

Self-powered Motion and Illumination Sensor EMDCU

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

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

EMDCU reports motion detection and illumination measurements wirelessly using the EnOcean radio standard and therefore does not require any wiring.

Key parameters of EMDCU 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.



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

EMDCU supports secure communication with AES-128 encryption and authentication based on a random, device-unique private key.

TYPE
EMDCU-W-EO

ORDERING CODE
E6251-K515

Features overview

Radio Frequency / Data Rate	902.875 MHz / 125 kbps
Transmission Power	+99 dBμV
Transmission Range (for guidance only)	typ. 200 m free field / 30 m indoor
Recommended Installation	Ceiling-mounted at 2.5 m (8.5 ft) ... 3 m (10 ft) height
Motion Detection Radius	typ. 5 m (16.5 ft.) when installed 2.5 m (8.5 ft.) high
Light Level Sensor Range / Accuracy	0 ... 65000 Lux / +- 10 %
Configuration	NFC (ISO 14443)
Power Supply	Integrated solar cell
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)	15 years
Consistent low light (65 lux 5 hrs / day)	12.5 years
Total Darkness	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	FCC (US), ISED (Canada)