

# /M-Bus to Wireless M-Bus converter

This rugged battery-powered M-Bus master is built for the toughest metering sites - wells, pits and water stations where moisture, flooding and limited access normally drive up cost and risk. By converting wired M-Bus to long-range wireless communication, it turns these locations into stable, low-maintenance metering points that deliver secure data without field visits.



LAN-WMBUS-XO-MBUS | LAN-906-0050  
LAN-WMBUS-XLO-MBUS | LAN-906-0070

## KEY BENEFITS

Reliable plug-and-play wired M-Bus to Wireless M-Bus converter for reading out wired M-Bus meters and transmitting the data securely using the Wireless M-Bus protocol. IP68-rated enclosure (4 days at 4 m) enables installation in wells, pits and water stations where flooding or moisture is expected.

Dual internal antennas use both horizontal and vertical polarizations to maximize range and minimize multipath issues, ensuring stable Wireless M-Bus communication.

Automatic meter scanning simplifies setup, while periodic encrypted status and meter updates ensure

secure, consistent and maintenance-free operation.

Designed for hard-to-reach locations, the battery-powered unit provides long-term, unattended operation without external power or service needs.

## SYSTEM MONITORING AND SECURITY

At regular intervals, the device sends a status message containing details such as current M-Bus load, number of connected meters, overloads and the supported meter count.

This ensures transparent, secure, and continuous monitoring of system performance.

## AUTOMATED METER HANDLING

When activated with a magnet, the unit automatically scans the M-Bus for connected meters.

It searches for secondary addresses at 2400 baud.

After scanning, the device continuously polls each meter and transmits received data using the wireless M-Bus long packet format (0x72). All payloads are encrypted by default.



**FIRMWARE**

MODE	T1
READ OUT INTERVAL	15 - 120 min. Default XO: 60 min Default XLO: 15 min
ENCRYPTION	Default AES128 encryption OMS mode 5 Profile A MBUS DATA

**POWER/LIFETIME**

VOLTAGE & CURRENT	2.7V-3.6V < 1A
BATTERY	XO: 2 x ER18505 3.6V Li-SOCI2, 7600-8200 mAh, Lithium < 1g/cell, UN3091 limited quantity XLO: 3.6V 2 x ER34615+SPC1550/W 3.6V Li-SOCI2, 38 000mA, Lithium < 5g/cell, UN3091 class 9
LIFE TIME	XO: 10 years* with hourly values, 2 M-Bus slaves connected (self powered) XLO: 10 years* with quarterly values, 1 M-Bus slaves connected (self powered)
RADIO	Frequency: 868/434 MHz Output power: 14 dBm (25 mW) to antennas ERP typical: 11.3 dBm (13.5 mW)
ANTENNAS	Two antennas for true differential transmission
MAXIMUM LOADS	XO: 2 M-Bus loads XLO: 4 M-Bus loads

**REGULATORY INFORMATION**

STANDARDS	2014/53/EU (RED) EN 13757-3/4:2013, OMS 4.0.2 EN61000-6-2:2019 EN61000-6-1:2019
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**REGULATORY INFORMATION**

ENCLOSURE	Phoenix Contact ECS-series Housing part# 1186431, Faceplate part# 1186436
COLOR	Light Grey (RAL 7042)

ENVIRONMENT	Operating temperature: -20°C to 70°C Storage temperature: 0°C to 30°C
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PROTECTION CLASS	IP68 (4 m/4 days)
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SIZE (W x H x D)	XO: 97 x 86 x 45 mm XLO: 172 x 116 x 64 mm
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CONNECTOR	Push Spring terminals
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CABLE GRAND	M12 Ø 5.0 - 7.5 mm, TPE gasket.
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**PROTOCOL COMPATIBILITY**

SLAVE TYPES	EN 13757-2 M-Bus slave devices supporting long headers. (0x72 Unencrypted)
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ADDRESSING TYPE	Secondary addressing
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TELEGRAM TYPE	Single-telegram
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**ELECTRICAL INTERFACE**

M-BUS OUTPUT VOLTAGE	21V
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SLAVE POWER	External (device operates as passive master)
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CABLING	Max length: 350 m Max resistance: 90 ohms Max capacitance: 180 nF Supplied cable: Ölflex Robust 21
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**COMMUNICATION PARAMETERS**

BAUD RATE	2400
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PAYLOAD SIZE	190 bytes
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**DEVICES**

XO	2 logical devices
XLO	4 logical devices

**ACCESSORIES**

BATTERY XO	LAN-910-0060
BATTERY XLO	LAN-910-0037
MAGNETIC PEN	LAN-910-0041
CABLE JOINER	LAN-910-0084

**BATTERY LIFETIME EXPECTANCY**

The Lansen M-Bus to Wireless M-Bus converters are specified for more than 10 years of battery lifetime under the standard configuration at 25 °C. Battery lifetime decreases when exposed to elevated or reduced temperatures during storage or operation.

Extended exposure to extreme temperatures accelerates battery aging and reduces expected lifetime. See Figure 1 for typical battery lifetime as a function of temperature.

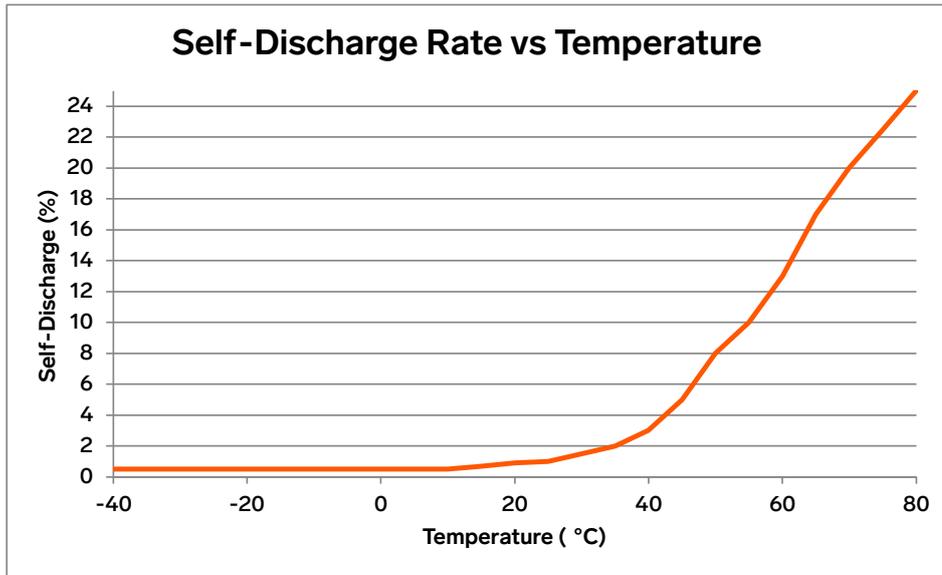


Figure 1

EXAMPLES	TYPICAL LIFETIME EXPECTANCY*	MAX M-BUS LOADS	MAX LOGICAL DEVICES	OPTIMIZED FOR
LAN-WMBUS-XO-MBUS	10 years	2	2	Hourly readings
LAN-WMBUS-XLO-MBUS	10 years	4	4	Quarterly readings

\*The expected battery lifetime stated is based on simulations and true measurements at 25 °C and is valid to the best of our ability but not a guarantee. The calculations and measurements can be sent upon request for your reference.