MCS-SR OCC-Lum

EasySens Motion sensor with ambient light sensor

thermokon®
HOME OF SENSOR TECHNOLOGY

Datasheet

Subject to technical alteration
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enocean®

Available in
• pure white brilliant
• anthracite

» APPLICATION

EasySens-radio-motion detector with ambient light sensor for person movement detection and brightness detection indoors - or in office spaces. The data transfer takes place via EnOcean-standard radio telegrams to the receiver.

The device hat the following functions

- Movement detection 360°
- Brightness detection
- Wireless radio transmission

This product is intended for use as part of an automation solution for (functional) buildings. It transmits sensor data within a building over short distances unencrypted by radio to suitable receivers. No personal data or location data is transmitted.

The product cannot communicate directly with the Internet and is not intended for applications that use the Internet to forward unprocessed sensor data. Automation stations that forward data via the Internet, e.g. to visualise the building status, must ensure that the data to be forwarded is encrypted as required by law.

» TYPES AVAILABLE

EasySens Motion sensor
MCS-SR Occ (battery powered)
Available in pure white, anthracite (varnished)

ambient light sensor

PIR Sensor (passive infrared)

Enclosure

» PRODUCT TESTING AND CERTIFICATION

CE

Declaration of conformity
The declaration of conformity of the products are available on our website
https://www.thermokon.de/direct/en-gb/categories/mcs

»SECURITY ADVICE – CAUTION

The installation and assembly of the device should only be performed by authorized personnel.

The product should only be used for the intended application. Unauthorised modifications are prohibited! The product must not be used in relation with any equipment that in case of a failure may threaten, directly or indirectly, human health or life or result in danger to human beings, animals or assets. Ensure all power is disconnected before installing. Do not connect to live/operating equipment.

Please comply with:
- Local laws, health & safety regulations, technical standards and regulations
- Condition of the device at the time of installation, to ensure safe installation
- This data sheet and installation manual

»NOTES ON DISPOSAL

The crossed-out wheelie bin symbol indicates that the product or removable batteries must not be disposed of with household or commercial waste. Within the EU, you are legally obliged to dispose of the product separately and appropriately in accordance with the national laws of your country. Alternatively, please contact your supplier or Thermokon Sensortechnik GmbH. Further information can be found at: www.thermokon.com

»INFORMATION ABOUT EASYSENS® (RADIO) / AIRCONFIG GENERAL USAGE

EasySens® - airConfig
Basic information about EasySens® radio and about general usage of our airConfig software, please download from our website. https://www.thermokon.de/direct/files/airconfig-software-manual.zip

»OVERVIEW OF THE RADIO TELEGRAMS

EEP
The structure of the data contained in the telegram can be found in the EEP (EnOcean equipment profile) list provided by the EnOcean Alliance.

»TECHNICAL DATA

Enclosure	PC V0, pure white or anthracite (optional)
Protection	IP20 according to DIN EN 60529
Ambient condition	-20..+60 °C, max. 85% rH non-condensing
Mounting	to be mounted flat onto the surface using adhesive foil (already mounted on bottom cover) or screws

Radio technology	EnOcean (IEC 14543-3-10), transmission power <10 mW **EEP A5-08-01**
Frequency	868 MHz
Antenna	internal transmitting- / receiving antenna
Power supply	battery operated, 1x Alkali-Mangan AAA (included in delivery)
Sending interval	immediately at the first motion detection, then every 5 min at presence, no presence at 5 min., Heartbeat at no presence: 20 min.

Measuring value	Movement
Detection range	∅=5 m at a mounting height of 2,5 m
Sensor	PIR (passive infrared)
Measuring value	luminosity
Measuring range light	0-510 lux
Accuracy light	±5% of measuring range

»FUNCTIONAL DESCRIPTION
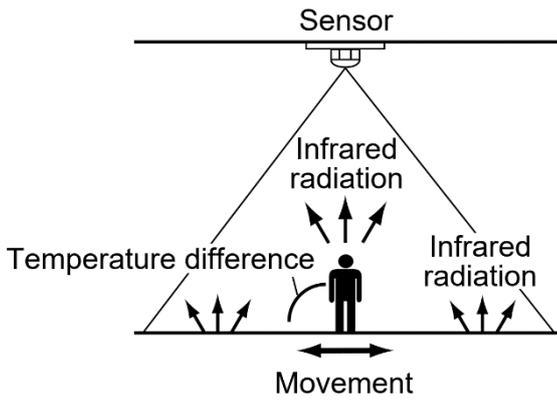
This sensor detects changes in infrared radiation that occur when a person (or object) whose temperature differs from the environment moves.

The specified ranges refer to average conditions at a certain mounting height and are approximate values. The motion detector should not be mounted near disturbing heat sources (e.g. lamps, radiators, fans etc.) to avoid false alarms. The range can vary with changing temperature conditions.

| Objekt properties:	
temperature difference (object and environment)	at least. 4 °C
speed	At least 0,3 to 1,0 m/s
Size	700x250 mm

»COMISSIONING

Before mounting, the device check the radio reception area. The radio signal needs to be sufficient for the receiver. The device can be mounted via the adhesive tape already mounted, or optionally with screws

»Device Opening

| Bottom View		Top View	
	Push bottom cover laterally.		Move device laterally to the left (observe arrow symbol orientation!)
	Remove cover		Remove top section

»Battery installation
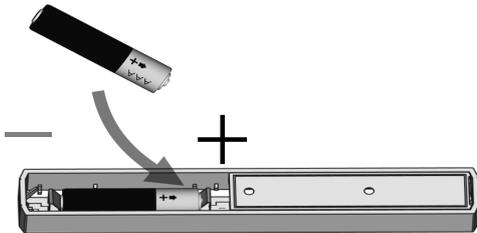
Insert the button cell in the mounting bracket.

Pay attention to button cell polarity!

»TEACH-IN

By default, a 1BS teach-in telegram is transmitted by pressing the Learn button (opened device). Press the key on the back to trigger a teach-in telegram. The teach-in telegram identifies the device manufacturer, the function and the type of the device.

Learn-button
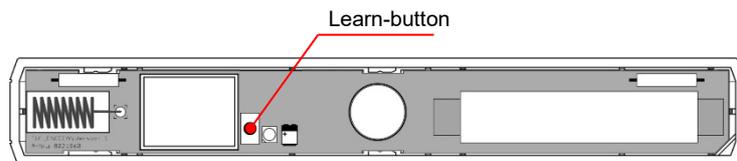
» DETECTION RANGE

| Detection range	
Detection distance	max. 7 m
Field of view horizontal x	90
Field of view vertical y	90
Detection zones	32
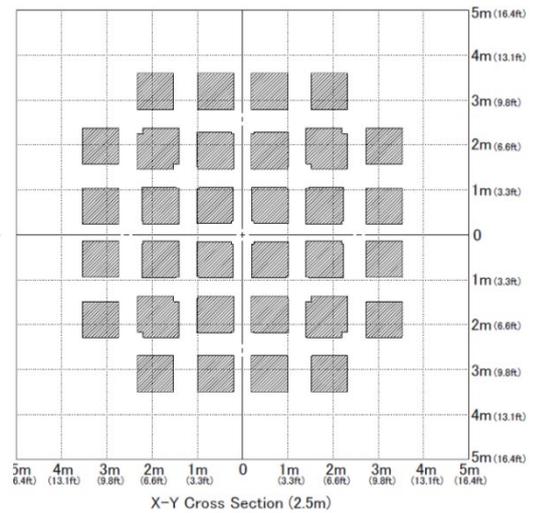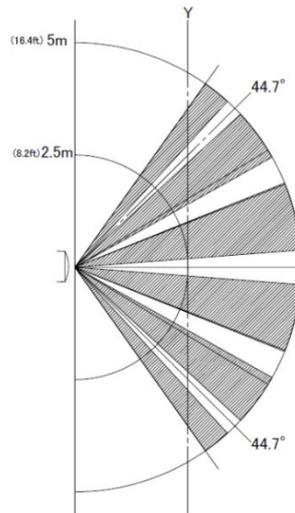
A installation height of 2,5 m
results in a detection area of approx. 4,9x4,9 m,
divided into 32 measuring zones.

Formel: tan(55)*installation height=radius detection range x

Formel: tan(46,5)*Installation height=radius detection range y

Functional test
Check the movement detection function by walking through the detection area
of the sensor. Review if the radio telegram was send by the MCS-SR Occ

X−Y Cross Section (2.5m)
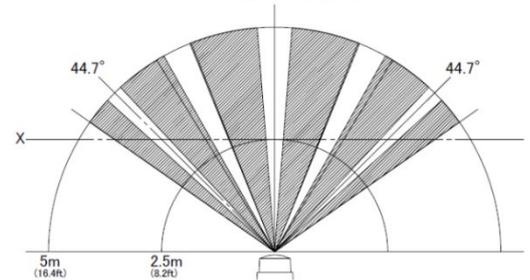
» ENERGY STATUS (SIGNAL TELEGRAM)

An energy status message (signal telegram) is sent at 6-hour intervals.

Signal telegrams (SIG) can be received with an STC65+ Modbus (from V4.7.0), STC-Bacnet IP (from V3.0.3.4) or a STC-IoT Gateway and evaluated by the superior control unit (BMS).

Telegram content

Offset	Size	Data	Shortcut	Description	
0	8	Message index	MID	Enumeration: 0x06 – Energy status of the device	
8	8	Energy	ERG	Description	Telegram (SIG)
				0..100 %	
				100: Energy level good	hex(06 64)
				1: Energy level low	hex(06 01)
				0: Energy level critical	hex(06 00)

» DIMENSIONS (MM)

14,6

20,6

142
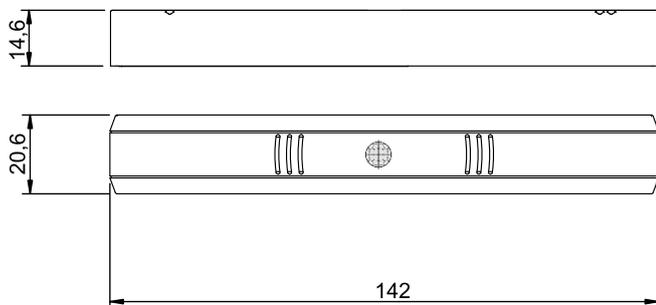
» ACCESSORIES (INCLUDED IN DELIVERY)

Battery 1,5V AAA (Micro)

Item No. 739351