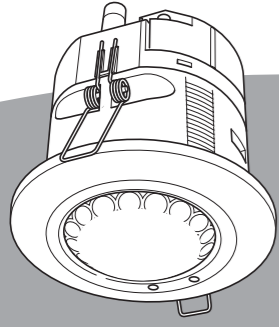


Installation Instructions



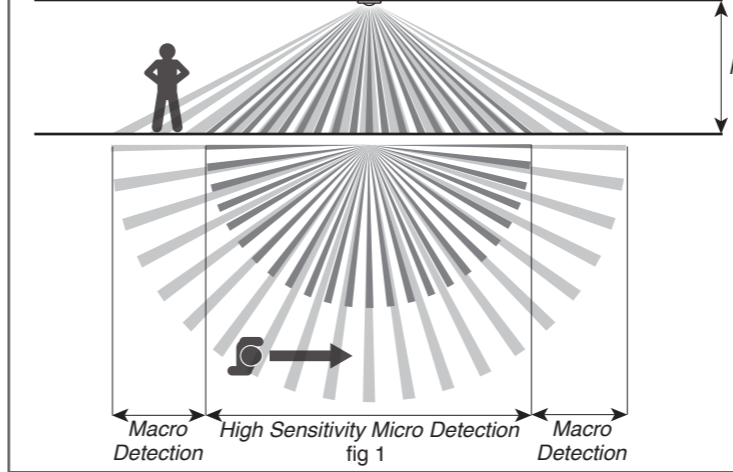
LightSpot HD Switching PIR Sensors

Only suitably qualified personnel should install this equipment

50093556-001 / Switching

Part Number	Flush Mount	Surface Mount	Switching (10A)	Manual "OneSwitch"	Programmable Manual Switch Input	IP55	Office	Mid Bay	High Bay
LS3100RF	•	•	•	•	•	•	•		
LS3100RSM	•	•	•	•	•	•	•		
LS3200RF	•	•	•	•	•	•	•		
LS3200RSM	•	•	•	•	•	•	•		
LS3200RIPF	•	•	•	•	•	•	•	•	
LS3200RMBF	•	•	•	•	•	•	•	•	•
LS3200MBSM	•	•	•	•	•	•	•	•	•
LS3200RHBF	•	•	•	•	•	•	•	•	•
LS3200RHBSM	•	•	•	•	•	•	•	•	•

Positioning the Sensor

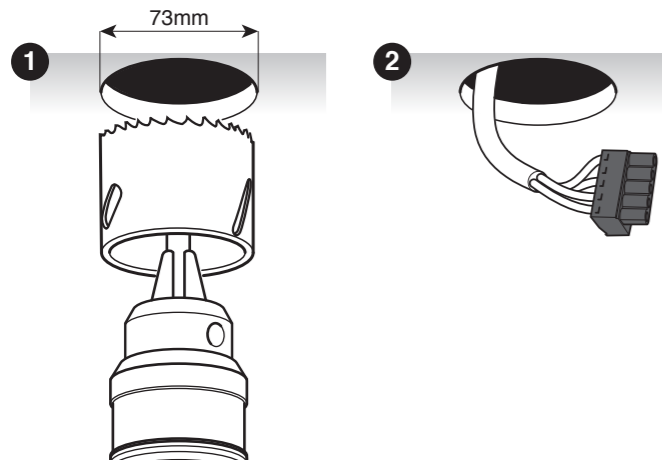


The sensor should be positioned on the ceiling in the centre of the occupied space. This product is available in three different mounting height variants; see fig.1 and the table below. Ensure that the maximum recommended mounting height is not exceeded. Avoid mounting next to an AC unit.

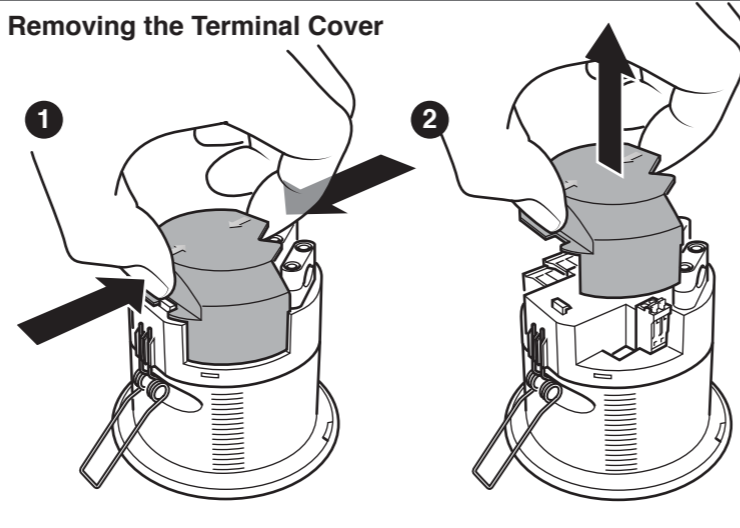
i The sensor is more sensitive to movement across the beam compared with movement towards the centre.

Type	Aspect ratio (diameter : height)		Max recommended mounting height
	Micro Detection - High Sensitivity	Macro Detection - Standard Sensitivity	
Office	2.8:1 (7m diameter @ 2.5m height)	4:1 (10m diameter @ 2.5m height)	3.5m
Mid Bay	N/A	2:1 (20m diameter @ 10m height)	12m
High Bay	N/A	1.9:1 (27m diameter @ 14m height)	16m

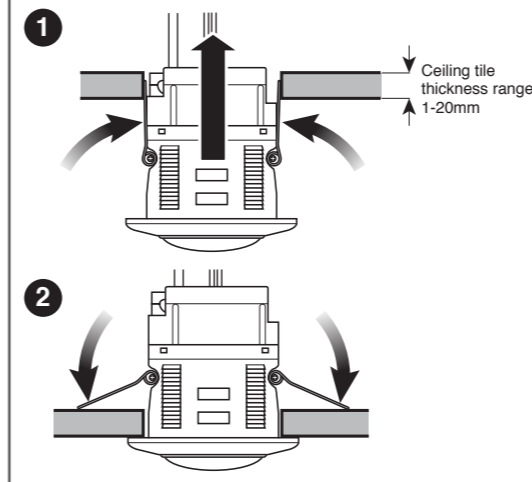
Installing the Sensor into Ceiling Tile



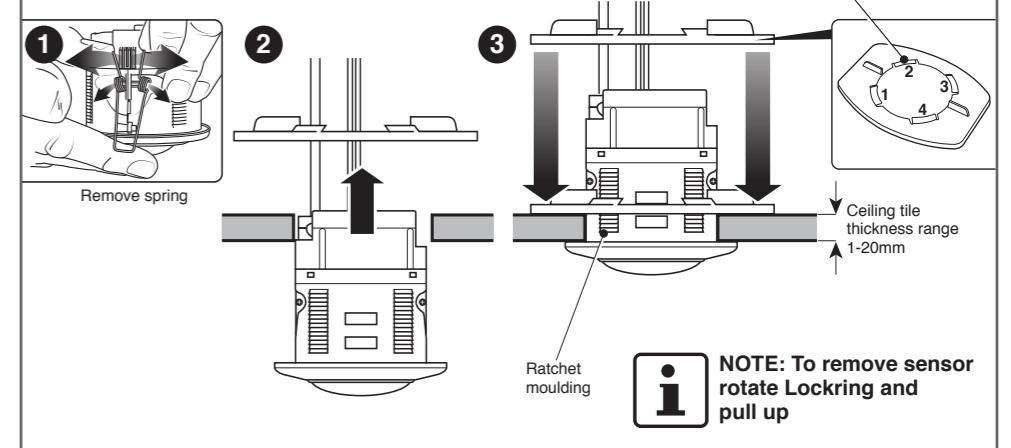
Removing the Terminal Cover



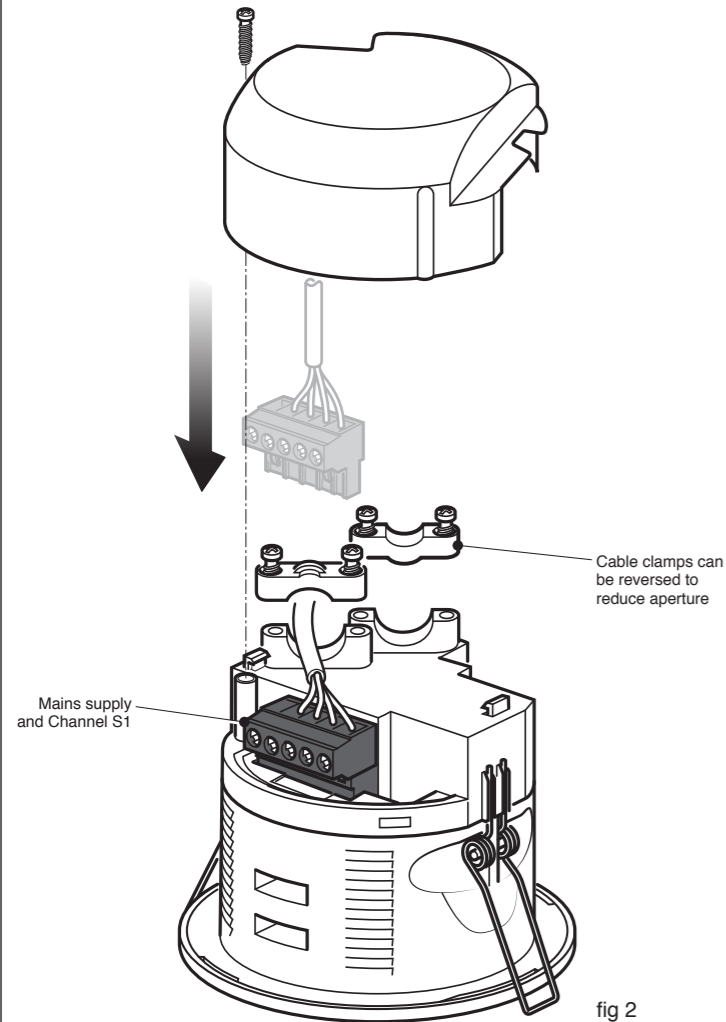
Fixing to Ceiling – Standard Method



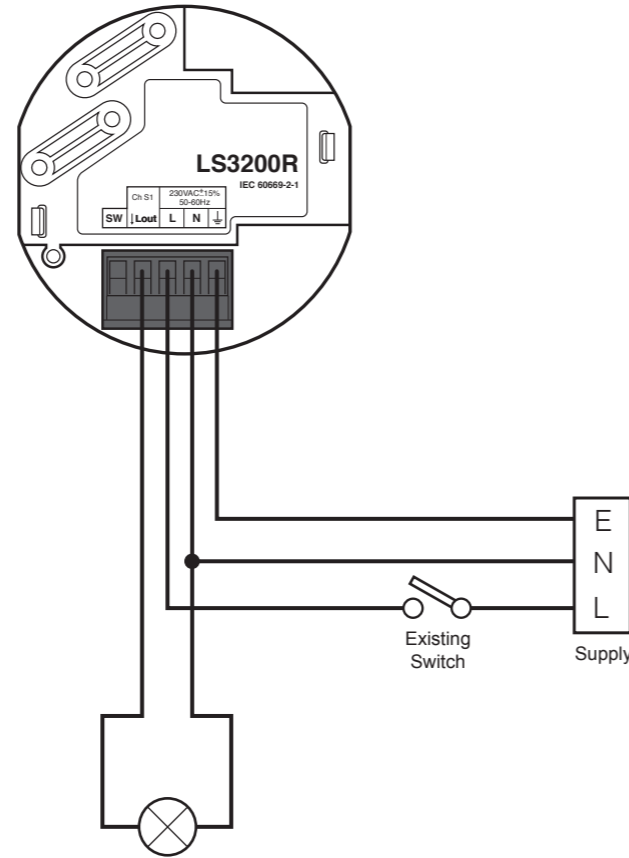
Fixing to Ceiling – Secure Locking Method (Available separately, please order locking)



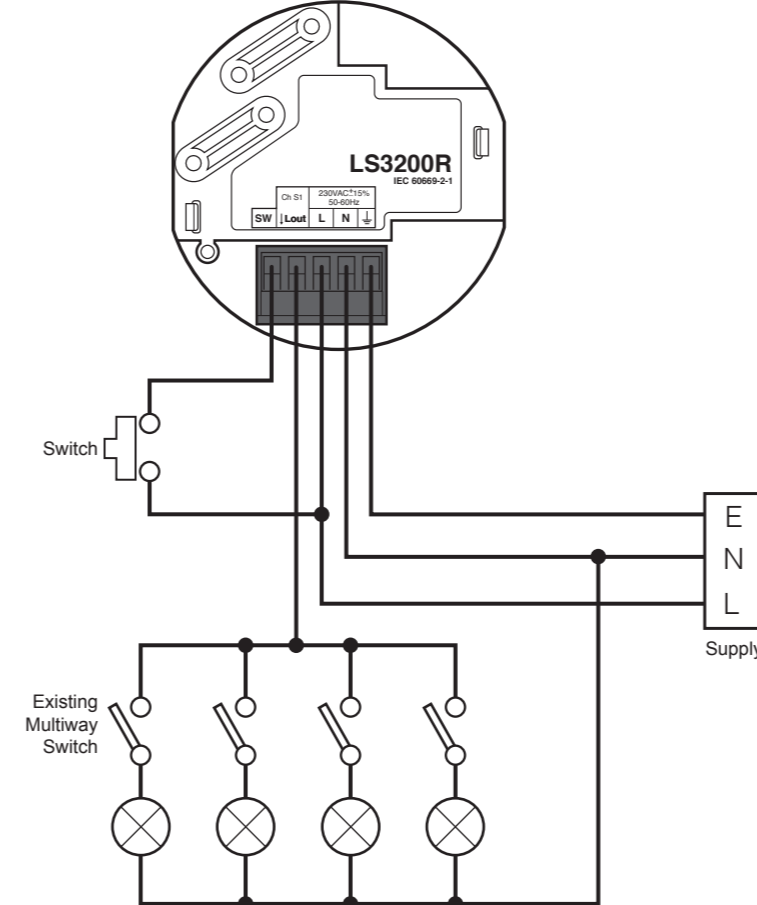
Electrical Connections



Simple Retro-Fit Application Retaining the Original Wall Switch (fig 3)



Application With Multi-way Switch for Multiple Loads (fig 4)



Two-way Switching (fig 5)

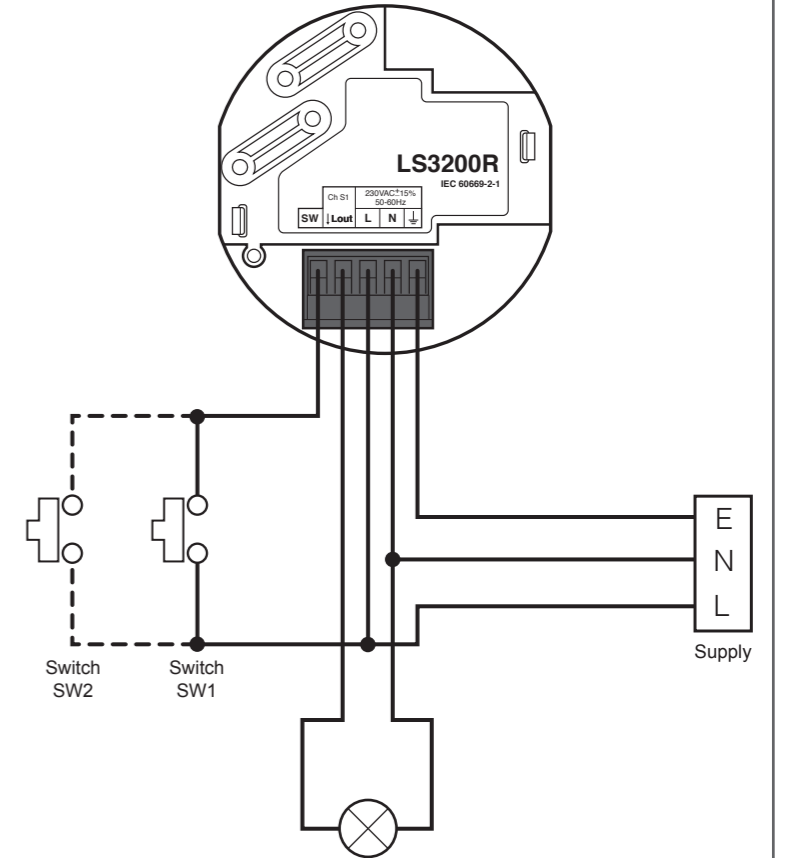


fig 2

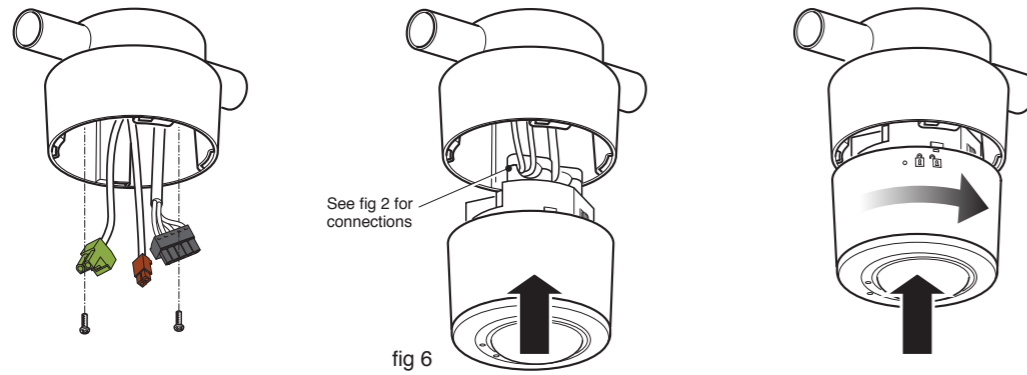
fig 3

fig 4

fig 5

Fixing to Ceiling – Surface Mounting (optional)

Product variants with "SM" suffix on the part number are supplied with the surface fitting kit as standard. The surface mount kit is available as a separate part, please order **Surfmt**. The sensor may be mounted to any suitable surface, but is most commonly fixed to a conduit stop-end (fig 6 set) (BESA) box or bushed to trunking.

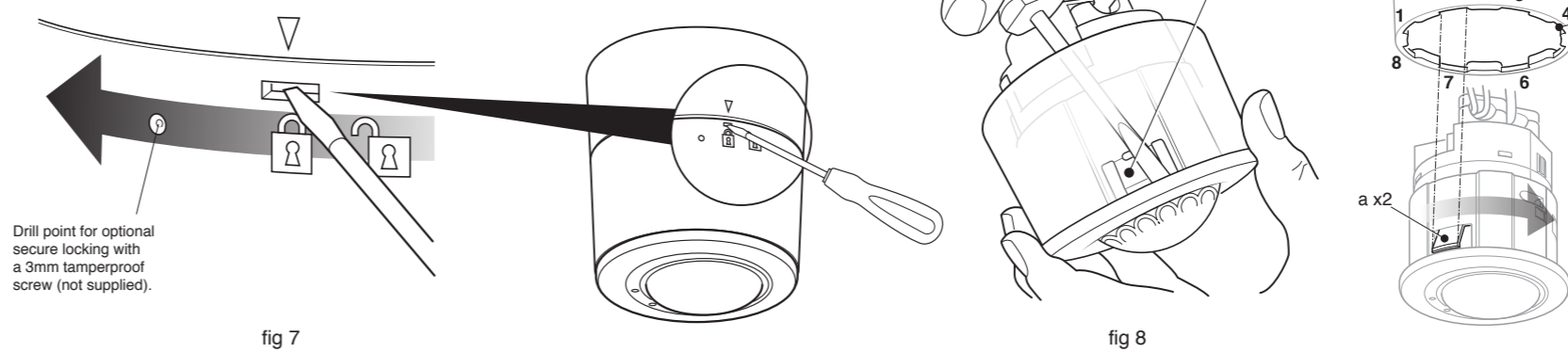


See fig 2 for connections

fig 6

Uninstalling and Repositioning

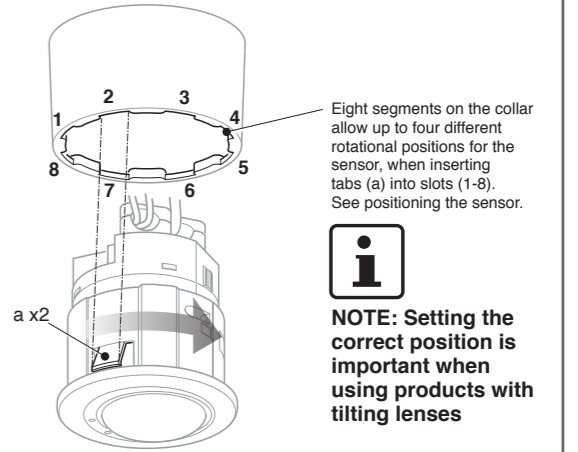
Insert a flat headed screwdriver into the slot as shown and twist the collar anti-clockwise to release, fig 7. To separate the sensor from the surface mount casing, push a flat headed screwdriver onto the tab via the inside void of the casing and pull the sensor upwards, fig 8.



Drill point for optional secure locking with a 3mm tamperproof screw (not supplied).

fig 7

fig 8



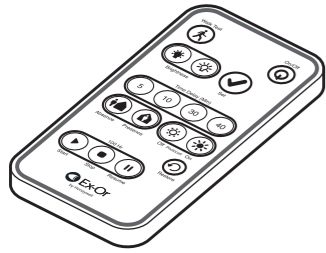
Eight segments on the collar allow up to four different rotational positions for the sensor, when inserting tabs (a) into slots (1-8). See positioning the sensor.



NOTE: Setting the correct position is important when using products with tilting lenses

WalkTesting / Lens Masking

In order to verify correct installation, walk-testing is recommended. An infrared commissioning tool will be required to put the detector(s) into walk-test mode. Two infrared commissioning tools are available: QuickSet and QuickSet Pro (Sold separately).



QuickSet



QuickSet Pro

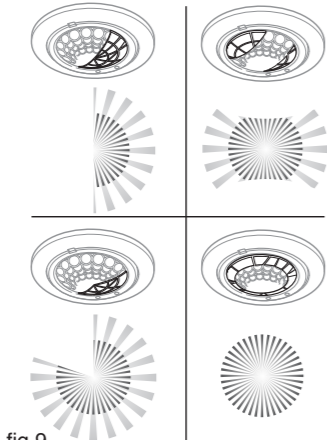
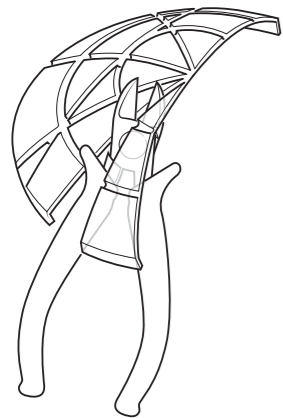
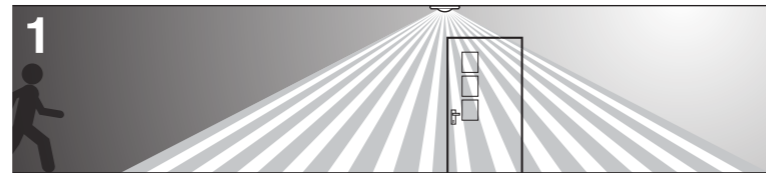


fig 9

Two lens masks are provided which may be used to restrict the viewable footprint of the sensor e.g. unwanted detection through a doorway. Cut the mask segment(s) as desired and install by pushing the mask lip between the bezel and the lens on the sensor as shown in fig 9.

Follow the instructions provided with the selected commissioning tool. While the sensor is in walk-test mode, the LEDs on the sensors are automatically enabled and it will turn on the lighting for only a few seconds each time occupancy is detected.



Stand out of the sensor's viewable footprint or remain motionless within the viewable footprint and wait for the lights to go out.



NOTE: After 5 minutes, the sensor will automatically exit walk-test mode without requiring any action from the operator.



Wait a further 5 seconds for the sensor to stabilise then make a movement, the lights should come back on. Observe that the detection / non-detection is as expected.

This range of products features a rich set of adjustable parameters that may be programmed via the hand-held infrared commissioning tools in order to create a sophisticated lighting control installation. There are no physical switches or potentiometers on the product.

Out of Box Behaviour

Prior to commissioning, the default settings for each channel of the sensor will be as follows:

Time Delay: 20 minutes

Photocell Setting: Always turn lights on when occupied

Occupancy Mode: Automatic (lights Auto ON, Auto OFF)

Movement Sensitivity: Maximum



NOTE: Please go to www.ex-or.com for a complete list of programmable parameters.

Technical Data

Marking	Manual Switch	Live Output (ChS1)	Power Supply		
	SW	Lout	L	N	E
Colour	Black				
Terminal type	Pluggable rising cage clamp				
Terminal capacity	1 x 0.5-2.5mm sq solid or stranded				
Recommended cable	0.75mm sq	Derive from appropriate wiring regulations			
Maximum length	10m				
Function	input	output	input		
Operating Voltage	230VAC +/-15% 50-60Hz Recommended circuit protection: 16A MCB				
Power consumption	Negligible	N/A	150mW [relay off] 500mW [relay on]		
Maximum load current	N/A	10A (maximum inrush 80A) LS3100R: 6A	N/A		
Permissible load types/connections	N/A	Magnetic-ballasted fluorescent, Compact fluorescent, Electronic-ballasted fluorescent, LED (maximum inrush 80A), Tungsten lamps (Max 6A)		N/A	

Diagnostics

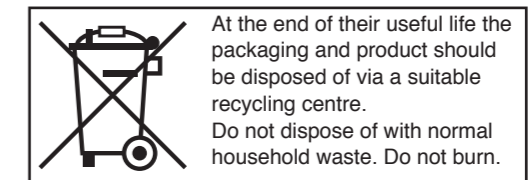
During walk-test. Detectable wiring faults are always indicated by the LEDs, irrespective of whether they are enabled.

LED indication	Meaning
	Movement detected
1 blue flash every 2 seconds	Light level demand – photocell striving for more light in order to reach set-point
2 blue flashes every 2 seconds	A manual switch is being activated

IMPORTANT NOTES

1. A means for disconnection must be incorporated in the fixed wiring in accordance with the current wiring regulations.
2. This equipment is designed to switch lights no more frequently than normal manual operation. However, manufacturers of some particular lighting types (e.g. '2D' luminaires) may specify a maximum number of switching cycles and/or a minimum on-time in order to achieve a predicted lamp life. Please check with the manufacturer of the luminaires to ensure that they are compatible with automatic controls in this respect.
3. Due to limited space within the enclosure, it is not recommended that this product be used as a wiring junction box. System connections should be made elsewhere and wiring not looped within the product enclosure.
4. All information given in this document was correct at the time of publication.

TECHNICAL SUPPORT
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At the end of their useful life the packaging and product should be disposed of via a suitable recycling centre. Do not dispose of with normal household waste. Do not burn.



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