

# LANSEN

## M-Bus master MA series

LAN-WMBUS-MA

### DEVICE

The mains powered M-Bus master, LAN-WMBUS-MA, is a plug-and-play wired M-Bus to wireless M-Bus converter to read out wired M-Bus meters and transmit the data wirelessly using the wireless M-Bus protocol.

### ANTENNA

The M-Bus master can either make use of two high performance internal antennas or one external antenna, depending on the model.

Using the two internal antennas take advantage of both horizontal and vertical polarizations for maximum range while minimizing multipath problems. The antenna diversity is important to prevent losses due to different polarization, especially indoors.

Models with external SMA interface are suited when large antennas are desirable to cover larger areas or long distances.

### STATUS MESSAGE

The device will, as default, on regular interval transmit a status message containing information such as the current M-Bus load, number of connected meters, overloads, and number of supported meters by the device.

### FIRMWARE

|                   |  |
|-------------------|--|
| MODE              | T1   |
| READ OUT INTERVAL | Refer technical document                   |
| ENCRYPTION        | Default AES128 encryption OMS 5. Profile A |
| MBUS DATA         | Refer technical document                   |

### POWER/LIFETIME

|               |  |
|---------------|--|
| POWER SUPPLY  | 230 VAC  |
| RADIO         | 14 dBm (25mW) output power to antennas<br>ERP typical: 13 dBm (19.9mW)   |
| ANTENNAS      | Two antennas for true differential transmission or one external antenna  |
| MAXIMUM LOADS | MA-4 16 mbus loads<br>MA-8 16 mbus loads<br>MA-16 16 mbus loads<br>MA-64 32 mbus loads<br>MA-128 32 mbus loads<br>MA-500 32 mbus loads |

### GENERAL INFORMATION

|                  |  |
|------------------|--|
| STANDARDS        | 2014/53/EU (RED)<br>EN 13757-3/4:2013, OMS 4.0.2<br>EN61000-6-2:2005<br>EN61000-6-1:2007 |
| MATERIAL         | RAL 9003 (signal white)  |
| IP               | 67   |
| SIZE (W x H x D) | 150 x 150 x 53 mm  |
| CONNECTOR        | 2 cable screw mount connectors   |
| INDICATION LED   | Power (green), TX (blue), RX (green), overload (red)                                     |

### USAGE

When the device is powered up the devices starts scanning the M-Bus for connected meters. It search for secondary addresses on baudrate 2400 (other baudrate on request).

For each device found, a short beep will be heard. After the scanning is completed, the device will beep as many times as number of devices found. The maximum number of devices supported depends on the model. It is possible to trigger a new search by holding a magnet on the product label.

The search takes about 5-10 minutes, depending on number of meters on the bus. After the search have been completed, the device will ask each meter every X minutes (see technical document for interval) for new data and transmit the recieved data using the wireless M-Bus protocol using the long packet format (0x72). The device by default encrypts all payloads.



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## DEVICES

|                       |                      |   |
|-----------------------|----------------------|---|
| LAN-WMBUS-MA-4-A2     | MBUS master 230V max | 4 logical devices                         |
| LAN-WMBUS-MA-4-A2-X   | MBUS master 230V max | 4 logical devices with external antenna   |
| LAN-WMBUS-MA-8-A2     | MBUS master 230V max | 8 logical devices                         |
| LAN-WMBUS-MA-8-A2-X   | MBUS master 230V max | 8 logical devices with external antenna   |
| LAN-WMBUS-MA-16-A2    | MBUS master 230V max | 16 logical devices                        |
| LAN-WMBUS-MA-16-A2-X  | MBUS master 230V max | 16 logical devices with external antenna  |
| LAN-WMBUS-MA-64-A2    | MBUS master 230V max | 64 logical devices                        |
| LAN-WMBUS-MA-64-A2-X  | MBUS master 230V max | 64 logical devices with external antenna  |
| LAN-WMBUS-MA-128-A2   | MBUS master 230V max | 128 logical devices                       |
| LAN-WMBUS-MA-128-A2-X | MBUS master 230V max | 128 logical devices with external antenna |
| LAN-WMBUS-MA-500-A2   | MBUS master 230V max | 500 logical devices                       |
| LAN-WMBUS-MA-500-A2-X | MBUS master 230V max | 500 logical devices with external antenna |

In addition to number of devices supported, some more parameters are configurable at purchase as below. For more details, see our documents (wM-Bus data format/Technical information/Configuration of device) on our webpage.

A = **A**lternative addressing used

E = No **E**ncryption

S = No "**S**tatus message"

T = Do not **T**ransmit empty packet if no response from meter

N = Do not search for **N**ew meters every 48 hours

F = Indication if no meter is **F**ound during startup (constant beep until meter is found)

R = Increased **R**eadout speed

### EXAMPLE: LAN-WMBUS-MA-4-X-AEN

- Device support 4 logical meters
- Device has external antenna interface
- Alternative addressing is used
- Encryption is not used
- Device does not search for new meter

For more details, refer to our documents below found on our webpage:

wM-Bus data format / Technical information / Configuration of device