

## Final Set-up

Ensure that all connections are correct before applying power. The PMD3 has a fully adjustable sensitivity control, this may be adjusted to decrease sensitivity for use over short distances or for detecting translucent material. The time delays, for beam make and break, can be set independently to each other. Rotate to desired settings. All controls are set by rotating the appropriate control knob anti-clockwise to decrease and clockwise to increase.

## Fault Diagnosis

Should the equipment fail to operate after installation, the following points should be checked:-

- 1) Re-check all connections, in particular the earth connection to pin 3 on the module.
- 2) Check the operating voltage across the light emitter connected to pins 1 and 11. (Pin 1 positive). This should be approximately 1.0 Volt dc.
- 3) Check the operating voltage across the receiver connected to pins 2 and 3. (Pin 3 positive). This should be approximately 4.0 Volts dc (with beam made or broken).
- 4) If 2 and 3 above are correct, re-check alignment, focusing and the output connections.
- 5) If either 2 or 3 above are not correct, remove the relevant head and check the operating voltage from the module. This should be approximately 3.5 Volts dc across pins 1 & 11 and approximately 7.0Volts dc across pins 2 & 3.
- 6) If 5 above is correct, carefully check head connections for reversal or short circuit.

## Overall Specification

<b>Supply</b> .....	110V/230V ac 50/60Hz .
<b>Output</b> .....	S.P.C.O. Relay.
<b>Switching Capacity</b> .....	5A 240V ac non-inductive.
<b>Indication</b> .....	Output energised LED (red).
<b>Operating Speed (max)</b> .....	5 per Second.
<b>Operating Temperature</b> .....	-10 to +50°C.
<b>Enclosure Material</b> .....	Moulded Noryl (modified PPO) & acrylic.
<b>Time Delays</b> .....	Independent time delays on beam make & break of 15 Seconds as standard.
<b>Sensitivity Control</b> .....	0 to 100% adjustment.

## 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.



THIS PRODUCT CONFORMS TO THE REQUIREMENTS FOR CE MARKING

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.

 **SYNATEL**  
INSTRUMENTATION LTD



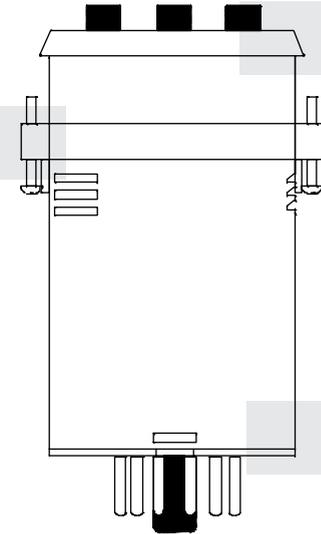
Walsall Road, Norton Canes, Cannock, Staffs. England. WS11 3TB.  
Tel: (01543) 277003 \* Fax: (01543) 271217

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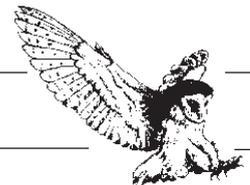


**SYNATEL**  
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**PMD3**  
**48mm DIN Standard**  
**Photoelectric Module**

**OPERATING**  
**INSTRUCTIONS**



## Introduction

The PMD3 photoelectric control module uses state of the art surface mount technology to provide a miniature unit housed in a 48mm DIN moulded enclosure. The module is designed to work with a light emitter and receiver. These can be separate head units or combined in a single head for Reflex detection (detecting the object) or Retro-reflex operation (for use with reflector discs or strips).

The PMD3 has independent time delays for beam make & break, sensitivity control and output energised LED indicator as standard. The standard unit will work off 110V/230V ac 50/60Hz, but other operating voltages may be supplied to order. The correct supply voltage is given on the rating label on the case of the unit.

## Installation

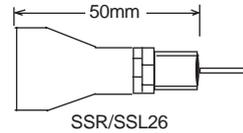
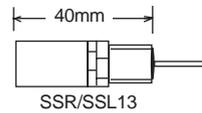
On all but SSF2B & SSF2F reflex heads, the light emitter is identified by a red band fitted to each end of the cable. The SSF2B & SSF2F heads are fitted with a 3 core screened cable, the light emitter lead being the red inner core.

The head(s) should be mounted rigidly and within the specified operating distance of each other. If the object being detected is smaller in size than the head lens, it may be necessary to partially mask the lens of the receiver to reduce its diameter.

## Commissioning

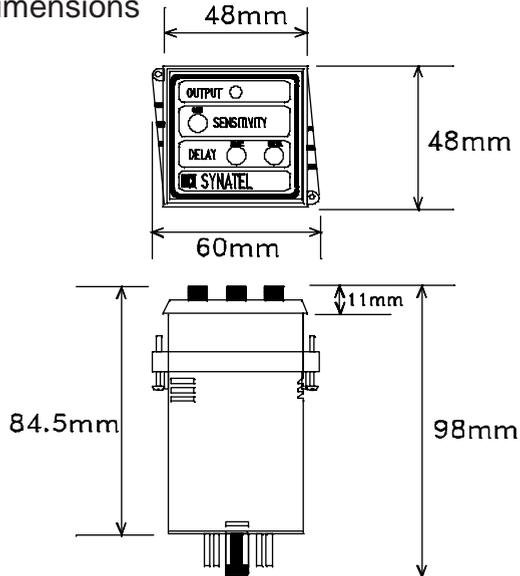
On most types of head, the lens focusing is fixed at optimum, on heads with separate lens hoods (i.e. SSL/SSR13 & SSL/SSR26) focusing is provided by adjusting the position of the hood on the threaded body. Optimum focusing will be achieved if the overall distance from the front of the lens hood to the rear of the threaded body is

set as shown below:-



The PMD3 is fitted with a red LED which illuminates when the output is energised. (Note: The indicating LED, where fitted on emitter heads, will illuminate at the same time). The PMD3 has been specifically designed to ensure non-critical alignment. For the majority of applications a visual alignment of the heads in conjunction with the output LED(S) will be satisfactory. It is advisable to partially mask the receiver lens with a piece of black tape, align for satisfactory operation and then remove the tape.

## Dimensions



## Connections

