Final Set-up

Ensure that all connections are correct before applying power & that unit is tightened to minimise vibration. Ensure that 'end portion' (approx. 20mm) of sensor, overhangs any metalwork & that surrounding metal work is at least 30 mm from front face. Apply power to unit & machinery & check that input & output lights are turning on & off as target 'appears' & 'disappears' past face of sensor. (see dimensions for setting distance).

Fault Finding

1) **Input & Output LED's stay 'ON'**

Check that the 20mm end section of the sensor is not bolted directly to metalwork.

Check that there is an air space between sensor & any surrounding metalwork (30mm min.)

Check that the machinery is rotating & that the target is actually leaving the sensor before re-appearing.

Check that background metalwork, behind target, is far enough away so as not to be detected.

2) **Input & Output LED's stay 'OFF'**

Check that target is within specified operating range of unit.

Check that machinery is rotating & that target is passing front face of sensor.

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

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.

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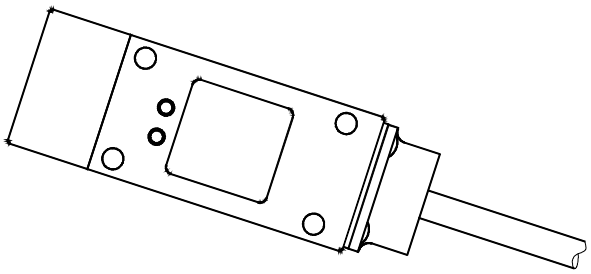
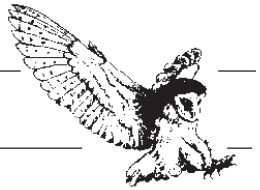


UNISWITCH
UD1DR & ID/E1DO
Limit Switch Style
DIN Standard
Proximity Sensors



OPERATING INSTRUCTIONS

Introduction

The Synatel 'Uniswitch' series, limit switch package proximity sensors work on the damped oscillator principle. No contact is made between the sensor & plant being monitored. The proximity sensors detect a stud or bolt mounted on the shaft or machinery.

Units are available for multivoltage ac/dc supplies or 10-30V dc supply, with relay or fully opto-isolated transistor output, suitable for npn/pnp connection or direct interconnection of PLC's etc.

All units are fully encapsulated for use in the most arduous applications & are fitted with 2 metres multicore cable & M20 cable gland adaptor, as standard.

Installation

'Uniswitch' should be wired as shown in the connections diagram. Cable length can be extended to virtually any distance required. The proximity sensors are well protected against electrical interference, but if long cable runs are used in very noisy environments, the cabling should be segregated from any high current carrying conductors.

Note that the end section (20mm) of the sensor, should overhang any metalwork that the unit is fixed to, otherwise the unit will stay in the 'ON' state. Ensure that any background metalwork, behind the target to be sensed, is at least 12mm behind target, this will prevent the proximity sensor detecting the background and target.

'Target Sensed' (Input) (red) & Output ON (output) (green) states are indicated by LED's situated on top of the proximity sensor.

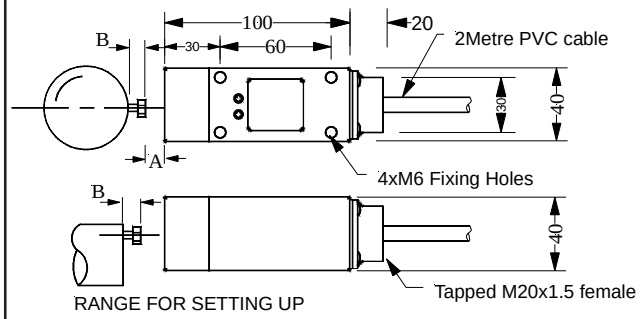
Mount the unit securely to withstand vibration.

A speed monitoring accessory is available (**Whirligig**) which allows simple fitting of equipment to machinery via an M12 bolt & retaining strap. The unit is fully enclosed, eliminating the need for further mechanical guarding. (Request Datasheet D7001 for information).

SPECIFICATION

Supply ..... 12-240Vdc/24-240Vac or 10-30Vdc.
Output ..... S.P.C.O. Relay or fully opto-isolated transistor . (S/C & over V protected).
Output Capacity ..... 3A 240V ac non-inductive.(Relay) 100mA 30V dc (Opto)
Output State ..... UD1DR-fixed at time of manufacture. Standard unit is energised with target detected. ID/E1DO-selectable by supply reversal.
Indication ..... Input (red) & Output (green) LED's.
Op. Speed (max) ..... 250Hz 1:1 duty.
Op. Temperature ..... -10 to +70°C.
Enclosure Material ..... Moulded polycarbonate/ABS mix.
Connection ..... 2 metres multicore cable + 20mm cable gland adaptor.
User Controls ..... None
Ingress Protection I.P.67

Dimensions

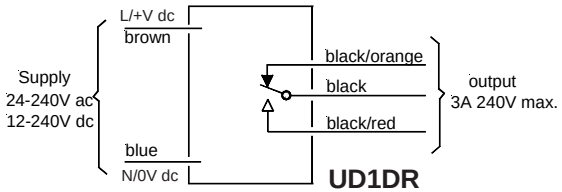


A = 15mm max for ferrous target

A = 9mm for non ferrous target

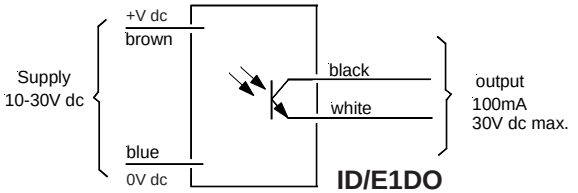
B =12mm minimum

Connections



UD1DR

For NPN: connect load between black and brown wires with white and blue wires connected together.
For PNP: connect load between white and blue wires with brown and black wires connected together.



ID/E1DO

Connected as detailed above, output will be ON with object present.
For output OFF with object present, reverse brown & blue wire connections only.