OUTPUT LED FAULT CODE:

Orange: Programming not accepted, unit has defaulted back to previous programme settings and requires re-programming.
Red: Follow procedure "Recalibration for a different setting". If the output LED remains red, contact your supplier.

Specification

Supply in	12-240V dc or 24-240V ac.
Supply Rating	2VA.
Operating Distance	12mm maximum. (Ferrous).
Target	Ferrous or Non-ferrous Stud or Bolt.
Output	S.P.C.O. Relay.
Switching Capacity	3A 240V non-inductive maximum.
Indication	Target Detected & Output Energised/ Fault Condition LED's. (See chart).
Operating Speed	10 - 4000 p.p.m.
Repeat accuracy	Better than 1%.
Operating Temperature	-15°C to +50°C.
Enclosure Material	PET/PEN Co-polymer.
Start-up Delay	Programmable 0 - 60 Seconds.
Operation Setting	Automatic calibration by applying magnet to 'Cal' point. Relay de-energises at 20% under set speed
Conduit Fitting	M20 x 1.5 tapped female thread.
IP Rating	IP65.
Weight	350gms.
Cable	Supplied with 2 metres 5 core PVC.

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.

CE

SYNATEL INSTRUMENTATION LTD

ISO 9001 001

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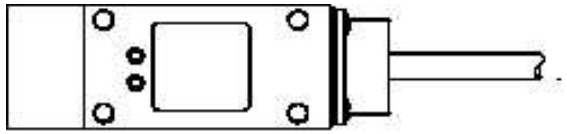
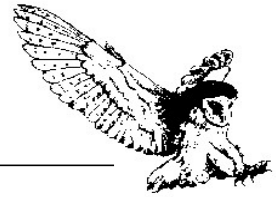


ROTAMATIC - PU1DR

DIN Standard, Programmable Under speed Monitor



OPERATING INSTRUCTIONS

Introduction

The Rotamatic PU1DR is a self contained self calibrating, micro-computer based, under-speed monitor. It consists of an inductive proximity sensor and associated under-speed monitoring circuitry, all housed in a DIN standard limit switch size package.

Calibration is achieved by applying a magnet to a calibration point, whilst running the machinery to be monitored at the correct speed. No contact is made between the sensor and plant being monitored. The proximity sensor detects a stud or bolt mounted on the shaft or machinery.

The unit works on 12-240V dc or 24 to 240V ac.
The PU1DR incorporates a programmable start up delay of up to 60 seconds, to allow moving parts to achieve correct speed, thereafter, if the pulse rate falls 20% below set rate, a fault signal is indicated.

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

Installation

The PU1DR should be wired as shown in the connection diagram. Cable can be virtually any length required, using ordinary unscreened cable. However, if long cable runs are to be used, the M750 wiring should not be positioned with cables carrying high voltage or current. Ensure that the unit is mounted securely to withstand vibration and that target distances shown are maintained.

Note! When installing the PU1DR unit in an exterior location, a suitable UV shield should be fitted over the unit. If located in an area with a high risk of impact additional guarding/protection MUST be fitted.
Do not mount the snout of the PU1DR flush onto surrounding metal, since this will cause the sensor to 'latch' on permanently. The sensor snout should overhang metal by at least 10mm and have as much air gap around it as possible.

Commissioning & Auto-calibration.

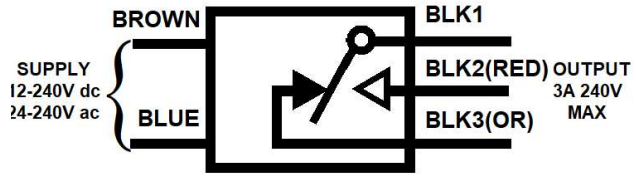
Two LED's are provided for imformation purposes, on the PU1DR. The input LED is red and flashes everytime a target passes the face of the sensor. The output LED is tri-colour. Under normal running, the output LED is a static green. Under fault conditions, the colour may be orange or red (see table for fault codes).The PU1DR is factory set to a speed of 10PPM and a start up time of 5 seconds. If the time delay required is greater than 5 seconds, see 'Recalibration for a different setting', otherwise, proceed as follows-

Apply power to the machine and PU1DR. Ensure that the machine has reached normal running speed and then place the magnet on the 'Cal' point, Count flashes of the green LED to set the start delay required in seconds, then remove magnet. The LED will echo the setting in seconds, during which time, automatic calibration to 20% below normal speed will be carried out.

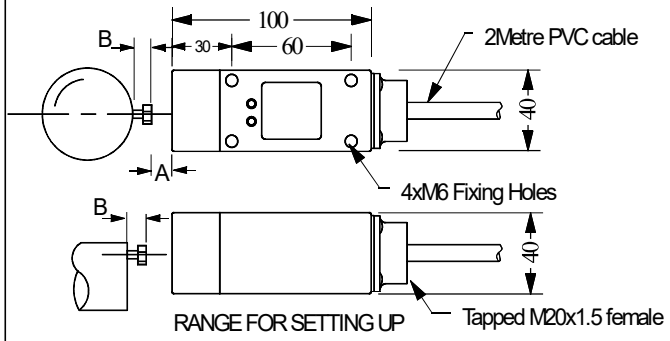
Recalibration for a Different Setting

If the unit is to be used for a slower speed or with longer time delay than previously set, the unit may trip out before it can be calibrated. This can be avoided by applying power while holding the magnet on the Cal point and removing the magnet only when the machine has reached normal speed. Wait for the green LED to illuminate permanently and then recalibrate as above.

Connections



Dimensions



A = 15mm max for ferrous target

A = 9mm for non ferrous target

B = 12mm minimum