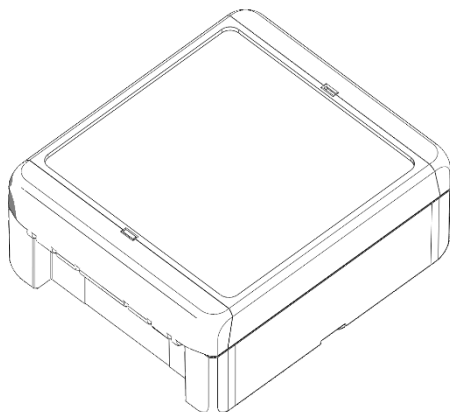


Version: 14.01.2025

## OVERVIEW



## FEATURES

- Uplink data via NB-IoT mobile network (LTE bands: 3, 8, 20) or LoRaWAN v1.0.2 (EU-868)
- Compatible with wireless M-Bus S1, C1/T1 modes (868 MHz) according to OMS
- Compatible with Sensus RF (BUP, 868 MHz)
- Internal upload storage for more than 64000 wMBUS telegrams
- Power supply: 3.3 - 5 V via JST XH socket
- Included battery: Double pack EVE ER34615+SPC
- IP66 housing: 151 mm (l) x 80 mm (w) x 60mm (h), color similar to RAL 9003 (white)
- Operating temperature: -20°C to +55°C

## APPLICATION

The *wireless M-Bus Gateway V4* is a battery-powered device. It is used for automated LoRaWAN, wMbus, Nb-IoT, or LTE-M remote reading of over 64000 meters with wireless M-Bus 868 MHz interface.

## TECHNICAL DATA

### General

Type	LOB-GW4-WMBUS
Order name	Wireless M-Bus Gateway V4
Input voltage	3,6 V (nom.)
Article number	1200326

### Mobile Network

LTE Networks	Nordic nRF9161
LTE Bands	Standard: B8, B20, B3 (791 MHz - 969 MHz, 1710 MHz – 1785 MHz) 2FF (Mini-SIM) – not included
SIM Card	
Data transmission	Secure CoAP over DTLS (via Lobaro IoT Platform) CBOR or JSON
Data format	
Direct MQTT	Direct forwarding via MQTT (LTE-M) to third party

### LoRaWAN

Type	Semtech SX1261
Protocol	Class A LoRaWAN 1.0.2 (EU-868)
TX Power	≤ +14 dBm
Activation	Over-the-air activation (OTAA) Activation by personalization (ABP)
Typical range	≤ 2km (urban)
Ideal range	≤ 10km (field)

### DECT-NR+

Dect-NR+	1880 MHz bis 1900 MHz (europe)
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### Antenna

Internal	PCB monopole (NB-IoT)
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### I/O

Local configuration port	PC-based configuration via USB adapter
LED	RGB Led for status display

### Battery

Approved type	ER34615-2 + SPC1550A/W
Voltage (nom.)	3,6V
Chemistry	Li-SOCI2
Capacity	38 Ah (2 x ER34615), 190 mAh (SPC1550A/W)
Connection	JST-XH 2-Pin
Continuous current	≤ 230mA
Weight	≤ 230 g
Classification	Class 9

## WIRELESS M-BUS GATEWAY V4

LOB-GW4-WMBUS

### TECHNICAL DATA

#### Housing

Dimensions	151 mm (l) x 125 mm (b) x 60 mm (h)
Material	PC-V0 RAL 9003 (white)
Weight	370 g
Protection class	IP66 / IP68 (1,2m / 2h)

#### Environment

Operating temperature	-20 °C - +55 °C
Rel. humidity	20 % - 70 % (non-condensing)
Storage temperature	0°C to 30 °C

#### Certifications and Approvals



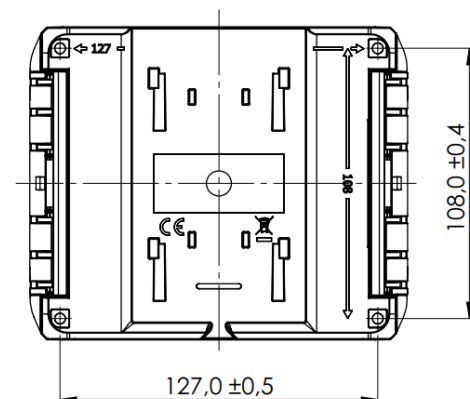
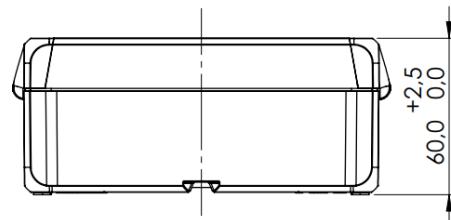
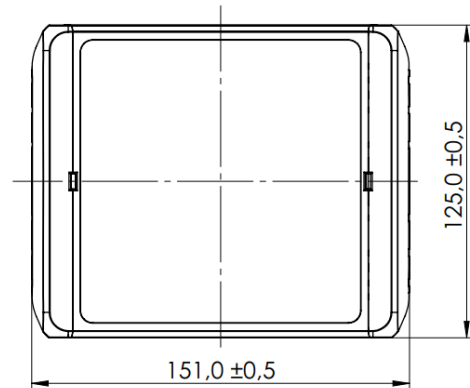
- EN 300 220-1 (RF)
- EN 300 220-2 (RF)
- EN 301 908-1 (RF)
- EN 301 908-13 (RF)
- EN 301 489-3 & EN 301 489-52 (EMC)
- EN 62368-1 (electrical safety)
- EN 62311:2008 (electrical safety)
- EN 50581 (RoHS)

### RADIO FREQUENCIES AND BANDS

RX: Receive mode, TX: Transmit mode

Mode	Protocol	Frequencies	Band width	Modulation
RX	wMBUS C1/T1	868.95 MHz	+/- 0.050 MHz	FSK
RX	wMBUS S1	868.3 MHz	+/- 0.050 MHz	FSK
RX + TX	NB-IoT Band 8	880-915 MHz (up) / 925-960 MHz (down)	25 MHz	NB-IoT
RX + TX	NB-IoT Band 20	832-862 MHz (up) / 791-821 MHz (down)	30 MHz	NB-IoT
RX + TX	NB-IoT Band 3	1710-1785 MHz (up) / 1805-1880 MHz (down)	75 MHz	NB-IoT
RX + TX	Dect-Nr+	1,9 GHz (Band)	1,728 MHz	OFDM

### DIMENSIONS



### WARRANTY AND GUARANTEE

Warranty and guarantee claims can only be made if the device has been used as intended and technical specifications and applicable technical rules have been followed.

## VARIANTS

The *wireless M-Bus Gateway V4* can be modified and extended. This includes power add-ons and other modifications

### Power Add-ons:

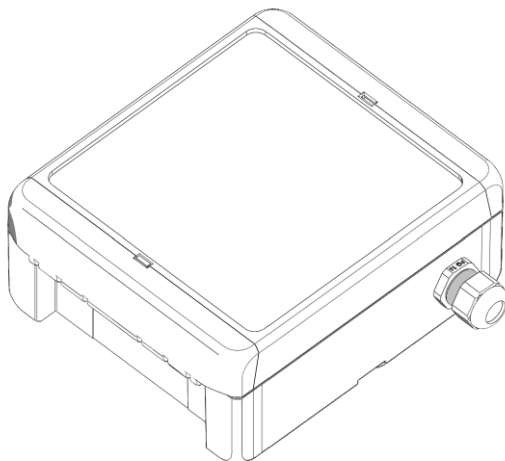
- 230 V
- 12 V power supply
- Solar

### Other variants

- Antenna
- Potting for protection class IP68

## Power Add-ons

### WIRELESS M-BUS GATEWAY V4 (230 V)



- Power supply: 230 V

## APPLICATION

The *wireless M-Bus Gateway V4 (230 V)* offers operation with a 230 VDC connection..

## TECHNICAL DATA

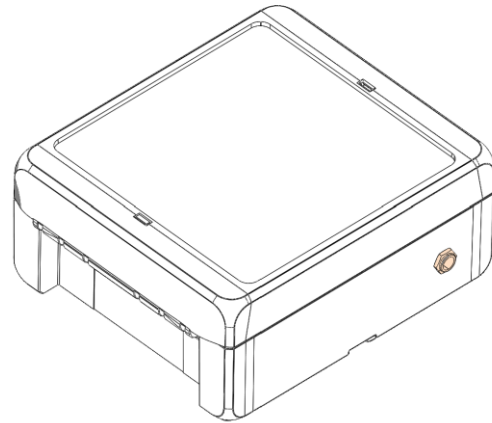
### General

Type	LOB-GW4-WMBUS-230V
Order name	Wireless M-Bus Gateway V4 (230V)
Input voltage	100 – 240 VAC to 5 VDC
Article number	1200474

### Housing modification

Cable gland	PG16
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### WIRELESS M-BUS GATEWAY V4 (12 V)



- Power supply: 12 V power adapter with DC round socket

## APPLICATION

The *wireless M-Bus Gateway V4 (12V)* offers operation with an external 12 V power adapter with DC round socket.

## TECHNICAL DATA

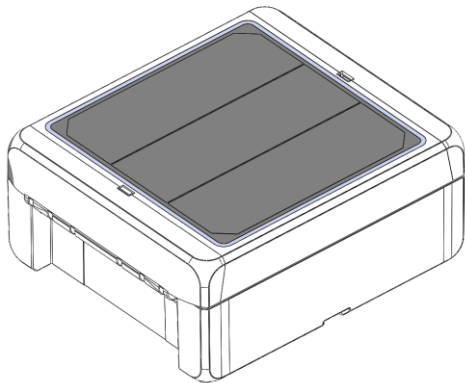
### General

Type	LOB-GW4-WMBUS-12V
Order name	Wireless M-Bus Gateway V4 (12V)
Input voltage	9 V - 36 V über Steckernetzteil (110 V-230 V AC / 5 V DC)
Article number	1200356

## WIRELESS M-BUS GATEWAY V4

LOB-GW4-WMBUS

### WIRELESS M-BUS GATEWAY V4 (SOLAR)



- Power supply: fixed solar cell (Indoor + Outdoor) + Li-Ion battery
- Opt.with back-up battery

#### APPLICATION

The *wireless M-Bus Gateway V4 (Solar)* enables energy-autonomous operation via a solar cell with a battery and optional backup battery.

#### TECHNICAL DATA

##### General

Type	LOB-GW4-WMBUS-SUN
Order name	Wireless M-Bus Gateway V4 (Solar)
Article number	1200378

##### Solarzelle

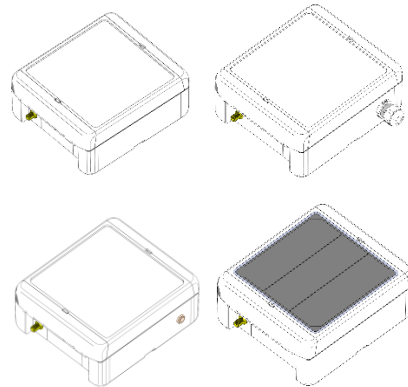
Std. Power	2 W, nom. 2 V (DC)
Energy storage	250F, 3.8V Lithium Ion Capacitor (LIC)
Connection	JST-XH 2-Pin
Dimensions	107 mm x 106 mm x 2 mm

##### Opt. Back-up battery

Released types	ER18505, ER18505M
Voltage (nom.)	3,6V
Chemicals	Li-SOCI2
Capacity	3,5 Ah - 4 Ah
Connection	JST-XH 2-Pin
Classification	No dangerous good

### Other variants

#### EXTERNAL ANTENNA



- external antenna connector (SMA)

#### APPLICATION

All versions of the *wireless M-Bus gateway V4* can also be supplied with an external SMA antenna connection in order to improve the radio characteristics, e.g. by better positioning of the antenna.

#### TECHNICAL DATA

##### General

Type	LOB-GW4-WMBUS-A
Order name	Wireless M-Bus Gateway V4 (ext. antenna)
Article number	1200382

Type	LOB-GW4-WMBUS-230V-A
Order name	Wireless M-Bus Gateway V4 (230 V, ext. antenna)
Article number	1200540

Type	LOB-GW4-WMBUS-12V-A
Order name	Wireless M-Bus Gateway V4 (12 V, ext. antenna)
Article number	1200552

Type	LOB-GW4-WMBUS-SUN-A
Order name	Wireless M-Bus Gateway V4 (Solar, ext. antenna)
Article number	1200530

##### Antenna

External	External female connector (SMA)
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#### POTTING FOR IP68

Potting dimensions: transparent, soft elastic 2-component silicone

#### APPLICATION

In particularly demanding outdoor environments, e.g. shafts with permanent relative humidity > 95%, the device can also be completely encapsulated.