



The Radio Solar Presence Detector PM101 with integrated brightness sensor is a device based on the EnOcean technology. It sends a radio data telegram to radio actuators and radio gateways of the Ratio radio bus systems to turn energy consumers on and off (e.g. lights, shutters, motor-driven actuators). The Radio Solar Presence Detector PM101 features two modes of operation with a total of five channels (4 x type PTM and 1 x type STM). Channels 1 and 3 evaluate the presence relative to the currently measured brightness, channels 2 and 4 evaluate only the presence and channel 5 sends all information (states of channel 1 and 2, current and stored brightness value). Energy is supplied through the conversion of room light into electrical energy by means of a solar generator; the electrical energy is stored in capacitors.

Typical areas of application are semi and fully automated illumination control systems and occupancy detection / presence, e.g. in offices, school and conference rooms and shops.

Technical data	Solar Presence Detector PM101	Remark
Operating data	Energy generation through solar generator, battery free and maintenance free Buffering using SuperCap, functional capability, if fully charged, up to 36 hours in complete darkness. Optional battery operation possible	
Radio technology	Protocol EnOcean, type PTM100 for presence and STM100 for presence and brightness value, frequency 868.3 MHz, modulation ASK, transmitting power max. 10 mW	
Channels	Channel 1, PTM-Tlg, on and off depending on presence and one light threshold, Channel 2, PTM-Tlg, on and off depending on presence, Channel 3, PTM-Tlg, off depending on presence and one light threshold, Channel 4, PTM-Tlg, off depending on presence, Channel 5, STM-Tlg, message telegram with presence, brightness and channel 1 and 2.	
Radio transmission module	TCM120	
Motion sensor	PIR sensor, Sensing range - ceiling mounting: 2.4 m above floor, 5 m/360°, Sensing range - wall mounting: 1.5 m above floor, 8 m Aperture angle approx. 90°, preferred direction horizontal, 36 detection zones, detection speed 0.2 to 3 m/sec. Brightness sensor 10 .. 1000 lux	
Charge and discharge times of memory cells	Startup time for learning mode > 1 hour @ 1000 lux Startup time for 24 hour operation in darkness > 8 hours @ 250 lux Charge time from lower operation limit to full charge > 7 Std. @ > 50 lux. Discharge time from full charge to lower operation limit > 48 hours	
Positioning	Wall or ceiling mounting, taking into account a daily basic light of at least 50 lux for 7 hours	
Data acquisition / Transmission interval	In case of an event and motion detection enabled approx. every 8 – 12 minutes.	
Range	Interior depending on building materials typically 20 to 100 m	
Dimensions	Case: LxWxH 120 mm x 100 mm x 20 mm	
Mechanical data	Case: Plastic ABS,	Weight: 180 g
Installation / Mounting	On-wall installation on a flat background	Glue or screws
Environmental conditions	Ambient temperature during operation 5°C ... +55°C Storage temperature -20°C ... +55°C Relative humidity (non-condensing) 0 ... 95%	
Protection type	IP20	
Approbations	CE certified and conforming to R&TTE Directive EU Directive on Radio Installations. In the USA and Canada, the 868 MHz radio technology is also licensable.	

Telegram	Refer to manual.
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Bezeichnung	Typ	Artikelnummer
Occupancy detector 360° / 8m with Solar-Cells, battery-less	Eagle PM101-SOL	2902000
Occupancy detector 360° / 8m with power supply 24VDC or battery	Eagle PM101-SPG	2903000