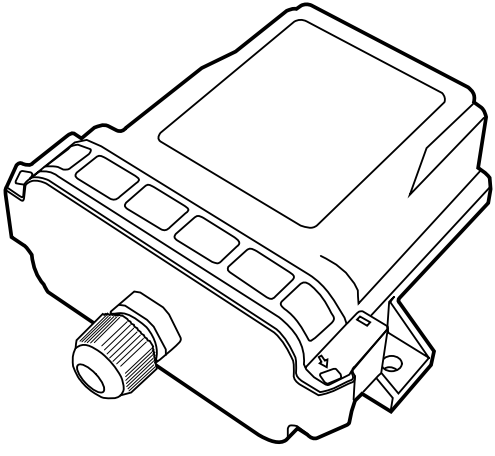
LANSEN

QUICK INSTALLATION GUIDE

LAN-XO/XLO-MBUS

Version 1.3



M-Bus wireless OMS®

Read The Instructions

Read and understand this manual and its safety instructions before using this product. Failure to do so can result in severe injury or death. Follow all instructions to avoid hazards like fire, explosions, or electric shocks.

Only use the product if you have fully read and understood the user manual. Ensure every user reads and follows these instructions before use. Keep safety information for future reference and pass it on to subsequent users. The manufacturer is not liable for damage or injury caused by incorrect handling or non-compliance with safety instructions.

Your safety and the device's proper functioning depend on adhering to these guidelines.

Intended Use

The XO/XLO-MBUS series from Lansen is intended to serve as a communication interface for the collection and transmission of data from wired utility meters to OMS4 or OMS5 networks. The device enables the integration of metering information into remote reading systems in accordance with EN 13757, ETSI TS 103 357, and OMS standards.

This product is intended for use in utility metering and building automation applications where consumption data from wired meters must be securely and reliably transmitted wirelessly for monitoring, billing, or system management purposes.

Explanation Of Symbols

Important information regarding instructions or recommendations for installation of devices.

Indicates a mandatory action to follow.

Warning, risk of bodily harm or death if handled without care.

The CE symbol is confirmation by Lansen Systems AB that this product is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU and RoHS Directive 2011/65/EU (EU) 2015/863.

This symbol on the product or its packaging means that it should not be disposed of with household waste. It is your responsibility to dispose of your waste equipment separately from the municipal waste stream. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.

Important Safety Information

Risk of injury or death due to fire!

DO NOT expose this product or its battery to temperatures above 85°C (185°F). Heating above 100°C (212°F) risks fire, explosion, or toxic gas release, and may cause permanent damage. Store and operate only within the specified temperature range. If the product or battery overheats, becomes damaged, or leaks: Discontinue use immediately, ventilate the area, and contact your supplier or a hazardous waste service. Never incinerate or dispose of in fire.

Do not attempt to alter or repair the device. If you are experiencing malfunction make sure to contact your place of purchase or visit our website.

Use ESD protection when handling the product with the PCB exposed to prevent potential damage to the electronics.

Disclaimer

Lansen Systems are not responsible for any damage, malfunction, or non-compliance resulting from the use of unauthorized accessories or modifications to this device.

Introduction

The XO/XLO-MBUS series from Lansen are plug-and-play devices for seamless integration of wired meters into OMS networks. The devices are battery powered and housed in durable IP68-rated enclosures, ensuring reliable operation even in demanding environments. With dual internal antennas for polarization diversity or external antenna, the devices provides robust wireless communication and long-term autonomous performance.

For more information, visit *lansen.io*.

Label Information

The device label provides the essential identification information. See the example below.

① Product name

② Serial number

③ QR-code: Full device information

Example: Device information

```
LAS  .00123456    .02  .0F
①    ②            ③    ④
```

① Manufacturer
② Serial number
③ Device
④ Protocol

In The Box

The following content is included in the box:

- User manual
- XO/XLO-MBUS with fieldbus cable

Installation

Connecting M-Bus devices

Use the pre-installed fieldbus cable to connect M-Bus devices to the XO/XLO-MBUS. If the pre-installed cable is too short, use an appropriate splicing connector to extend its length.

Long cables cause communication errors.

To make sure the signal is correct:

- Do not use a cable longer than *350 meters*.
- Make sure the total cable resistance is less than *90 ohms*.
- Make sure the total cable capacitance is less than *180 nanofarads*.

Opening the device

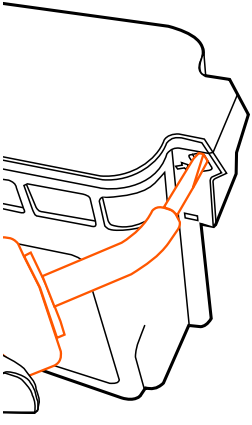
Remove the device lid to replace the battery or to replace the fieldbus cable.

Opening the device may compromise its water-resistance. Before closing the enclosure, check that the silicone gasket is intact, correctly seated, and free from dust or debris.

XO

The lid of XO device is secured with plastic tabs.

1. Insert a 3.5 mm flat head screwdriver into the openings in the lid.

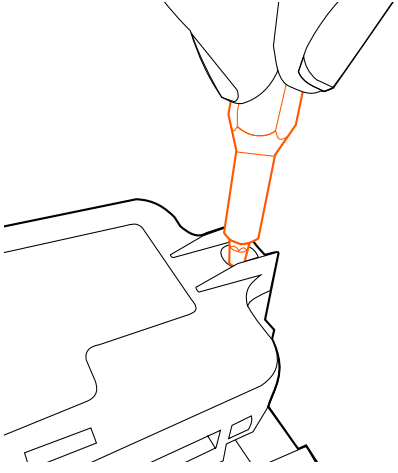


2. Push the tabs back and gently lift the lid away from the main housing.

XLO

The lid of XLO device is secured with screws.

1. Use a Torx T20 screw driver to remove the two screws holding the lid in place.



2. Gently lift the lid away from the main housing.

Activating the device

The device is inactive when it is delivered. You must activate it with a magnet before it transmits any data.

Touch a magnet against the left side of the device, see *Figure 1*.

- A beep indicates that the device is starting the activation process.
- The device scans for connected M-Bus meters and beeps at regular intervals.
- When the scan is complete, the device beeps one time for each detected meter.
- The device is now active.

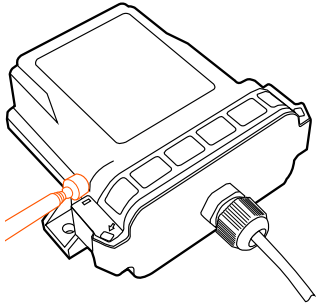


Figure 1. Activation with magnet

If no meter is found on the bus, the device beeps steadily for 16 seconds before returning to the inactive state.

If scanning fails, wait for 5 s or more before you try again.

Mounting the device

Recommended mounting instructions

- Place the device 160-180cm above ground
- To maximize range, avoid placing the device directly against metal objects

1. Orient the device with the connectors facing down.
2. Mount the device in one of two ways:
   a. To a wall with screws through the mounting holes.
   b. To a pole with a zip tie or hose clamp through the opening on the back of the device.

If the mounting surface is uneven, use spacers at the screws holes to prevent excessive tension on the product housing. Excessive tension can cause cracks or leaks.

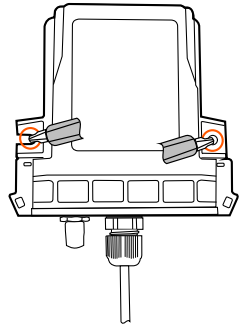


Figure 2. Mounting XO with screws.

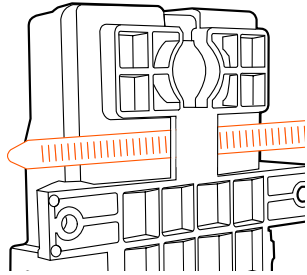


Figure 3. Mounting XO with a zip-tie.

Specifications

Communication protocols	wM-Bus, M-Bus
Frequency band (Version dependent)	868 MHz or 434 MHz
Output power (ERP)	< 14 dBm / < 25 mW
Battery type	XO: ER18505-2 3.6V Li-SOCl2 XLO: ER34615-2+SPC1550
Battery voltage	2.4 – 3.6V
Max. M-Bus loads	XO: 2 XLO: 4
Max. Logical devices	XO: 2 XLO: 4
Field bus cable	Length: 1.5 m Diameter: 5 mm
Operating conditions	-40°C to +80°C
Storage conditions	0°C to +30°C

Troubleshooting

Issue	Possible Reason(s)	Potential Solution(s)
The device is not activating.	The magnet was held: • in the wrong position. • against the label for too short a period.	• Hold the magnet against the product label. • Listen for a long beep before you remove the magnet.
The device is activated but not relaying any information.	The distance between the device and the receiver is: • Too close. • Too far.	• Place the device at least 1 m away from the receiving device. • Reduce the distance to the receiving device. • Install a repeater to improve the signal quality.
No connected M-Bus devices are found.	The bus is: • Shorted • Open • Too many M-Bus loads	• Verify the bus with a multimeter • Remove shorts • Repair broken cables • Remove excessive loads

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Contact Information

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Regulatory Information

SIMPLIFIED EU DECLARATION OF CONFORMITY

Hereby, Lansen Systems AB declares that the radio equipment type defined by article name on the sticker is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: *lansen.io/DOC*

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