LANSEN

USER MANUAL

LAN-WMBUS-B4-B(E)-MIOTY-A1/A2

Version: 1.0

SYMBOLS:

Important information regarding instructions or recommendations for installation of device.

Warning, risk for bodily harm if handled without care.

NOTICE:

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

Do not attempt to alter or repair the device, if you are experiencing malfunction make sure to contact your place of purchase.

It is recommended to use ESD protection to prevent potential damage to this product.

WARNING:

Battery: Fire, explosion, and severe burn hazard. Do not recharge, disassemble, heat above 100°C, incinerate, expose contents to water. Do not crush.

Additional information

Please note that antennas, and antenna cables are not included. See our full range of antennas, cables, and other accessories under our “accessories section” online. All articles listed can be found on our website: https://www.lansen.io/assortment/accessories/

Article Name	Description
LAN-WMBUS-D2-TC	Lansen Configuration Dongle
Lansen Configurator	Software for Lansen Dongle
LAN-A-PMB-KIT-ID58-78	Pole mounting kit
LAN-MAG-R4	Magnet with telescopic shaft
LAN-R4-IP-KIT	Sealing kit for A1 enclosure
LAN-BATT-BR-B1	Battery with supercap, 3,6v, 38Ah, black
LAN-BATT-B-B1	Battery, 3,6v, 38Ah, black

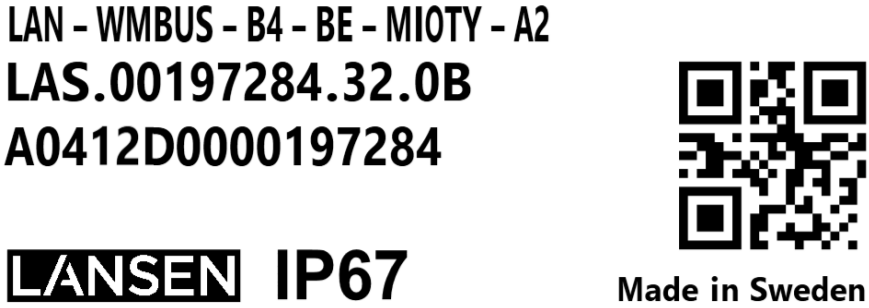
INTRODUCTION

The battery powered wireless M-Bus to mioty, OMS4mioty, bridges from Lansen are highly configurable devices used for extending the range between meters and a gateway by converting incoming wM-Bus (OMS3/4) to outgoing OMS over mioty. In other words, it bridges between wM-Bus and mioty.

For more information, visit our website www.lansen.io.

LABEL INFORMATION

The label on the device gives necessary information about a specific device. See example below for wM-Bus and mioty.



Article name: LAN – WMBUS – B4 – BE – MIOTY – A2

IP Classification: IP67

wM-Bus:

wM-Bus serial number: LAS.00117128.32.0B
Manufacturer code: LAS
wM-Bus Identification number: 00117128
Device type (hex): 32
Protocol version (hex): 0B

By using the QR-code you will receive all the wM-Bus information regarding the device.

mioty:

mioty serial number: A0412D0000197284
Manufacturing code: A0412D00
Identification number: 00197284
Short address: 7284

SPECIFICATIONS

	wM-Bus	mioty
Frequency band(s)	M: 868,000 MHz to 868,600 MHz N: 868,700 MHz to 869,200 MHz	EU1: UL Ch.B: 868.080 MHz UL Ch.A: 868.180 MHz
Output power (ERP)	LAN-WMBUS-B4-B(E)-MIOTY-A1/A2: < 14 dBm / < 25 mW	
Configurable	LAN-WMBUS-B4-B(E)-MIOTY-A1/A2: Yes, by dongle.	
Battery	2xER34615 Li-SOCl² Nominal voltage: 3.6 V Nominal capacity: 38000 mAh 2xER34615+SPC1550/W Li-SOCL² Nominal voltage: 3.6 V Nominal capacity: 38000 mAh	

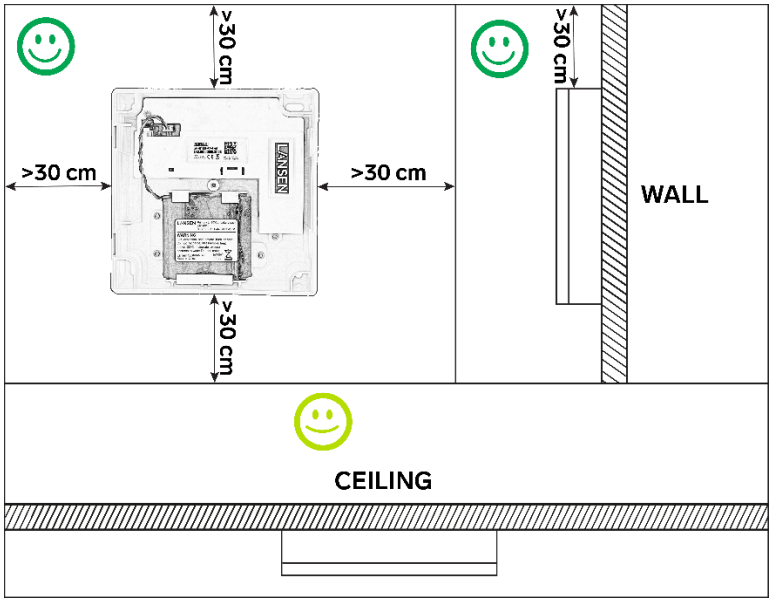
RECOMMENDED PLACEMENT INSTRUCTIONS:

(A1 Indoors) It is recommended to install bridges indoors to walls, but they can also be installed to the ceiling. It is highly recommended to mount the device as the image on the next page.

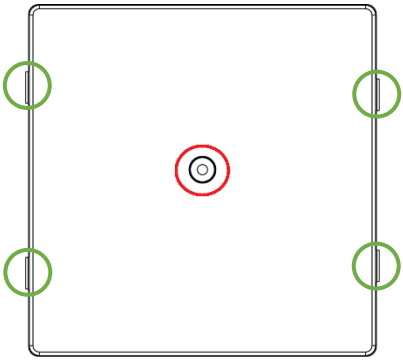
(A2 Indoors and outdoors) It is recommended to install the bridge upright on a wall, pole, pipe, or similar, but it can be installed on a ceiling as well. It is highly recommended to mount the device as the image on the next page.

The label on the device should be on the left side.

Keep at least 30cm in all directions to other objects or walls/ceiling/floor.



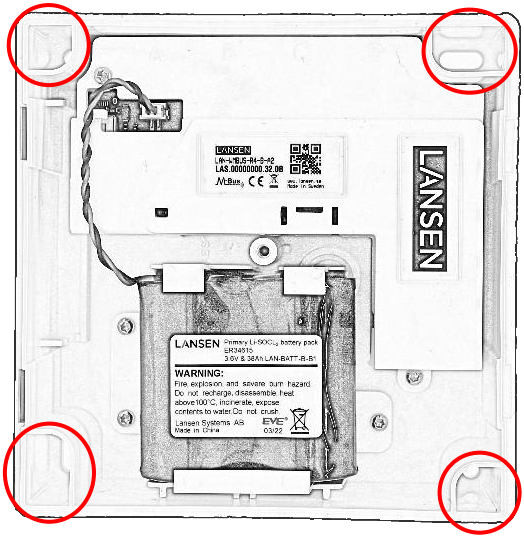
Installing and mounting



Step 1:

Unscrew the screw (marked with a red circle) and remove the cover by pushing the clips at both sides of the cover.

Note: The screw is a Security Torx T20H (with a small pin in the middle).

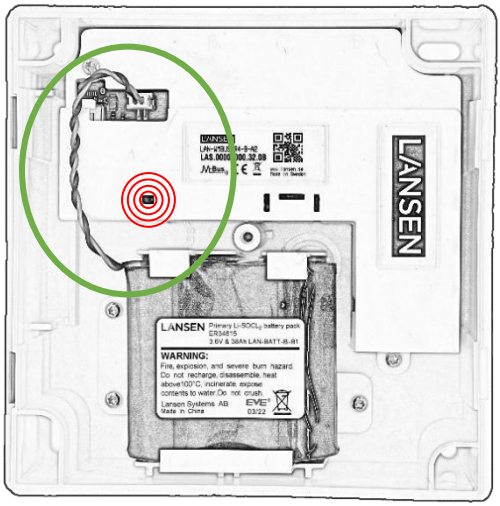


Step 2a: Mounting on a wall or ceiling

Take the bridge and hold it where it is going to be mounted. Mark the holes (red circles), pre-drill if necessary (depending on the material), and mount the device by using four screws (not included).

Step 2b : Mounting on a pole/mast (A2)

Install the Lansen pole mounting kit (article number LAN-910-0066) on the back of the bridge. Pull the straps through the holes and wrap it around the pole or pipe which the bridge is going to be mounted on and tighten the straps, so it is securely mounted.



Step 3: Startup sequence

Connect the battery cable to the bridge as marked with green circle in the picture to the left. Three beeps will be heard during startup.

The LED will light up for approximately 1 minute, then it will quickly listen for wM-Bus packages and send a mioty test package so you can see it is working. Once the startup sequence is completed (takes approximately 2 minutes) it will beep once more and begin listening for wM-Bus packages.

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.

Step 4: Configuration of device

We recommend connecting to the device using a Lansen USB-dongle (LAN-WMBUS-D2-TC) with the software *Lansen Configurator*.

Should you require to reconfigure the device, simply use a magnet to the left of the outside label until you hear a beep. This will force the device to send a mioty test package and once you hear a second beep it will go into listening mode for approximately 10 minutes which will allow you to connect and configure the device.

The bridge requires a list of whitelisted devices before it is fully functional. This can be done for each meter/sensor individually or by using a CSV file in *Lansen Configurator*. We strongly advice against using the parameter “Automatic meter installation” as it will very quickly drain the battery of your device.

Once your meters have been manually added you can confirm that their packages are being received in the meter list as they will turn from white to a color (representing RSSI value) once a package has been accepted by the bridge.

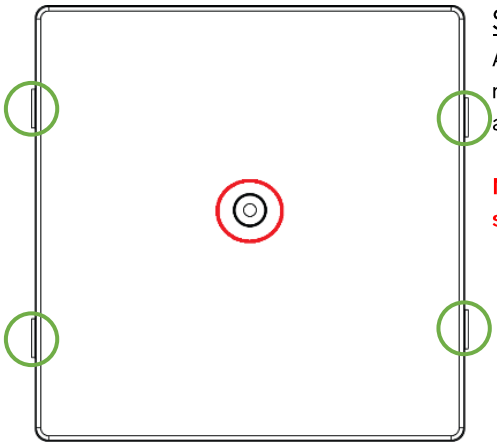
Step 5: LED and sound indications

LED		
Red	Steady on	Sending mioty package
	Blinking	Receiving wM-Bus package(s)
	Blinking once every minute	Power saving mode, indicating it is still running

Note: Once a magnet has been used the LED will be active for 15 minutes before going back into power saving mode.

There are four separate times the bridge will beep:

1. Once started it will beep three times.
2. Once the startup sequence is finished it will beep once.
3. If you use a magnet to force it into listening mode it will beep when you use the magnet.
4. After using a magnet it will send a mioty status package and then beep when finished. Indicating that it is in forced listening mode for approximately 10 minutes.



Step 6:

Attach the cover and mount the screw (marked with a red circle on the image to the left). Make sure the clips at both sides of the cover are firmly attached.

Note: The screw is a Security Torx T20H (with a small pin in the middle).

B4-B(E)-MIOTY Hardware Troubleshooting

Issues	Possible Reason(s)	Possible Solution(s)
The device is not activating.	The device may not be powered properly.	Make sure the battery is attached properly to the device. It should beep once the battery is connected. If you are changing batteries, make sure to use the recommended batteries described under **Specifications** in this user manual.
The device is activated but not relaying any information.	The distance between sensor and bridge. Poor RSSI.	Too close: The device needs to be a minimum of 1 meter away from the active sensor(s) or gateway. Not within range: Move your device and bring it closer to the gateway or sensor to see if you need to close the gap. Alternatively, if you have a wireless gateway or sensor, move it closer to the bridge.

B4-B(E)-MIOTY Software Troubleshooting

Issue	Possible Reason(s)	Possible Solution(s)
Wrong software, drivers or firmware for your dongle.	-	Visit our website for the latest software, drivers or firmware found at www.lansen.io/download/
Cannot configure the bridge by using the dongle.	Distance.	Too close: The device may be too close to the dongle. Recommended distance is 1m away from the dongle. Not within range: The device may be too far away from the dongle. Move your computer closer to see if you can connect or check the packet sniffer when the device is within range.
	ID.	Make sure your serial number "LAS.XXXXXXXX.32.0B" (Example) where the Xs are the serial number, is added properly for the setup to work.
	Encryption.	If encryption is enabled, ensure the AES key provided to you on our website is correctly entered: www.lansenonline.com .
	Magnet/Reed timer.	Make sure the device is listening at the time you are either attempting to connect or sending the configuration update. Note: You can force this by using a magnet to the left of the label of the device or disconnecting/connecting the battery. Note: If you are using a magnet, or restarting the device, the device LED(s) will light up and you will hear beeping, you can only see the LED if the PCB is visible.
Not getting any data.	Whitelisting, manually adding meters.	In Lansen Configurator, go to "Config Repeater / Bridge" and then the "Meters" tab. Make sure all your meters are in the list. You can add the meters manually under "Add meter data" or by uploading a CSV file.
	Whitelisting, manufacturing ID.	In Lansen Configurator, go to "Config Repeater / Bridge" and then the "Routing" tab. Here you can manually add the manufacturing ID's under "Accepted Manufacturing IDs". Be aware that the device will be adding all meters of that manufacturer in the vicinity of the device. E.g. LAS for Lansen products.

Issue	Possible Reason(s)	Possible Solution(s)
S-Mode.	S-Mode.	Input mode: If you choose to put the device input mode to S-mode, once configured, be aware that you need the dongle to be reconfigured to S-mode as well before doing further changes. Output mode: You will not receive any data unless the dongle is configured to S-Mode, however, configurating the bridge will still be possible with the standard “T/C” configurated dongle.
Further questions.	Place of purchase.	For any further questions, please contact your place of purchase.

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: https://www.lansensystems.com/DOC