

Self-powered Bluetooth® Low Energy Motion and Illumination Sensor EMDCB

EMDCB is a self-powered ceiling-mounted sensor that monitors the environment for person movement and measures ambient light level both via a dedicated illumination.

Under standard operation conditions, EMDCB is self-supplied via its solar cell in conjunction with an internal energy store which enables EMDCB to operate 4 days in absolute darkness.

Key applications include lighting control based on presence and ambient light level as well as occupancy monitoring.

EMDCB reports motion detection and illumination measurements wirelessly using Bluetooth Low Energy (BLE) advertising and therefore does not require any wiring.

Key parameters of EMDCB can be configured using the integrated NFC (ISO 14443) interface. Additionally, a simple user interface consisting of one button, one switch and one LED allows for simple configuration without additional tools.



EMDCB reports regularly the measured light level and the status of the motion detection sensor. The motion sensor of EMDCB is permanently active so that initial motion will be reported immediately.

EMDCB telegrams are secured with AES-128 (CBC) authentication based on a random, device-unique private key.

TYPE
EMDCB-W-EO

ORDERING CODE
E6221-K515

Features overview

| | |
|---|---|
| Radio Frequency / Standard | 2.4 GHz / Bluetooth Low Energy (Advertising Mode) |
| Radio Channel | BLE CH 37, 38 and 39 (Advertising Channels) |
| Transmission Power | +4 dBm |
| Transmission Range | typ. 75 m outdoor line of sight / 10 m indoor |
| Recommended Installation | Ceiling-mounted at 2.5m (8.5ft) ... 3m (10 ft) height |
| Motion Detection Radius | 5 m (16.5 ft.) when installed 2.5 m (8.5 ft.) high |
| Light Level Sensor | 0 ... 65000 Lux / +- 5% accuracy at full scale |
| Required Light Level | 200 lux for 6 hours per day |
| Operation Time Without Light | 96 hours |
| Backup Battery Type (optional) | CR2032 |
| Operation Time With Backup Battery | |
| Infrequent bright light (200 lux 2 hrs / day) | 20 years |
| Consistent low light (65 lux 5 hrs / day) | 15 years |
| Total Darkness | 7.5 years |
| Product Dimensions | 113,2 mm L x 65,5 mm W x 30,7 mm H (4.46" L x 2.58" W x 1.21" H) |
| Operating Conditions | 0 °C (32 F) ... 60 °C (140 F) Indoor use only 20 % r.h. ... 85 % r.h. Non-condensing |
| Radio Certifications | RED (Europe), FCC (US), ISED (Canada) |