

Commissioning.

All Units

Unilight units have a red and green indicator LED on the top. For emitter type UL2AV the indicators show power on (red) and circuit operating (green). On all other units the red LED varies its brightness depending upon signal strength and sensitivity setting. The green LED shows output state, and for UP2ART, UR2ART and UT2ART models only, it also flashes to indicated misalignment dirty optics or low signal strength.

Check that relay output mode is correct (see fig 1) and make sure that all connections, cable glands and terminals are tight. Apply power.

Turn the sensitivity control fully clockwise and timer controls anticlockwise. Adjust alignment to achieve maximum brightness on the red LED. To achieve optimum alignment the sensitivity control can be progressively turned anticlockwise while the alignment is readjusted to give maximum brightness except for model UR2ART, sensitivity can then be turned fully clockwise if detecting opaque objects or adjusted accordingly for non opaque ones. Model UR2ART can be adjusted to suit the application.

The time delays (beam make and break) can then be set as required.

Tighten all fixing screws and replace cover.

UL2AV & UT2ART

The UL2AV and UT2ART are through beam emitter and receiver units.

Follow the procedure given under "All Units" but note that both the emitter and receiver must be adjusted to give maximum brightness on the red LED indicator.

UP2ART

The UP2ART is a self contained polarised retro reflex unit which operates with a retro reflector disc only. Its optics are designed to reject reflection from any other surface including polished steel and mirrors.

Follow the instructions given under "All Units". Note that it is not necessary for the reflector to be exactly perpendicular to the light beam.

After alignment, the sensitivity control can be set to maximum (clockwise) unless non opaque objects are to be detected.

UM2ART

The UM2ART unit contains a sophisticated lens and mirror arrangement to enable detection of objects which a normal sensor would penetrate and ignore. When installed correctly, the UM2ART can be set to detect stretched cling film etc. The UM2ART works in conjunction with a reflector disc. The reflector need not be precisely perpendicular to the light beam.

With the sensitivity control fully clockwise, adjust the head to give maximum brightness on the red LED. The sensitivity may then be reduced progressively while adjusting the head to give the highest brightness/lowest sensitivity. When this has been achieved, tighten bracketry.

Rotate the sensitivity control anticlockwise until the green light just goes out and note the control position. Place an object or film to be detected between the head and reflector simulating working conditions as closely as possible. Rotate the sensitivity control clockwise either until the green LED lights or the maximum position is obtained and note the control position. Set the control approximately midway between the two settings.

Status Indication - UT2ART and UP2ART

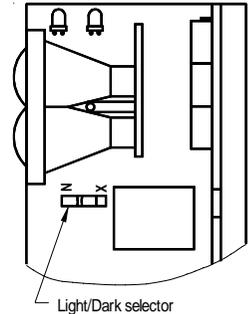
If the alignment becomes marginal or the optics become dirty, the green output light will flash. In this eventuality, clean and realign as appropriate.

Light/Dark Operation

As supplied, the unit is set for "light" operation and the relay will energise with beam made. To set "dark" operation where the relay will de-energise with beam made, proceed as follows:

Disconnect all wires from terminal block.

Remove the single screw holding the terminal carrier within the unit and carefully withdraw it. Locate SW1 and change its position from N to X.



Specification: UL2AV/UT2ART

Supply: 12-240V dc or 24-240V ac.

Supply Rating: 2VA or 40mA.

Operating Range: 8 Metres.

Operating Speed: 5 per second maximum.

Output: Receiver (UT2ART) only. Voltage free change over contacts rated at 240V ac 2.5A non-inductive max.

Temperature Range: -10°C to +50°C

Sensitivity: Fully adjustable 0-100%

Protection: IP65.

Delay: Independent delays for beam made and beam broken. Maximum 5 seconds delay.

Indication:

Emitter

Red LED=Power ON

.Green LED=Circuit working.

Receiver

Red LED=Alignment

Green LED=Beam Made.

Enclosure: Moulded PC/ABS.

Weight: 250gms.

Cable Entry: Base or rear cable entry. The remaining unused cable entry being sealed with blanking plug, supplied.

Termination: Screw terminal carrier.

Specification: UP2ART

Supply: 12-240V dc or 24-240V ac.

Supply Rating: 2VA or 40mA.

Operating Range: 5M maximum.

Operating Speed: 5 per second maximum.

Output: Voltage free change over contacts rated at 240V ac 2.5A non-inductive max.

Temperature Range: -10°C to +50°C

Sensitivity: Fully adjustable 0-100%

Protection: IP65.

Delay: Independent delays for beam made and beam broken. Maximum 5 seconds delay.

Indication:

Red LED=Alignment

Green LED=Beam Made. Flashes at low signal strength.

Enclosure: Moulded PC/ABS.

Weight: 250gms.

Cable Entry: Base or rear cable entry. The remaining unused cable entry being sealed with blanking plug, supplied.

Termination: Screw terminal carrier.

Specification: UM2ART

Supply: 12-240V dc or 24-240V ac.

Supply Rating: 2VA or 40mA.

Operating Range: 1M maximum.

Operating Speed: 5 per second maximum.

Output: Voltage free change over contacts rated at 240V ac 2.5A non-inductive max.

Temperature Range: -10°C to +50°C

Sensitivity: Fully adjustable 0-100%

Protection: IP65.

Delay: Independent delays for beam made and beam broken. Maximum 5 seconds delay.

Indication:

Red LED=Alignment

Green LED=Beam Made. Flashes at low signal strength.

Enclosure: Moulded PC/ABS.

Weight: 250gms.

Cable Entry: Base or rear cable entry. The remaining unused cable entry being sealed with blanking plug, supplied.

Termination: Screw terminal carrier.

UR2ART Reflex

The UR2AR(T) is a self contained sensor which detects the object as it passes across the front face of the sensor.

Apply power to the unit and ensure that the object to be detected is within operating range. Moving the object nearer and further from the sensor will cause the intensity of the Red LED to increase or decrease. The Green Output LED will illuminate when there is enough signal to operate the relay output (Note: Green LED flashes when there is low signal strength). Sensitivity control can be adjusted for operation over short distances and time delays can be set as required.

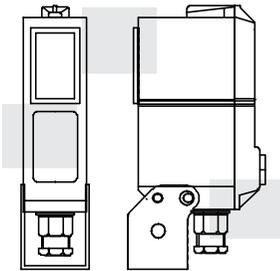
Specification: **UR2ART**

Operating Range: 1.5M maximum.

All other details of specification and connections are as **UP2ART**.

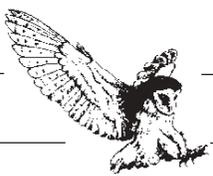
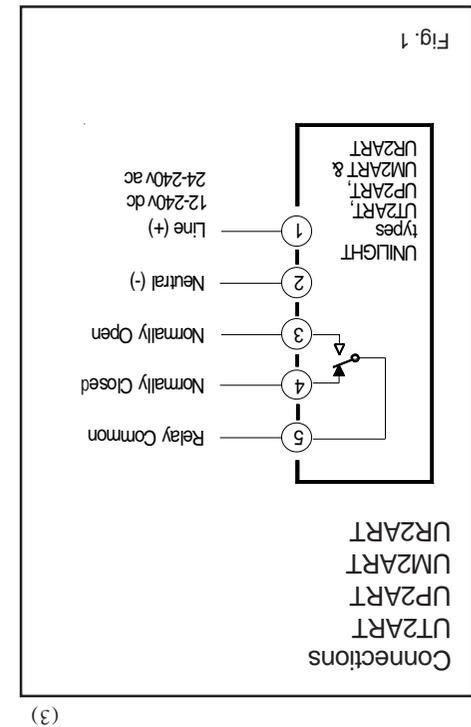
Introduction
 The UNILIGHT range of photo-electric sensors, consists of through-beam, polarised retro-reflex and a special clear glass or plastic detector.
 All units operate from 12-240V dc or 24-240V ac and have a relay output rated at 2.5A 240V ac maximum, non-inductive.* (*except for through-beam emitter which has no output facility).
 The units are supplied in a robust, moulded enclosure and come complete with a universal mounting bracket.
 UNILIGHT units are simple to install, using un-screened cable, and require minimum maintenance, once commissioned. Twin LED indicators show alignment and output state.
 All units are provided with independently adjustable time delays for beam made & broken.

SYNATEL
 INSTRUMENTATION LTD



**UNILIGHT
 PHOTO-ELECTRIC
 SENSORS**

**OPERATING
 INSTRUCTIONS**

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.

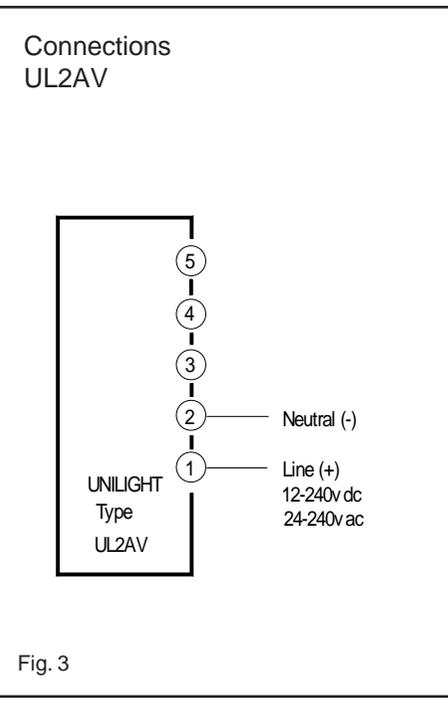
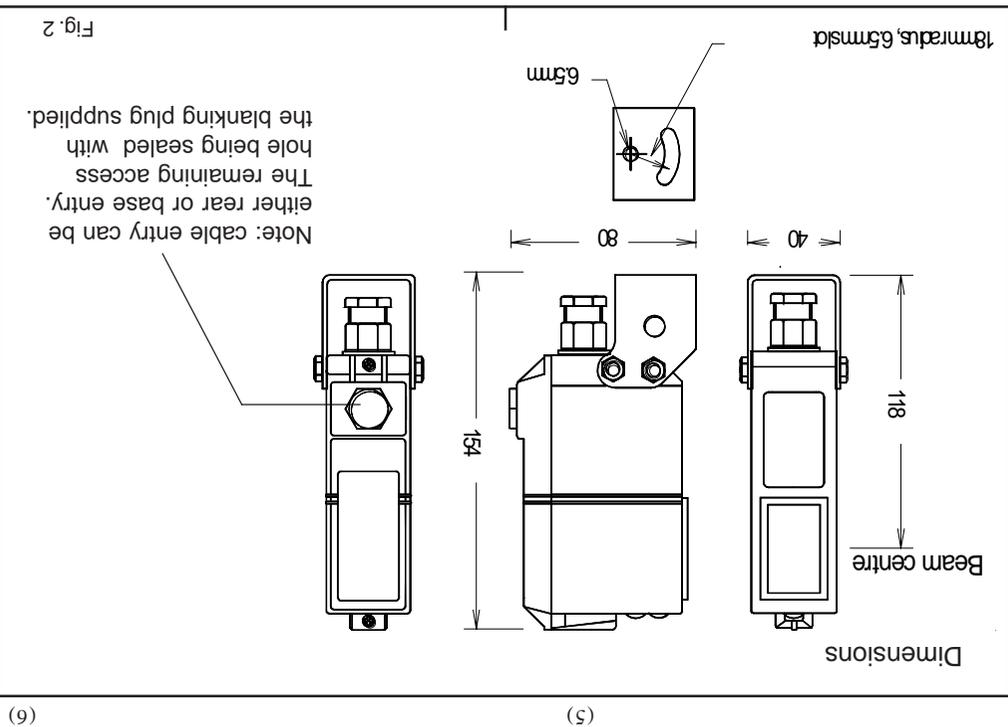
Health and Safety
 Provided that the equipment covered by these instructions is installed and operated as directed, it presents no hazard and conforms fully to health and safety regulations.

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.

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

641-038B >UNILTMANMK4



(2)
Installation
 The UNILIGHT should be wired as shown in the connections diagram. See fig.1 & 3. Note that all units are universal supply, 12-240V dc or 24-240V ac.

Cable length can be virtually any length required. Screened cable is unnecessary, however, if long cable runs are to be used, these should be segregated from high voltage or high current carrying cables.

The UNILIGHT has the provision of either rear or base entry cable connections. The remaining, unused cable entry being sealed with a blanking plug.

The UNILIGHT should be mounted securely to minimize effects of vibration, ensure that all cable gland, blanking plugs and screws are tightened after commissioning, to prevent ingress of water.

(3)
 (4)
 (5)
 (6)