LightSpot
Long Range Series
Detectors: LR15, LR30, LRD30 & LRD60

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Installation & Commissioning Instructions

Flush Mounted Unit LR15F, LR30F Mounts onto own back box
Surface Mounted Unit LR15SM, LR30SM WMK - Wall-mounting kit available
Flush Mounted Unit LRD30F, LRD60F Mounts onto 2-gang sinking box
Surface Mounted Detector with mounting box LR15B, LR30B
Surface Mounted Detector with mounting box LRD30B, LRD60B
**CHOOSING A POSITION**

Select a position on a rigid surface where the detector has a clear view of all the occupants who are expected within the monitored area.

Face the detector away from glass panels or thin partitions which have movements occurring behind them (e.g., trees etc.).

The detectors are extremely sensitive to movement; they must be mounted on a solid surface which has no movement whatsoever. Extra care must be taken when considering the deployment of 60m detectors in older non-brick buildings which may experience a degree of movement in strong winds.

Typical mounting height is 3 - 4 metres. Do not mount LR-type Detectors above 3.5m or LRD-type above 6m without seeking technical advice.

Often a corner position makes the best use of the detector’s wide detection pattern.

![Detector Image]

**ELECTRICAL CONNECTIONS**

Detectors are supplied with a choice of mountings:
- within the lid of the control unit housing
- in separate housings for remote mounting.

A wall-mounting kit is available for the LR15SM and LR30SM.

If mounted in a separate housing, the detector and its control unit should be interconnected using a minimum 0.75mm² mains rated 2-core screened cable - 'Pyro' or 'FP200' are suggested.

The d.c. voltage measured between terminals B + C at the detector should not be less than 10 volts.

Three LR-style or two LRD-style detectors may be connected in parallel to the control unit terminals. See ‘Control Unit Installation & Commissioning Instructions’ for details.

**ORIENTATION OF LRD30 & LRD60 DETECTOR HEADS**

Swivel the detector to the best orientation. With the LRD30 and LRD60, the detector response in its vertical axis is wider than its horizontal axis, as shown below.

![Detector Head Orientation Diagram]

To give the best possible coverage of the area to be controlled, the head may be adjusted in its eyeball socket to a position best suited to the shape of the detection area.

The detector head locking screw should be slackened to allow movement of the detector head. When the correct position has been established, the head should be locked in position by tightening the locking screw.

![Detector Head Locking Screw]

**RANGE AND DETECTION PATTERN (POLAR PLOT)**

<table>
<thead>
<tr>
<th>DETECTOR</th>
<th>RANGE ADJUSTMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>LRD60</td>
<td>Up to 60 m</td>
</tr>
<tr>
<td>LR30 / LRD30</td>
<td>Up to 30 m</td>
</tr>
<tr>
<td>LR15</td>
<td>Up to 15 m</td>
</tr>
</tbody>
</table>

LRD-type detectors may be wall or ceiling mounted.

It is recommended that LR-type detectors be ceiling mounted. Where LR-type detectors cannot be ceiling mounted, the wall mounting kit (WMK) must be used.

Polar plots for LRD-type detectors

Free space polar response to ½ step body movement.

**During Commissioning**

Where the detector is fitted into the lid of a control unit, the box lid may be temporarily held by two of its fixing screws as shown. This gives access to the controls during commissioning. The screws must be securely tightened to ensure adequate temporary support.

![Commissioning Diagram]