

## PPAD-C-HB-DALI-ADDR

### High sensitivity PIR DALI Network

#### Overview



The PPAD-C-HB-DALI-ADDR is a combined passive infrared (PIR) motion sensor and photocell designed to be part of a DALI network. The PPAD-C-HB-DALI-ADDR is a high sensitivity PIR detector suitable for high bay applications, such as warehouses and factories, and where high detection sensitivity is needed.

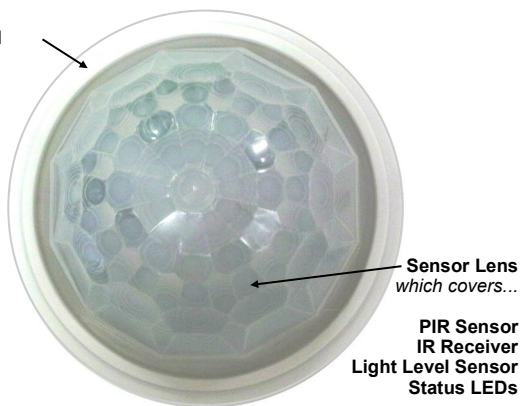
Functioning as a presence detector, the unit returns occupancy data to the DALI network.

The photocell provides a lux level measurement value to the DALI network.

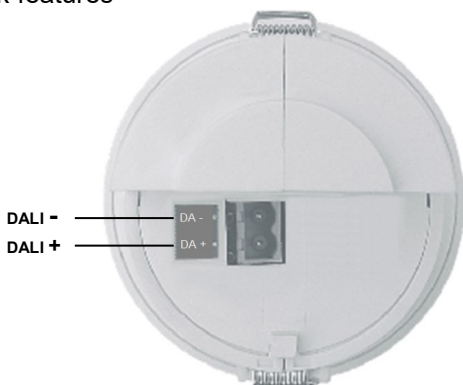
#### Features & wiring

##### Front features

Mounting Bezel

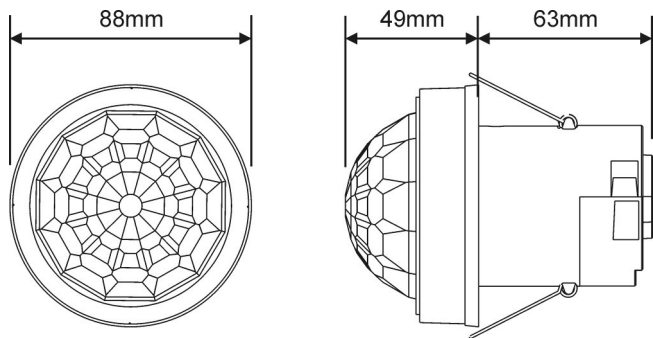


##### Back features

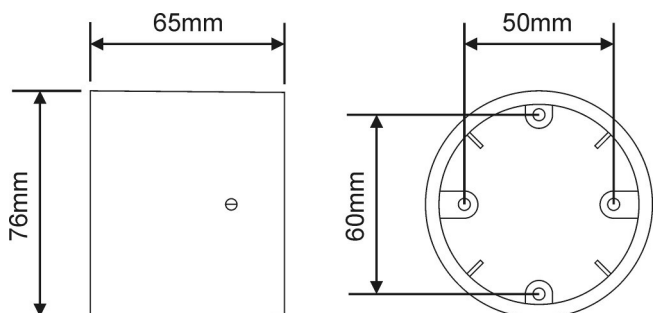


#### Dimensions

##### PPAD-C-HB-DALI-ADDR



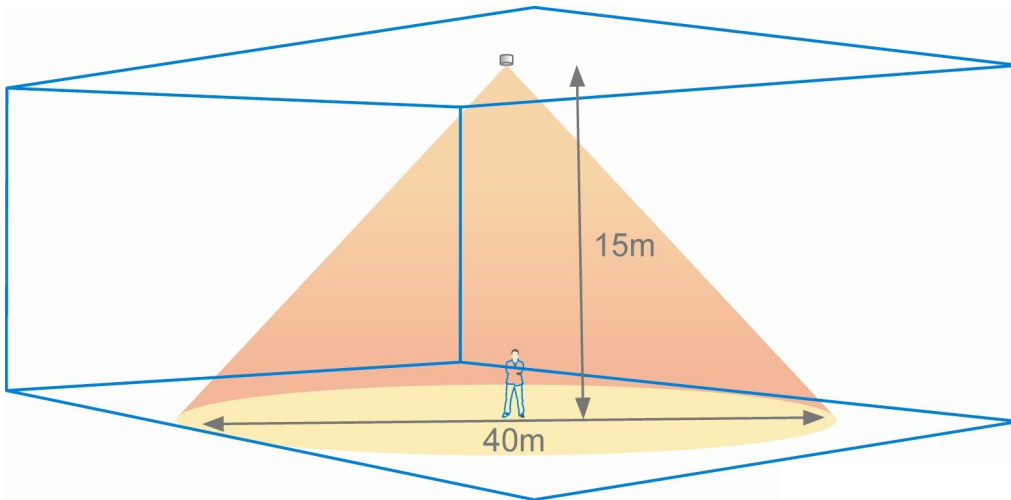
##### SB-C



**Note:** always check the number of DALI addressable devices on any DALI loop as well as the DALI power supply loading to ensure limits are not exceeded. Do not exceed 8 DALI sensors per DALI loop.

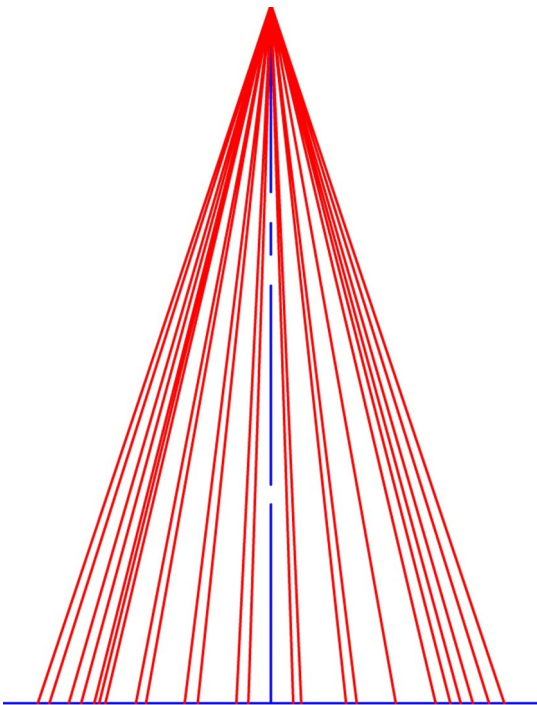
# Detection diagrams

## Range

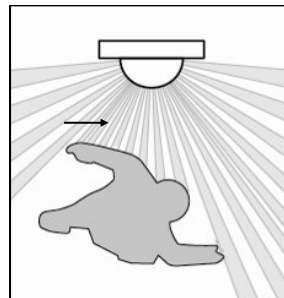


Maximum mounting height 20m

## Detection pattern

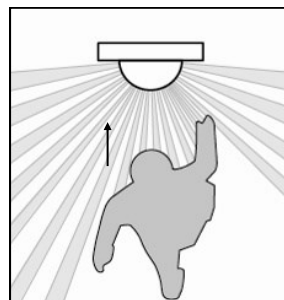


## Walk across



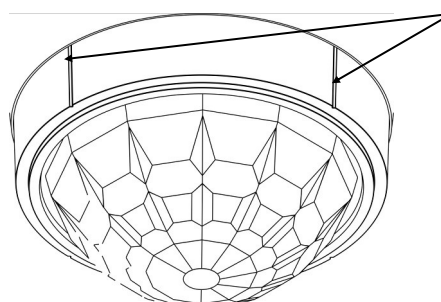
| Height | Range Diameter |
|--------|----------------|
| 15m    | 40m            |
| 10m    | 26m            |
| 6m     | 16m            |
| 3m     | 9m             |

## Walk towards

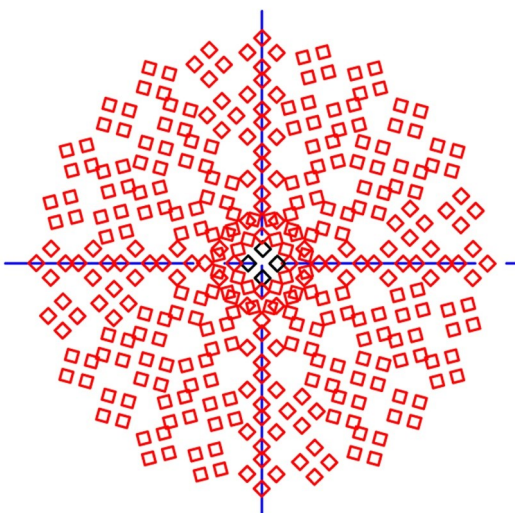


| Height | Range Diameter |
|--------|----------------|
| 15m    | 30m            |
| 10m    | 20m            |
| 6m     | 12m            |
| 3m     | 8m             |

## Alignment marks



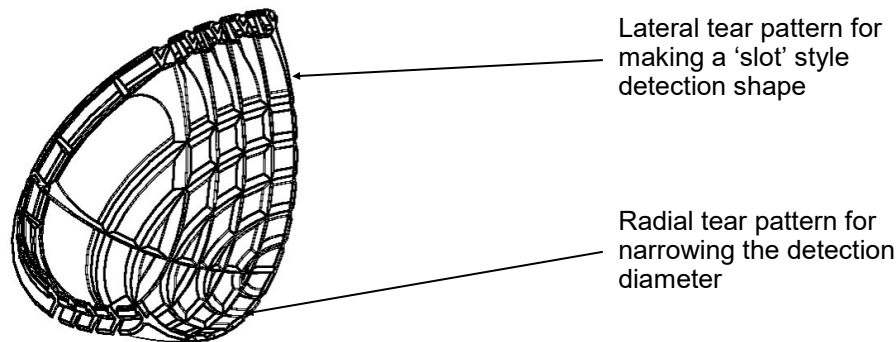
The sensor head has 4 alignment marks. These correspond to the 4 outer passive infrared sensors under the lens. Use these marks to align with aisles and corridors to ensure the best detection characteristics. See example overleaf.



Masking

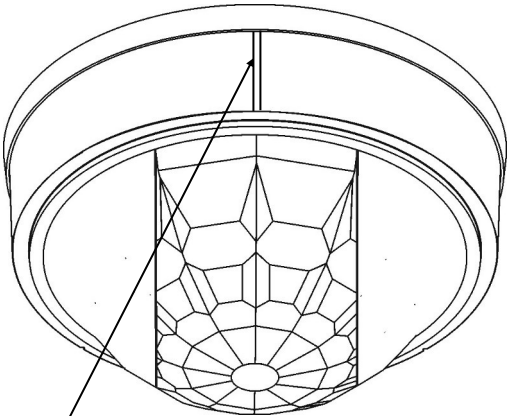
The PPAD-C-HB-DALI-ADDR includes two clip-on masking shields to allow for precise masking of the detection shape. The masks can be easily shaped to produce detection patterns suitable for applications such as aisles and corners and for narrowing the detection diameter.

**Important note.** *Ensure all infra-red (IR) programming is completed before affixing the masking shields to the detector.*  
*The masking shields may impair the light sensor and IR sensors by covering them. Ensure correct operation before completing commissioning.*

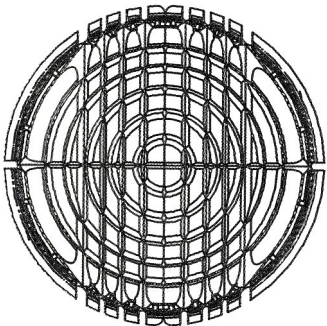


Aisles

Masking shields trimmed for aisle shaped detection



Align trimmed shields with sensor head alignment marks and aisle.



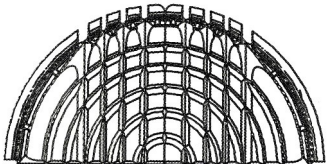
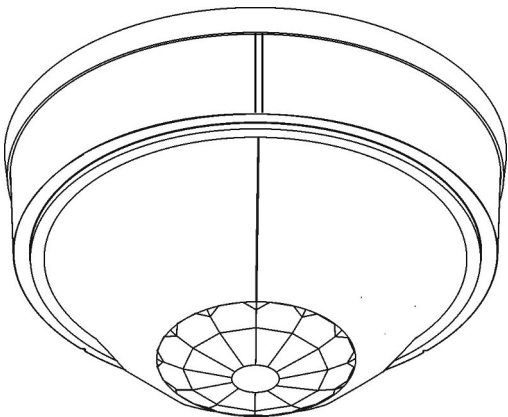
| Slot number | Masking shield % coverage |
|-------------|---------------------------|
| 1           | 45%                       |
| 2           | 32%                       |
| 3           | 22%                       |
| 4           | 11%                       |

Slot number 1 2 3 4 4 3 2 1

**Example**  
 Mounting height 6m  
 Trimmed to slots 2  
 Aisle detection width 16m x 32% = 5.1m walk across  
 12m x 32% = 3.8m walk towards

Narrow detection

Masking shields trimmed for a narrow beam of detection



Diameter number 1 2 3 4 5 5 4 3 2 1

| Diameter number | Masking shield % coverage |
|-----------------|---------------------------|
| 1               | 89%                       |
| 2               | 63%                       |
| 3               | 45%                       |
| 4               | 32%                       |
| 5               | 22%                       |

**Example**  
 Mounting height 15m  
 Trimmed to diameter 3  
 Detection diameter 40m x 45% = 18m walk across  
 30m x 45% = 13.5m walk towards

# Installing the PIR Detector

## Choosing a Suitable Location

The PIR Detector is designed to be ceiling mounted and must satisfy the following criteria:

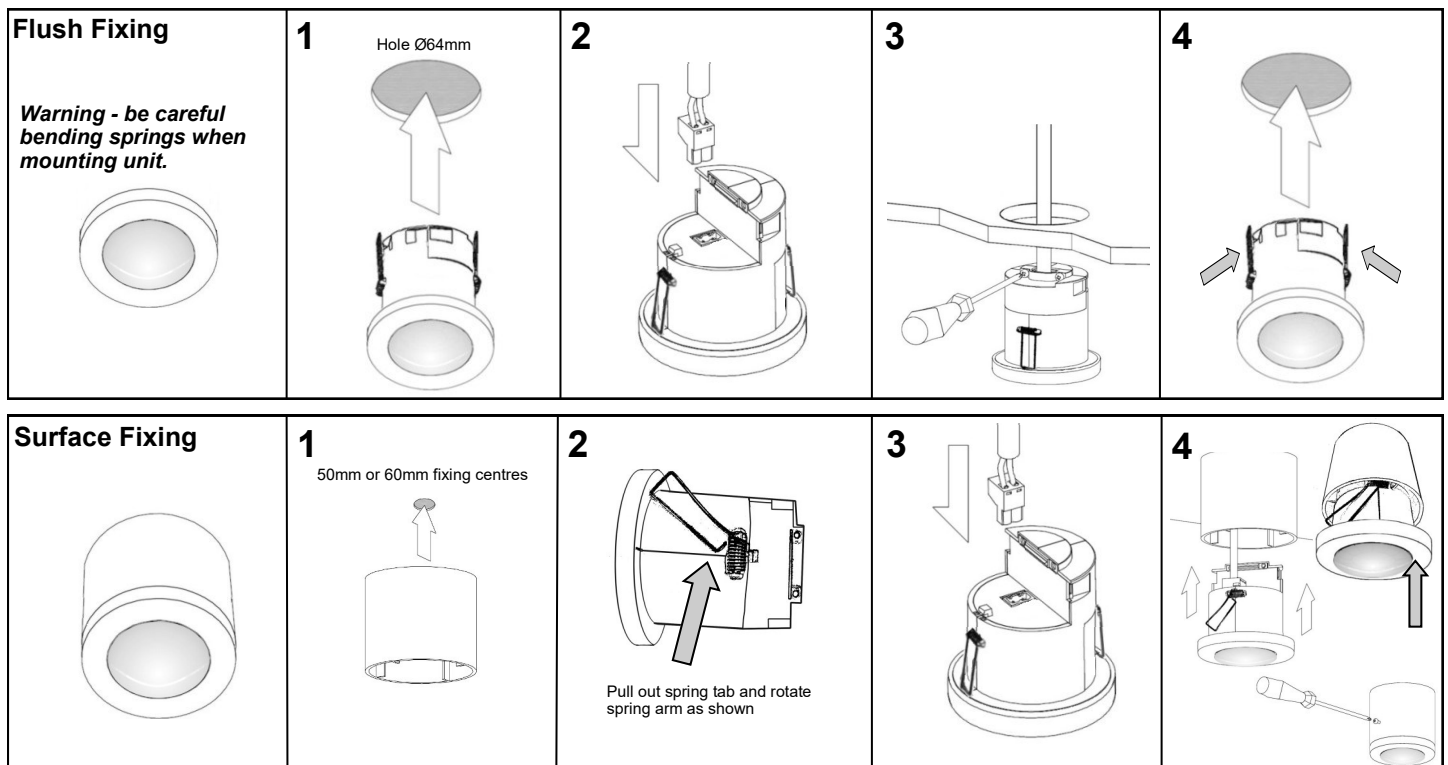
- Avoid positioning the unit where direct sunlight may enter the sensor element.
- Do not site the sensor within 1m of any lighting, forced air heating or ventilation.
- Do not fix the sensor to an unstable or vibrating surface.
- Position the sensor so that the occupants of the room fall inside the detection zone. Note that the detection zone illustrated is based on a recommended mounting height of 2.8m. A lower height will decrease the overall size of the detection zone.

## Mounting Methods

The Detector is designed to be mounted using either:

- Flush fixing (recommended), or
- Surface fixing, using the optional Surface Mounting Box (part no. SB-C).

Both methods are illustrated in below.



## Technical data

|                   |                                             |
|-------------------|---------------------------------------------|
| Dimensions        | See diagrams on page 1                      |
| Weight            | 0.10kg                                      |
| Supply Voltage    | 9.5VDC—22.5VDC via DALI                     |
| Supply Current    | 8mA                                         |
| Terminal Capacity | 2.5mm <sup>2</sup> (solid or stranded)      |
| Material (casing) | Flame retardant ABS and PC/ABS              |
| IP rating         | 40 without gasket. 65 with included gasket. |
| Compliance        | EMC-2014/30/EU<br>LVD-2014/35/EU            |



UK and international patents applied for



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