

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)