

**Important Note:**

RMR48/T units with suffix 'P' (RMR48/T/P) have been factory modified for pnp input. All other units are npn.

**Specification**

- Supply in ..... 110/230V ac 50/60 Hz.
- Supply Rating ..... 3VA.
- Supply out ..... 24V dc 40mA max. for use with sensors.
- Input ..... npn input or Voltage free contacts.
- Output ..... S.P.C.O. Relay
- Switching Capacity ..... 3A 240V non-inductive maximum.
- Indication ..... Input signal & Output Energised LED's.
- Operating Speed ..... 10 - 10,000 p.p.m.
- Repeat accuracy ..... Better than 2.5%.
- Operating Temperature ..... -10°C to +50°C.
- Enclosure Material ..... Moulded Noryl (modified PPO) & acrylic.
- Start-up Delay ..... 0 - 30 Seconds.
- Operation Setting ..... Automatic calibration after initial 'set' button has been pressed and released. Unit indicates fault condition at 20% from set speed and returns to safe condition at 18%.
- Termination ..... 11 pin International relay base.

**Guarantee**

The equipment is covered by a 12 months guarantee from the date of shipment. Any faults arising due to faulty materials or workmanship, within the guarantee period, will be corrected free of charge providing the equipment is returned to us carriage paid.

**Certificate of Conformity**

The equipment covered by these instructions has been manufactured and tested in accordance with our quality assurance procedures and conforms fully with our published specification.

**Health and Safety**

Provided that the equipment covered by these instructions is installed and operated as directed, it presents no hazard and conforms fully to health and safety regulations.



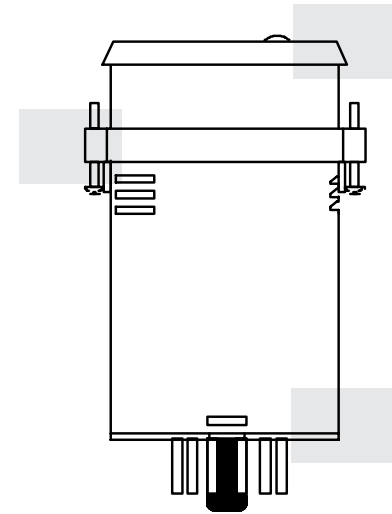
When this product is incorporated into other machinery or apparatus, that apparatus must not then be put into service (in the E.C) until it has been declared in conformity with the appropriate E.C Directive/s.



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**MODUSLIP - RMR48/T**  
**48mm DIN Standard**  
**Under/Over speed Monitor Module**

**OPERATING**  
**INSTRUCTIONS**



## Introduction

The MODUSLIP is a self calibrating, micro-processor based, modular speed monitor which operates in conjunction with a sensor to detect shaft over or under speed or stoppage due to fault conditions.

Input can be provided by solid state proximity sensor, shaft encoder, photo-cell or Voltage free contacts. The MODUSLIP provides a 24V dc sensor supply.

The unit is ideal for monitoring grain elevators, belt driven fans, conveyors etc. but may be used to monitor any rotating or reciprocating machinery.

The unit automatically calibrates at 20% deviation from set speed. An adjustable 0 to 30 Second start-up delay is provided.

## Installation

The MODUSLIP should be wired as shown in the connections diagram. Note that screened cable is unnecessary, however, if long cable runs between sensor and control module are to be made, ensure that the MODUSLIP wiring is not positioned with cables carrying high Voltages or current.

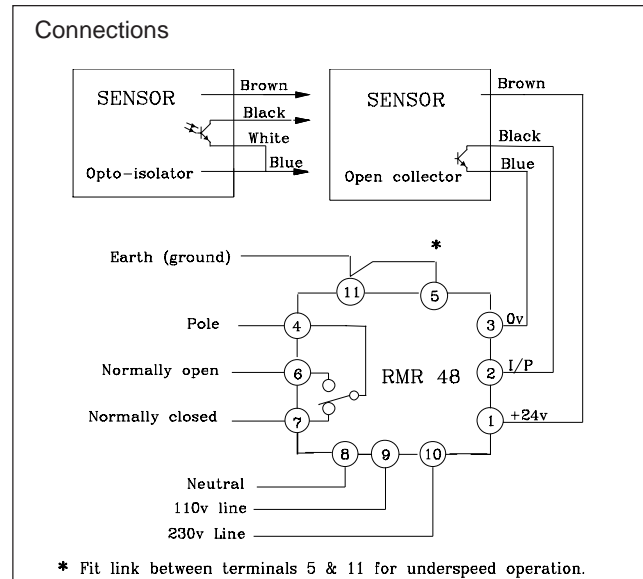
## Commissioning & Auto-calibration. (How it's done)

The MODUSLIP is factory calibrated at a set speed of 10 P.P.M. and a start-up delay of 5 seconds. For underspeed applications requiring a lower speed or longer delay and overspeed applications requiring higher speed, see Recalibration for a Different Setting.

## Underspeed Operation

Ensure that all connections are correct and that a link has been fitted between terminal base pins 5 & 11. Start up the system and ensure that the monitored shaft is running at the correct speed. Press and hold down the 'SET' button for a period equal to the start-up delay and then release the button. Whilst the button is pressed the output LED will flash at one second intervals, as a guide to time delay. When the button is released, the output LED will again flash at one second intervals, to confirm the start-up delay and at the same time the unit will self calibrate to 20% under the monitored speed.

The relay will be energised under normal conditions.



## Overspeed Operation

Ensure that all connections are correct and that no link has been fitted between terminal base pins 5 & 11. Calibrate the unit as detailed for underspeed operation. A start-up delay is not normally required on overspeed monitors. To achieve this, once the machinery is running at normal speed, press the 'SET' button and release immediately.

The relay will be energised under normal running conditions.

## Recalibration for a different setting.

If it is necessary to recalibrate the MODUSLIP to a new speed or start-up delay, in the future, procede as follows:-

Switch off the supply to the module.

Press, and hold down, the 'SET' button and re-apply the power. Continue to hold down the button until the machinery has reached it's correct running speed and then release.

Wait until the output LED has stopped flashing and then re-calibrate as detailed in under or over speed operation.

