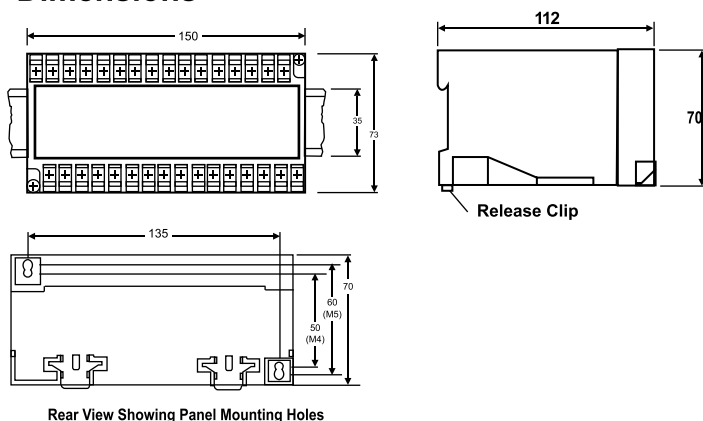
Model 256-PRA 3 RTD inputs
256-PRB 2 RTD inputs
256-PRC 1 RTD inputs



Model 256-PCC

When used for less than 6 RTD inputs the unused terminals 1, 2 & 3 must be linked together.

Dimensions



Low Voltage Directive :

This product complies with BSEN61010-1

WARNING :

Voltage 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 adjustment with the power connected, then exercise extreme caution.

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.