LightSpot - Stand-alone lighting control by presence detection and photocell

Long Range Series LightSpot

Long Range LightSpot is a high performance presence detection system for use in almost any internal space. It was conceived to bring effective energy-saving control to large areas such as warehouses, sports halls, workshops, hangars, classrooms etc. The system offers many outstanding features and user options and is designed to the highest quality standards and performance criteria to ensure efficient and trouble-free operation. When installed using the LRDKIT which is IP67 and IK08 rated, the LR30F can be used in the most exacting locations.

Long Range LightSpot systems comprise two components:

- 230-volt control units with single or dual volt-free output relays, rated to switch any type of load up to 10 amps

- low-voltage microwave detectors for surface or flush mounting, available in 15 and 30 metre versions

System design and installation is extremely simple, requiring no special tools or training. Installation is confined to the lighting circuits being controlled. Detectors and control units may be combined to form self-contained controls or separated for more convenient electrical connection and commissioning. The low-voltage detectors do not contain any adjustment controls and may be fitted in public areas and at a height of up to 3.5m.
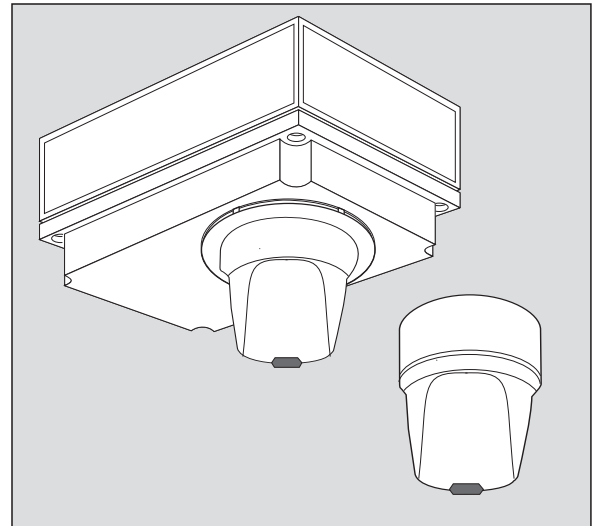
**Fully or Semi-automatic Operation**

In larger areas it is often good practice for all or part of the load to be in semi-automatic operation, whereby a start button is provided to switch ON. The load is automatically reset OFF once the area is vacated. This feature is useful where activation from adjacent spaces might occur or where the existing light level is adequate for visiting access. Dual-circuit control units allow for low-level safety lighting to be provided automatically with the remaining load in semi-automatic operation.

Modes of Operation

	Auto ON with auto OFF Fully automatic	Manual ON with auto OFF Semi-automatic
C1 One circuit	Walk in and lights come ON. Lights go OFF automatically when the area is vacated and there has been no movement for the selected interval (usually 5 minutes). This is the routine application for areas where basically one type of activity takes place.	Walk in and nothing happens until a start button is pressed. Lights then come ON and remain ON until the area is vacated and no movement has been detected for the selected interval. This is an excellent way to provide lights very conveniently for all who need them without casual waste.
C2 Two circuits	Walk in and both circuits are activated. After no movement has been detected for a selected interval, circuit 1 opens, followed, after a further delay, by circuit 2. This option is used when a sequenced shutdown is desirable, eg with SON lighting.	Walk in and circuit 2 is activated. Circuit 1 will only come ON if the start button is pressed. When no movement has been detected for a selected interval, circuit 1 opens, followed, after a further delay, by circuit 2. The system resets to fully/semi-automatic operation. This is a convenient way to give safe through passage whilst retaining the advantages of semi-automatic operation.

Positioning

The detector can see through glass and should be pointed away from thin partitions and windows which view spurious movement sources.

For operation in racking aisles,
see Application Note: AN4010.
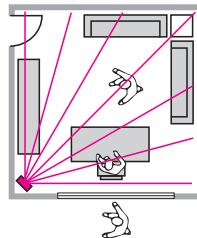
It is recommended that LR-type detectors be ceiling mounted but, if wall mounting is required, the wall mounting kit (WMK) must be used.
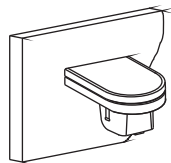

(Supplied assembled)

Examples of WMK application

Horizontal installation
For general applications where ceiling mounting is not convenient and wide angle coverage in the horizontal plane is desirable. The WMK can be screwed to a hard surface or the lid of a conduit stop-end box.

Vertical installation
Use this method of mounting for racking aisle applications and where adjustment in the vertical plane will give improved control over the precise point of entry detection.
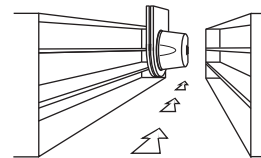
LRDKIT - Rugged Installation Option
For more demanding locations, the LRDKIT (available separately) provides a robust IP67 and IK08 rated housing for the LR30F. It allows the sensor to be mounted either horizontally or vertically, for ceiling or wall mounting, and to be rotated within different planes for optimal performance.

Horizontal orientation

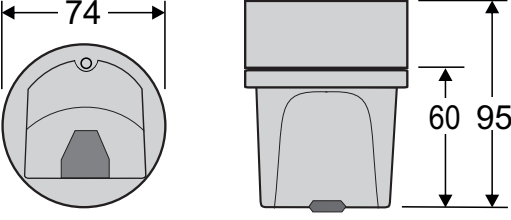Vertical orientation
(for wall mounting)
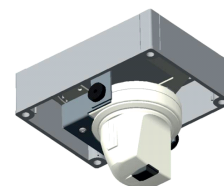
Vertical orientation
(for ceiling mounting)

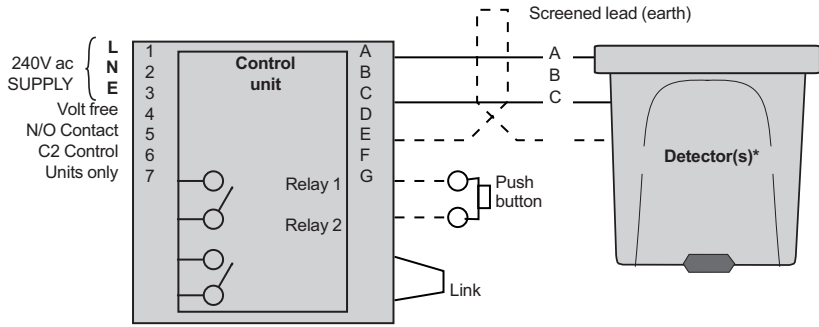Dimensions (mm): 180 (h) x 130 (w) x 150 (d)

Technical Data

Detector

74

60 95

WEIGHT: 250g
COLOUR: White
HOUSING MATERIAL: Flame-retardant ABS
IP RATING: 4X*
MAX MOUNTING HEIGHT: 3.5m
OPERATING TEMPERATURE: 0℃ to 40℃
(*For more demanding locations, the LR30F can be rendered more robust by installing with the optional LRDKIT which has an IP67 rating

Control Units

OPERATING VOLTAGE: 230V 50-60 Hz
SWITCH: 10 Amp x 230V (volt-free)
        Incandescent lamps: 1500W max (at 230V)
TERMINALS: 1 x 6mm or 2 x 2.5mm
WEIGHT: approx 850g
POWER SUPPLY: transformer isolated 12V
SEMI-AUTOMATIC: using low voltage switch

SEGREGATION: none
TIME-OUT: 0 - 16 minutes per channel
POWER-UP CONDITION: select ON or OFF
DIMENSIONS: 175 x 125 x 75 mm
IP RATING: 65
OPERATING TEMPERATURE: 0℃ to 40℃

Electrical connection diagram

Screened lead (earth)

240V ac SUPPLY — L N E

1
2
3
4 Volt free
5 N/O Contact
6 C2 Control
7 Units only

Control unit

A
B
C
D
E
F
G

Relay 1
Relay 2

Push button

Detector(s)*

A
B
C

Link

Note: phases should not be mixed in enclosure.

* Maximum of 3 Detectors per Control Unit.

Part Numbers

LR15SM, LR30SM   Detectors - surface mounted: 15m, 30m range
LR15F, LR30F   Detectors - flush mounted: 15m, 30m range

Control Units:
LRC1L   Control unit with single switch relay
Combined units (detector fitted within lid of a control unit - surface mounted) may be ordered by combining the above part numbers eg **LR15C1.**
WMK   Wall-mounting kit for LR15SM and LR30SM
LRDKIT   Robust mounting kit for LR30F

Ex-Or operates a genuine policy of continuous improvement. You may expect the specification to be regularly enhanced.
For latest technical information, please visit www.ex-or.com.

Please check www.ex-or.com to ensure this is the most recent issue

Ex-Or by Honeywell, St. Mark's Court, North Street, Horsham, West Sussex, RH12 1BW, UK
T: +44 (0)1942 719229   F: +44 (0)1942 508753   E: technicalsales.ex-or@honeywell.com & orders.ex-or@honeywell.com www.ex-or.com

Long Range Series LightSpot Technical Data Sheet D4009 Rev. K 14-Jul-2020 Page 4