

LANSEN

QUICK INSTALLATION GUIDE

MAINS REPEATER WITH OPTIONAL USE FOR EXTERNAL ANTENNA

LAN-WMBUS-R4-M-LR-A1/A2-(X)



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.

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 due to electrical shock.



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 your other 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.



This symbol on the product means the equipment meets the safety requirements specified for Class II equipment according to IEC 61140.

Important safety information



Warning: Risk of electric shock!

An all-pole mains switch with a contact separation of at least 3mm must be incorporated in the electrical installation of the building.

Furthermore, a 230 VAC installation **MUST** be carried out by an authorized installer (skilled person) according to the relevant electrical safety regulations.



Only store, transport, and use the product and any included battery under the conditions described in this user guide.



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.



Warning: Risk of electric shock and equipment damage!

To prevent electric shock and protect the device from damage, **ALWAYS** ensure that the device is connected through a surge protector if it is to be installed in an environment classified as overvoltage category IV.

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.

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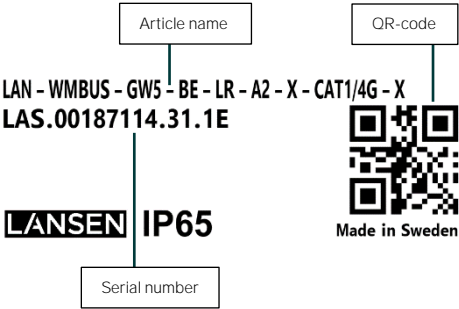
INTRODUCTION

The mains powered wireless M-Bus repeaters from Lansen are highly configurable plug-and-play devices used for extending the range between meters and a collector/gateway. The enclosure is chosen to make the repeater as discrete as possible. The device has a sleek and discrete design with high security and performance.

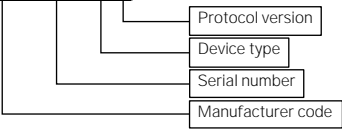
For more information, go to our website: www.lansen.io.

LABEL INFORMATION

The label on the repeater gives useful information about your device, see example below.



Article name: Full article name code of the device.
QR-code: Includes the wM-Bus serial number of the device.
Serial number: Full device information (example above:
LAS.00187114.31.1E)



Specifications

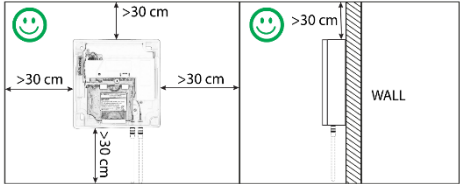
Frequency band(s)	wM-Bus: M: 868,000 MHz to 868,600 MHz N: 868,700 MHz to 869,200 MHz
Output power (ERP)	< 14 dBm / < 25 mW
Usage conditions	-20 to 60 °C
Storage conditions	-30 to 85 °C
Transport conditions	-30 to 85 °C
Configurable	Yes, with a Lansen USB dongle. For more information, refer to the configuration manual.
Input voltage power	100 – 240V, 50/60Hz
Max Power	8W

MOUNTING INSTRUCTIONS

(A1) It is recommended to mount the gateway indoors on a wall. It can also be installed to a ceiling.

(A2) It is recommended to install the gateway upright on a wall, pole, or pipe. It can also be installed to a ceiling.

It is highly recommended to mount the device as shown in the picture below.

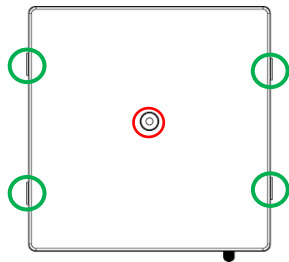


Installing and mounting

Opening the housing:

Needed equipment: Screwdriver with security Torx T20H.

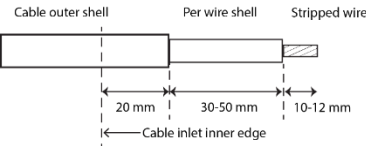
Unscrew the center screw (Torx T20H) and remove the cover by pushing the clips at both sides of the cover.



Stripping the power supply cables:

Strip the power supply cables according to the diagram.
Diameter for the cable when entered through the silicon grommet is:

- Minimum 6mm
- Recommended 8mm.
- Maximum 10mm.



Installing the power supply cable:

The power supply cable can be mounted either through the cable guide at the side or through the cable inlet in the back.

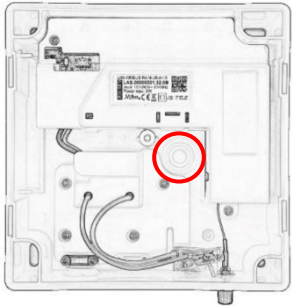
Using the back cable Inlet:

Warning: Risk of injury or death due to electrical shock!

Only use the cable inlet on the back if the device is to be mounted so that it completely covers the power cables.

Carefully cut, drill or punch out the hole marked in the picture.

! This solution gives IP class 40. Do NOT use this for outdoor installations!

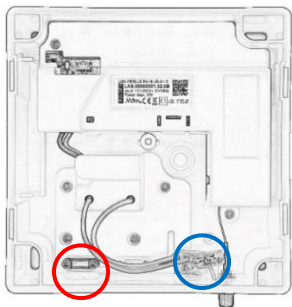


Using the side cable inlet:

The side inlet is preferable if ingress protection is needed.

- ❗ Risk of device damage due to water ingress.

1. Use a round awl to perforate the silicon grommet to ensure a good seal.
2. Thread the power cable through the grommet.
3. Attach the strain relief cable clamp included in the package.



Connecting the power cable:

- ⚠ **Warning:** Risk of injury or death due to electrical shock!

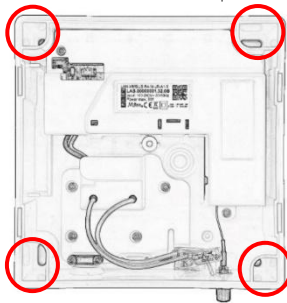
1. Always connect the power supply cable to the coupling clamps on the inside (marked by a blue circle).
2. Always use the strain relief.

Mounting the device:

There are two mounting options:

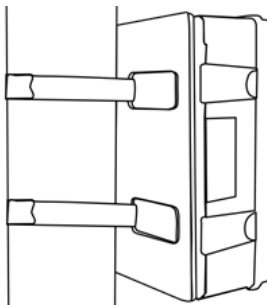
a) Wall mounting:

1. With the lid off, hold the device where it will be mounted.
2. Mark the holes with a pencil.
3. Pre-drill if necessary and mount the device by using four screws suited for the wall material (not included).
4. Continue to Device startup.



b) Pole mounting:

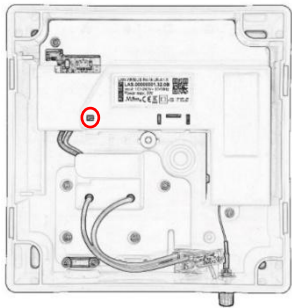
Install the Lansen pole mounting kit (art. nr LAN-910-0066) on the back of the device. Pull the mounting straps through the holes. Wrap the straps around a pole or pipe. Tighten the straps until the device is securely mounted.



Device startup:

Connect the power. Three beeps will be heard during startup and a red LED will start blinking once for every packet the repeater retransmits.

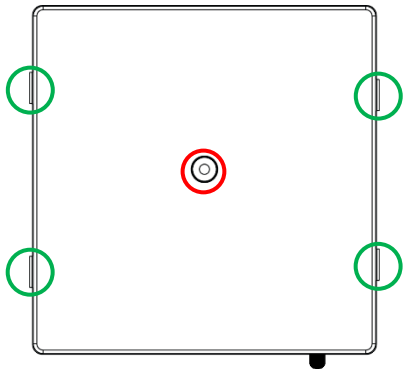
Note: If more beeps are heard a few seconds (~5s) after the first beeps, this indicates a problem with the device. Please contact place of purchase.



Closing the housing:

Needed equipment:
Screwdriver with security Torx T20H.

1. Attach the cover and make sure the clips are firmly attached.
2. Mount the center screw.



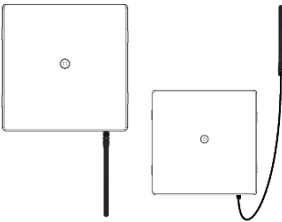
Installing an antenna:

Some variants of this device support an external antenna. To install, attach the antenna directly to the SMA connector (left picture below) or with an antenna cable (right picture below).

If your device does not support an antenna, installation is now complete.



Always make sure that the output power is within the regulatory limits of your region when using an external antenna. The output gain can be adjusted through the Lansen Configurator tool. This parameter can be found under the “Basic” tab.



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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: www.lansen.io/DOC

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