

Data sheet
RATIO®-radio bus system
Outside Light Sensor LS101



The Ratio®outside light sensor LS101 is a battery- and maintenancefree radio sender. The power generation is effected by transmission of sunlight into electrical energy by a solargenerator.

It conduces to the measuring of light intensity and transmission by radio to radio actuators and senders/gateways.

Due to its construction it is suitable to the installation on a wall.

Technical Data	Outside Light Sensor LS101	Remarks
Operating data	Solar Power Generator, battery-free.	
Radio technology	Protocol EnOcean-STM, Transmission power max. 10mW EIRP	Frequency 868,3MHz Modulation ASK
Radio module / Channels	STM100 / 1Reed Contact with 2 action states (open/closed)	
Start up time from empty storage	for learning use for use for 14 hours in darkness	> 10 min. @ 100 lx > 5 h @ 1000 lx or > 13 h @ 400 lx
Light value registration	Two ranges switchable 300... 30000 lux or 600... 60000 lux accuracy/- 147 lux	
Measurement value logging	Every 10 seconds	
Transmission interval	by change of measured value 468Lux within 10 seconds every 17 minutes	
Range	Interior 30 to 100m, exterior up to 300m	
Dimensions	Casing: LxBxT 80mm x 60mm x 50mm	
Protection category	IP65 after EN 60529	
Mechanical Data	Casing: plastic ABS,	Weight: 70g
Mounting / Assembly	Finery on a flat underground	Adhesion or screws
Environmental conditions	Temperature when in operation Storage temperature Rel. humidity (non-condensing)	0°C ... +55°C -40°C ... +85°C 0 ... 95%
Protection category	IP54	
Approbation	R&TTE guidelines 1999/5/EC and conforming to EU regulations. ROHS conforming according to 2002/95/EC.	

Telegram							
Byte	Symbol	Significance	Value	Byte	Symbol	Meaning	Value
0	SYNC1	Synchronization	A5h	1	SYNC2	Synchronization	5Ah
2	HEADER	Length	0Bh	3	ORG	Type of transmitter	06h
4	DATA3	always 0	14h	5	DATA2	300..30000 Lux (0..255)	00h
6	DATA1	600..60000 Lux (0..255)	xxh	7	DATA0	Bit 0..2 = no meaning, Bit 3 = Learning branch, pressed=0, Bit 4 .. 7 = no meaning	xxh
8	ID3	ID-Number part 1	xxh	9	ID2	ID-Number part 2	xxh
10	ID1	ID-Number part 3	xxh	11	ID0	ID-Number part 4	xxh
12	STATUS	Status byte	xxh	13	CHK	Check sum	xxh

Designation	Designation additive	Typ	Article number
Outside Light Sensor		LS101	2120000