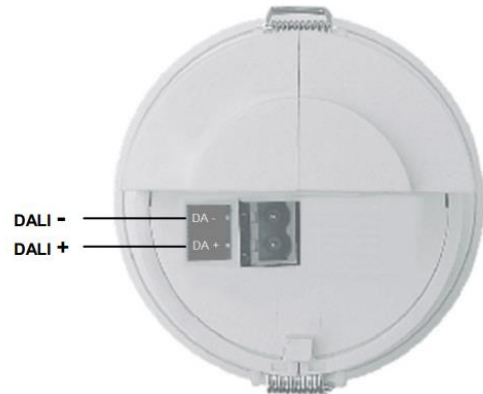


# QBUS DALI SENSOR – HIGH BAY (QDSEN/HB)



### 3. Mounting and wiring



Connect the QDSEN/HB on the DALI bus.

### 1. Product Description

The Qbus Dali Sensor High Bay is a combined passive infrared (PIR) motion sensor and photocell, and is to be connected directly on a DALI network. Motion and light can hence be detected via this sensor, and can control a Qbus output via the Qbus Dali Interface (QDI). This high sensitivity PIR detector is suitable for high bay applications such as warehouses and factories, and where high detection sensitivity is needed. Installed at a height of 15 meters, the QDSEN/HB has a detection area of 40 meters diameter.

The configuration of the QDSEN/HB takes place via the configuration of the QDI module. When assigning addresses via the Qbus Dali Interface, the QDSEN/HB modules connected to that DALI network will appear as inputs in the list. Via the Qbus Configuration Software (System Manager) you can define to activate a specific output only if a certain light level and/or motion has been detected.

### 2. Safety Instructions

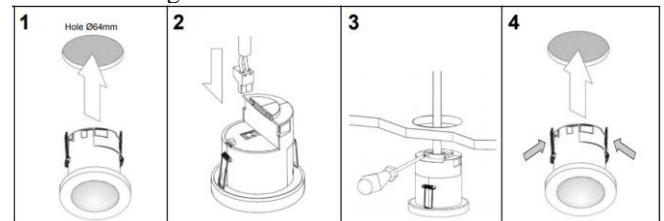
Read the complete manual before carrying out the installation and activating the system.



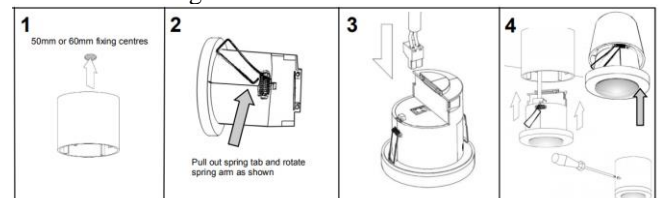
#### WARNING

- The device must be mounted and commissioned by an authorized electrician in accordance with the country-specific regulations.
- The module has to be connected to the DALI-bus.
- The device must not be opened. The guarantee provisions will be void when the module has been opened.

#### Flush mounting:



#### Surface mounting:



#### ATTENTION:

The QDSEN/HB is designed to be ceiling mounted, and must satisfy following criteria:

- Avoid positioning the unit where direct sunlight may enter the sensor element.
- Do not install the sensor within 1 meter of any lighting, forced air heating / cooling or ventilation.
- Do not install the sensor on a vibrating or unstable surface.

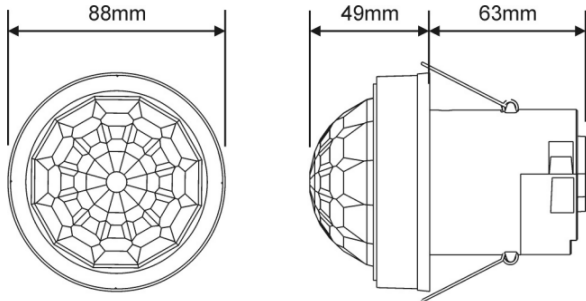
A back-box for surface mounting is standard part of the QDSEN/HB.



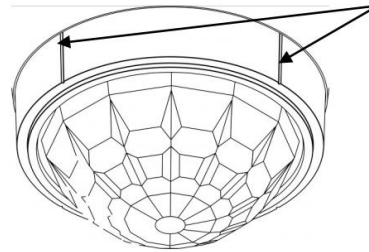
# QBUS DALI SENSOR – HIGH BAY (QDSEN/HB)

## 4. Dimensioning

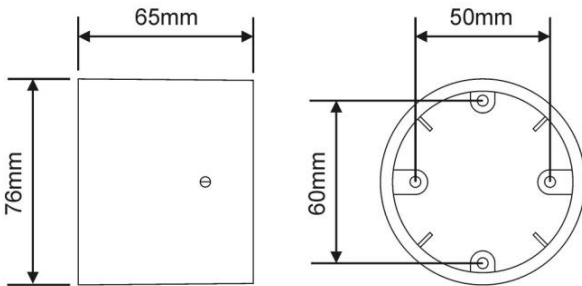
Dimensioning of the QDSEN/HB



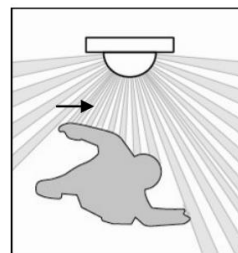
Alignment marks



Dimensioning of the included back box for surface mounting:

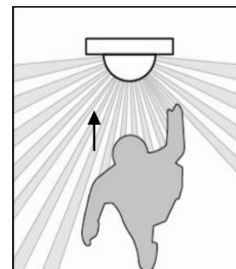


### Detection zone at “walk across”:



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

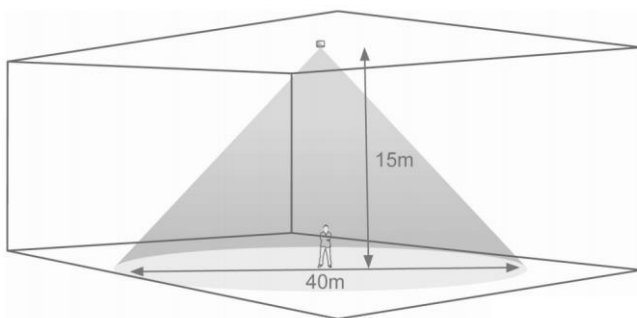
### Detection zone at “walk towards”:



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

## 5. Detection zones

At a mounting height of 15 meter, a detection zone of 40-meter diameter is covered. Maximal installation height is 20 meters.



The QDSEN/HB 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.

### Masking:

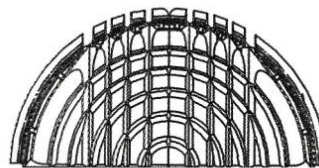
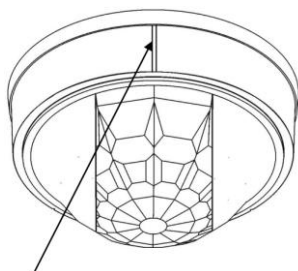
Included with the QDSEN/HB are two masking shields to allow for precise masking of the detection shape. The masks can be easily shaped to produce detection patterns suitable for applications such as aisles and corners and for narrowing the detection diameter.

**IMPORTANT:** Ensure all settings of the detector are completed via the Qbus System Manager before affixing the masking shields to the QDSEN/HB. The masking shields might impair the light sensor and the PIR sensors by covering them. Ensure correct operation before completing the commissioning.

The masking shields can both be used for aisle shaped detection and for narrow beam detection.

# QBUS DALI SENSOR – HIGH BAY (QDSEN/HB)

**Aisle shaped detection:**



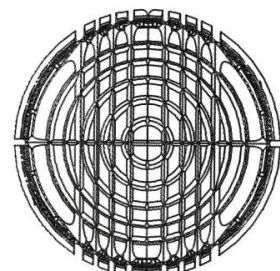
1 2 3 4 5 5 4 3 2 1

Line #	Remaining detection
1	89%
2	63%
3	45%
4	32%
5	22%

Align trimmed shields with the sensor head alignment marks and aisle.

The masking shields can be trimmed at different lines.

Depending on the chosen line, a certain % of the standard detection zone is left:



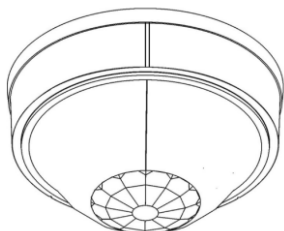
1 2 3 4 4 3 2 1

Line #	Remaining detection
1	45%
2	32%
3	22%
4	11%

If for example the masking shields are trimmed at the 2nd line, and the detector is mounted at 6m height, the detection zone will be:

- 16m (standard at 6m height, see above) x 32% = 5,1 meter at “walk across”;
- 12m (standard at 6m height, see above) x 32% = 3,8 meter at “walk towards”.

**Narrow beam detection:**



The masking shields can be trimmed at different diameters.

Depending on the chosen diameter, a certain % of the standard detection zone is left:

If for example the masking shields are trimmed at the 3<sup>rd</sup> diameter line, and the detector is mounted at 15m height, the detection zone will be:

- 40m (standard at 15m height, see above) x 45% = 18 meter at “walk across”;
- 30m (standard at 15m height, see above) x 45% = 13,5 meter at “walk towards”.

## 6. Technical Data

### GENERAL SPECIFICATIONS :

- Power supply : DALI-bus
- Operational temperature: -10°C to 35°C.
- Maximum humidity : 95%, no moisture condensation

### PHYSICAL SPECIFICATIONS

- Housing: flame retardant ABS
- Protection Degree : IP65 with gasket
- Installation : on DALI-bus.
- Weight : approx. 100 grams.

### CE

- Complies with the EMC regulations and low voltage regulations. The device complies with EMC-2014/30/EU en LVD-2014/35/EU



## 7. Guarantee provisions

Period of guarantee : 2 years from date of delivery.  
 Guarantee will not be accepted if the device has been opened! Before sending back faulty devices, an RMA-form needs to be requested at:

**Qbus N.V.**  
 Joseph Cardijnstraat 19  
 B-9420 Erpe-Mere  
 Tel : +32 (0)53 60 72 10/Fax : +32 (0) 53 60 72 19  
 Email : [support@qbus.be](mailto:support@qbus.be)