

## 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 up to 7 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 a bi-color 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**

ORDERING CODE  
**E6251-K515:DB**

### Features overview

<b>Radio Frequency / Data Rate</b>	902.875 MHz / 125 kbps
<b>Transmission Power</b>	+99 dBμV
<b>Transmission Range (for guidance only)</b>	typ. 200 m free field / 30 m indoor
<b>Recommended Installation</b>	Ceiling-mounted at 2.5 m (8.5 ft) ... 3 m (10 ft) height
<b>Motion Detection Radius</b>	typ. 5 m (16.5 ft.) when installed 2.5 m (8.5 ft.) high
<b>Light Level Sensor Range / Accuracy</b>	0 ... 65000 Lux / +- 10 %
<b>Configuration</b>	NFC (ISO 14443)
<b>Power Supply</b>	Integrated solar cell
<b>Required Light Level</b>	200 lux for 6 hours per day
<b>Operation Time Without Light</b>	Up to 7 days (after full charge)
<b>Backup Battery Type (optional)</b>	CR2032
<b>Backup Battery Life (CR2032 With 230mAh)</b>	
Infrequent bright light (200 lux for 3 hrs / day)	10 years
Consistent low light (75 lux for 6 hrs / day)	7 years
Total Darkness	5 years
<b>Product Dimensions</b>	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)
<b>Operating Conditions</b>	-5 °C (25 F) ... +45 °C (115 F) Indoor use only 20 % r.h. ... 85 % r.h. Non-condensing
<b>Radio Certifications</b>	FCC (US), ISED (Canada)