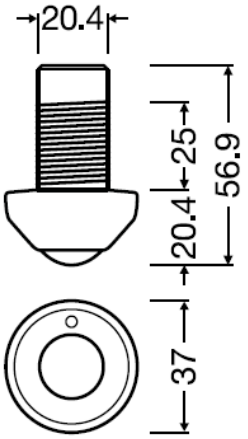
# Product data sheet: B NLC D HB LI – Sensor for HubSense®

## Bluetooth® Networked Lighting Control sensor

## For light harvesting and presence detection D4I standard

**Product family benefits**
DiiA D4I certified incl.parts -351
Design freedom due to compact size
Easy to integrate in luminaire
Minimize internal wiring in combination with DEXAL drivers

**Areas of application**
Warehouse
Factories
Retails
Sports Hall




**Benefits**

With/without Daylight and Occupancy Sensor DEXAL Module
Bluetooth® Networked Lighting Control
Control of D4I drivers or DALI drivers
Works with inventronics Hubsense
Works with inventronics D4I LED drivers

**Approval marks**
Bluetooth, D4I, SRRC, UL

Housing material: plastic

## Product Features

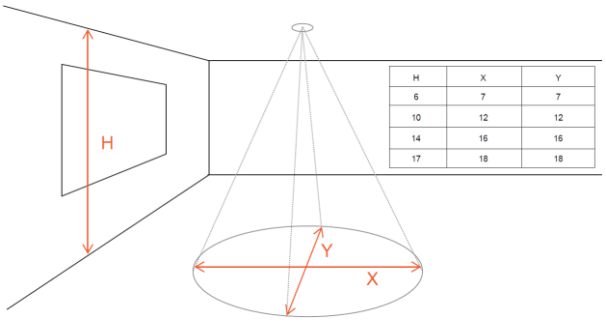
- Sensor for luminaire integration based on Bluetooth® Networked Lighting Control
- IP grade 65*
- D4I controlled
- Stand by power consumption <150mW
- 50000 h lifetime at tc max = 60°C
- Installation height up to 17m
- IP grade 65*
- Wide detection range up to 18m
- Shield accessory
- 5 years guarantee
- UL

*IP65 is reached when used in combination with sealed accessory (i.e. the mount batten adapter)

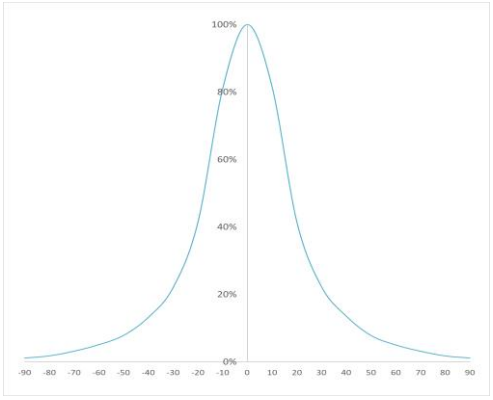
## Electrical Specifications

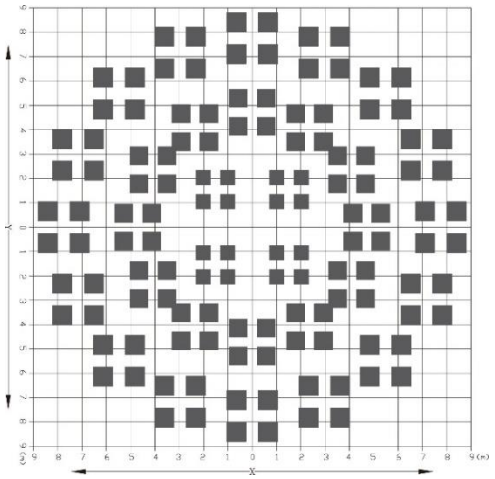
| | Item | Value | Unit | Remarks |
|---|---|---|---|---|
| INPUT/ OUTPUT | Rated voltage | 12 – 22.5 | Vdc | According to D4I standard |
| | Average input current | 10 | mA | |
| | Peak input current | 30 | mA | |
| | System wattage | <150 | mW | System assumption (0.37W driver + 0.12W dongle) |
| | Radio frequency | 2.4 | GHz | |
| | Max Tx Power | +8 | dBm | 4.884 mW |
| | Wireless protocol | | | Bluetooth NLC provided by SILVAIR |
| | Range | 20 | m | Line of sight |
| CAPABILITIES | Control | D4I | | DALI parts: 101, 103, 351 |
| | Number of connected drivers | 4 | | D4I LED drivers |
| | Type of sensor | | | PIR and Light sensor |
| | Detection angle | +/-20° | | 50% lux detection |
| | Mounting heights | 8 – 17 | m | Minimum – Maximum height |
| | Min temperature difference between the target and the surroundings | up to 17m<br>up to 12m | 4°C<br>2°C | |
| | Installations | | | In Luminaire |
| | PIR detection range | 18 | m | |
| | Detection angle | 360 | ° | |
| | Light measurement | 5-1000 | lux | lux with daylight harvesting function (β-angle 40°: ±20°), |
| | Reset | | | Magnet |
| | LEDs indicator | | | Blue x 1, Red x 1 (pairing, connected & etc. indications) |
| ENVIRONMENT | Ambient temperature range $t_a$ | -20 …+50 | °C | |
| | Maximum case temperature $t_c$ | 60 | °C | (50,000 hrs lifetime at max. Ta = 50°C / Tc = 60°C) |
| | Max. case temp. in fault condition | 110 | °C | |
| | Storage temperature range | -20 …+70 | °C | |
| | Operating humidity | 0 … 90 | % | |
| | Storage humidity | 0 ... 95 | % | Not condensing |
| | | | | |
| | Environmental rating | Indoor | | |
| | IP rating | IP 65 | | When installed on sealed device with gasket |
| | | | | |
| | Expected lifetime | 50'000 | h | Ta=50°C or Tc=60°C |
| DIMENSIONS AND WEIGHT | Screw thread length | 25 | mm | |
| | Length | 56.9 | mm | |
| | Diameter internal | 21.8 | mm | |
| | Diameter external | 37 | mm | |
| | Protrusion | 20.4 | mm | With PIR 18 mm |
| | Mounting hole diameter | 22.2 – 23.2 | mm | |
| | Product weight | 21 | g | |
| | Wire preparation length, input side | 7 … 9 | mm | |
| | Cable cross section, input side | 0.25…0.75 | $mm^2$ | |
| | Maximum allowed cable length | 10 | m | |
| STANDRDS | **CE**<br>**LVD:**<br>EN61347-2-11<br>**EMC:**<br>EN 301 489-1<br>EN 301 489-17<br>EN 50581<br>EN 62479<br>EN 300 328<br>**DALI 2:**<br>EN IEC 62386-101, EN IEC 62386-103 and D4i Part 351<br>**RoHS & REACH compliance**<br>**UL** | | | |
| | SRRC | | | |

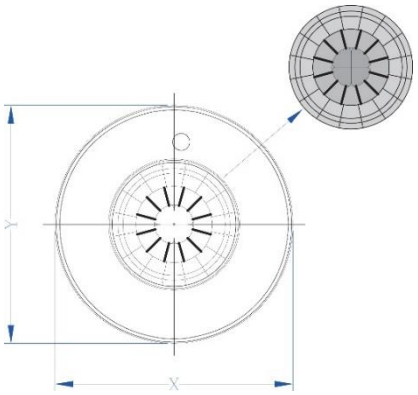
## Detection range

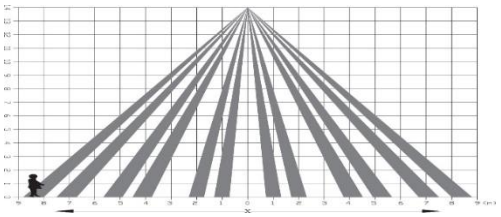


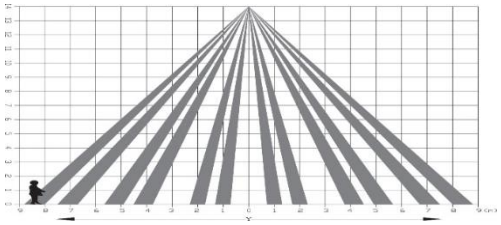

| H | X | Y |
|---|---|---|
| 6 | 7 | 7 |
| 10 | 12 | 12 |
| 14 | 16 | 16 |
| 17 | 18 | 18 |





## Installation Tips

Do not install the sensor directly next to a window which can cause incorrect measurement of the natural light. Keep minimum distance as per table below

| Height | Distance from window |
|---|---|
| 10 m | 6 m |
| 14 m | 8,4 m |
| 17 m | 10 m |

Do not calibrate the sensor in low level of light. It can cause incorrect calibration when setting Lux value.

Light sensor accuracy may depend on the surface reflectance

## Additional product information

- By integrating the device into a casing, the wireless range could be affected by metal surfaces. Therefore, the wireless range needs to be verified after integration.
-The device could be reset to factory default by magnet (cfr User Instruction)
-The status LED of the device indicates following Network status

Blue LED Indicator:
• Success connection: LED indicator flashes 2s at once
• No connections: LED indicator flashes 0.3s at once
Reset to factory settings:
LED indicator flashes 1s at once, then quickly flashes and disappears
Red LED Indicator:
• Warm up: LED indicator disappears after 60s
• When PIR is triggered, the LED indicator quickly flashes at once; continuous triggered, LED indicator flashes every 1s at once

-The device has passed successfully the SILVAIR Testing process.
-The device can be put into operation using the inventronics HubSense Commissioning Tool (https://platform.hubsense.eu), subject to prior acceptance of the Terms of Use and the Privacy Policy.
-OSRAM may terminate or suspend the use of the HubSense Commissioning Tool at any time and for any or no reason in its sole discretion, even if access and use is continued to be allowed to others.
-The device complies with Bluetooth mesh Standard v1.0. It can also be used in 3rd party Bluetooth® NLC network, that complies with this standard and that supports the mesh models of this device, and with certain 3rd party commissioning tools, that support the mesh models of this device. In order to ensure correct interoperability a verification with the 3rd party network components and the 3rd party commissioning tool is necessary in advance. Please contact inventronics (support@inventronicsglobal.com.eu) to receive the actual list of supported models for this device.
- inventronics shall have no liability for any 3rd party commissioning tool and does not make any representations, express or implied, about the availability and/or performance of such commissioning tool.
- inventronics shall have no liability for and does not make any representations, express or implied, about the connectivity of inventronics Bluetooth® NLC products with any other products, that have passed the SILVAIR Testing process

## ordering information

| Product type | Ordering code |
|---|---|
| B NLC D HB LI | 9BNLCDHBLI000-0000 |

Inventronics GmbH
Parkring 31-33, 85748 Garching,
Germany
Phone: +49 89 6213-0
Email:
contact@inventronicsglobal.com