



# EBDHS-MB-DNET1

## Luminaire mount high bay PIR DALI network

### Overview



The EBDHS-MB-DNET1 is a combined passive infrared (PIR) motion sensor and photocell designed to be part of a DALI network. The EBDHS-MB-DNET1 is a high sensitivity PIR detector suitable for high bay applications, such as warehouses and factories, and where high detection sensitivity is needed. It is specifically designed for mounting onto a batten style luminaire.

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.

The units are IP65 rated as standard and are therefore suitable for outdoor use as well as wet and wash-down areas. A selection of fixing washers are supplied to aid fixing to a variety of luminaires.

*For a copy of the DALI 'Command set', contact CP Electronics' technical support or visit our website: [www.cpelectronics.co.uk](http://www.cpelectronics.co.uk)*

### Features

Front view



#### PIR Sensor

Detects movement within the unit's detection range, allowing load control in response to changes in occupancy.

#### IR Receiver

Receives control and programming commands from an IR (infrared) handset.

#### Light Level Sensor

Measures the overall light level in the detection area

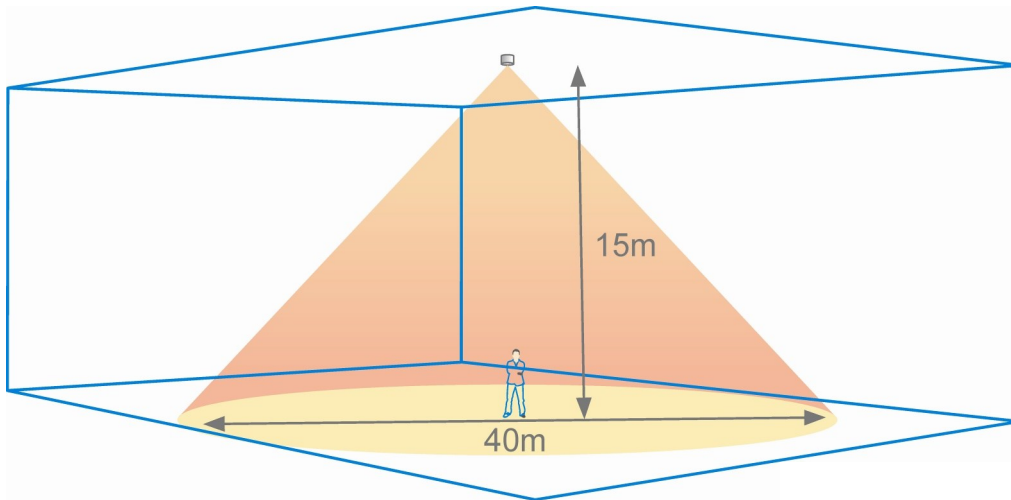


**EBDHS-MB-DNET1-LT30**

*Special order version that can be used down to -30°C*

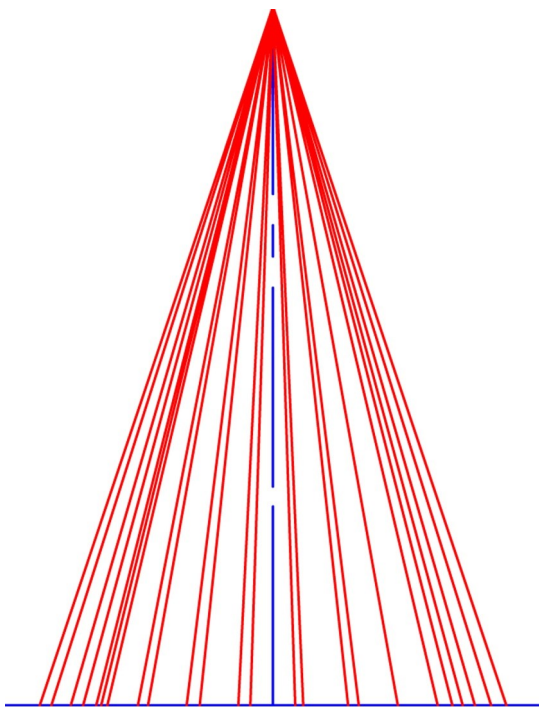
# Detection diagrams

## Range

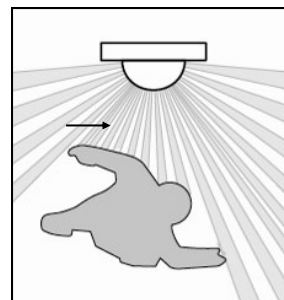


Maximum mounting height 20m

## Detection pattern

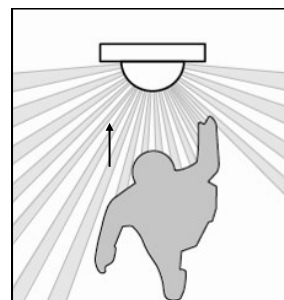


## Walk across



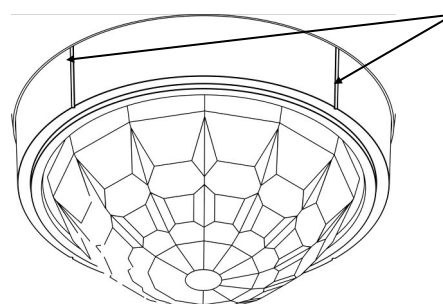
Height	Range Diameter
15m	40m
10m	26m
6m	16m
3m	9m

## Walk towards



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

## Alignment marks



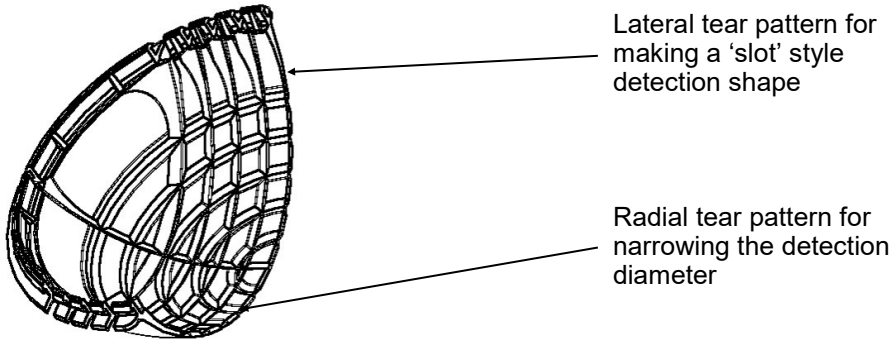
The sensor head has 4 alignment marks. These correspond to the 4 outer passive infrared sensors under the lens. Use these marks to align with aisles and corridors to ensure the best detection characteristics. See example overleaf.

## Masking

The EBDHS-MB-DNET1 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.

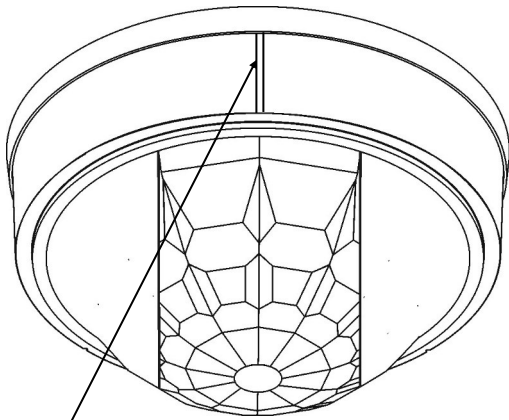
**Important note. Ensure all infra-red (IR) programming is completed before affixing the masking shields to the detector.**

**The masking shields may impair the light sensor and IR sensors by covering them. Ensure correct operation before completing commissioning.**

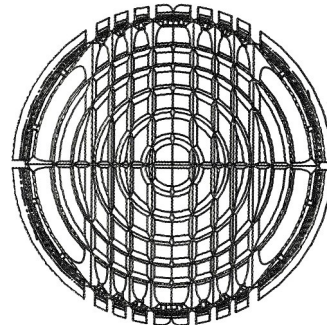


## Aisles

Masking shields trimmed for aisle shaped detection



Align trimmed shields with sensor head alignment marks and aisle.



Slot number 1 2 3 4 4 3 2 1

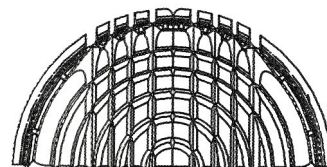
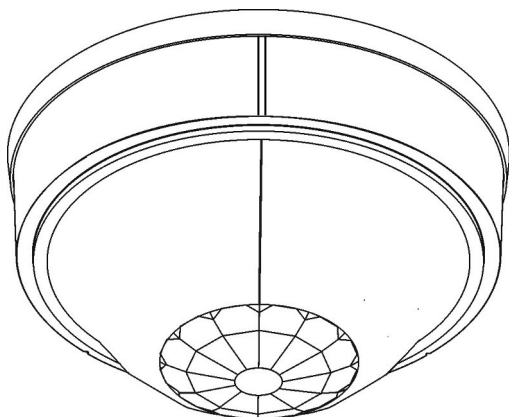
Slot number	Masking shield % coverage
1	45%
2	32%
3	22%
4	11%

### 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%

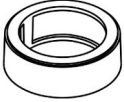

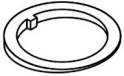

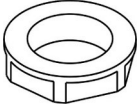
### Example

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

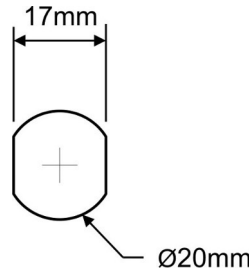
# Installation

**Do not grip unit at the lens end. Hold the square body near the threaded end when installing and tightening the nut. Care must be taken to prevent damage to the lens and surrounding IP seal.**

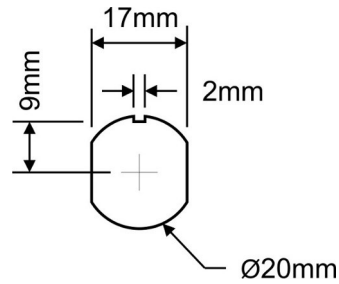
## Components

Part	Quantity Supplied
 IP Spacer with silicone coating	1
 Silicone washer	1
 5° washer	1
 5° spacer	1
 M20 nut	1

## Mounting hole without key

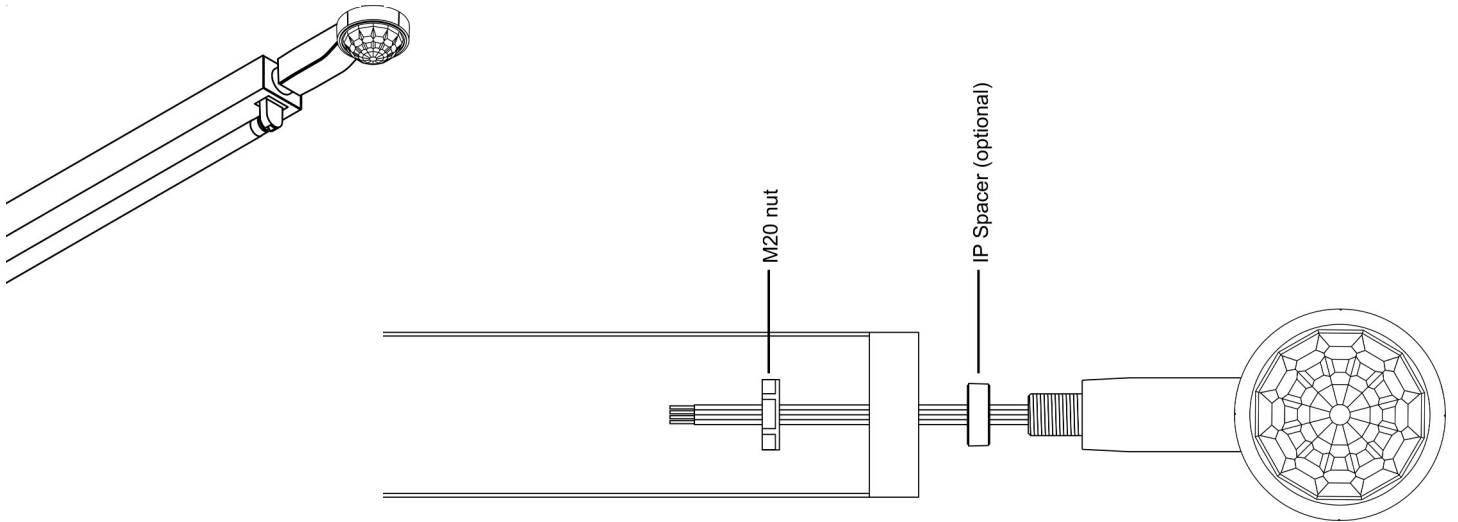


## Mounting hole with key

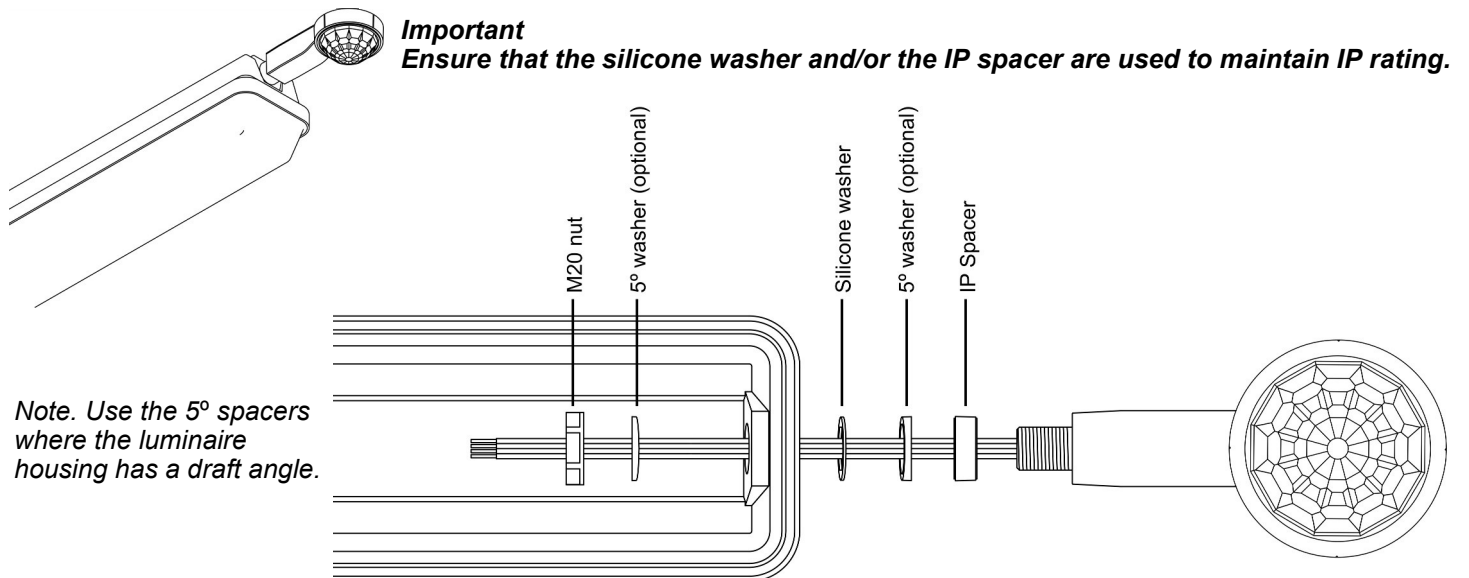


*Note. Key to be at top of sensor.*

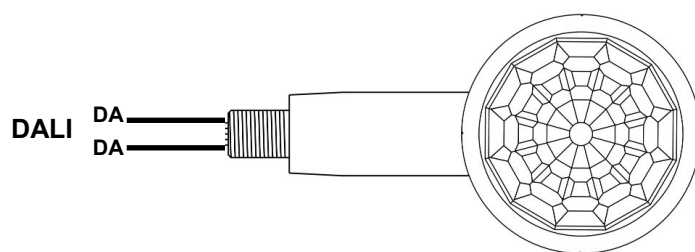
## Standard luminaire fitting



## IP luminaire fitting



The EBDHS-MB-DNET1 supplied with two 1m wires to connect to the DALI network. The device is designed to operate correctly with reversed polarity.



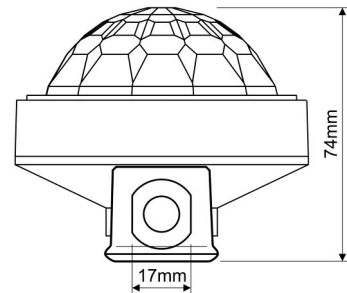
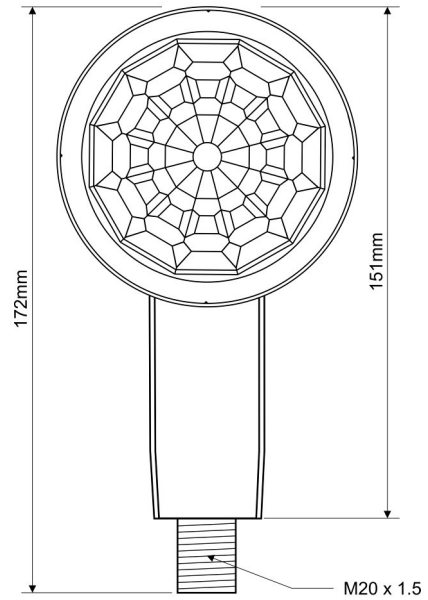
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# Technical data

Dimensions	See diagrams on page 1
Weight	0.15kg
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
Temperature	EBDHS-MB-DNET1 -10°C to 35°C EBDHS-MB-DNET1-LT30 -30°C to 35°C
Humidity	5 to 95% non-condensing
Material	Flame retardant ABS/PC Type Class 2
IP rating	IP65
Compliance	EMC-2014/30/EU LVD-2014/35/EU

For further compliance information visit  
[www.cpelectronics.co.uk/compliance](http://www.cpelectronics.co.uk/compliance)



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