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 ERP typical: 13 dBm (19.9mW)
ANTENNAS	Two antennas for true differential transmission or one external antenna
MAXIMUM LOADS	MA-4 32 mbus loads MA-8 32 mbus loads MA-16 32 mbus loads MA-64 32 mbus loads MA-128 32 mbus loads MA-500 32 mbus loads

GENERAL INFORMATION

STANDARDS	2014/53/EU (RED) EN 13757-3/4:2013, OMS 4.0.2 EN61000-6-2:2005 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-uMA-B	Micro MBUS master, battery	Max 3 logical devices, max 3 MBUS loads
LAN-WMBUS-MA-4-A2	MBUS master, 230V	Max 4 logical devices, max 32 MBUS loads
LAN-WMBUS-MA-4-A2-X	MBUS master, 230V	Max 4 logical devices, max 32 MBUS loads , with external antenna
LAN-WMBUS-MA-8-A2	MBUS master, 230V	Max 8 logical devices, max 32 MBUS loads
LAN-WMBUS-MA-8-A2-X	MBUS master, 230V	Max 8 logical devices, max 32 MBUS loads, with external antenna
LAN-WMBUS-MA-16-A2	MBUS master, 230V	Max 16 logical devices, max 32 MBUS loads
LAN-WMBUS-MA-16-A2-X	MBUS master, 230V	Max 16 logical devices, max 32 MBUS loads, with external antenna
LAN-WMBUS-MA-64-A2	MBUS master, 230V	Max 64 logical devices, max 32 MBUS loads
LAN-WMBUS-MA-64-A2-X	MBUS master, 230V	Max 64 logical devices, max 32 MBUS loads, with external antenna
LAN-WMBUS-MA-128-A2	MBUS master, 230V	Max 128 logical devices, max 32 MBUS loads
LAN-WMBUS-MA-128-A2-X	MBUS master, 230V	Max 128 logical devices, max 32 MBUS loads, with external antenna
LAN-WMBUS-MA-500-A2	MBUS master, 230V	Max 500 logical devices, max 32 MBUS loads
LAN-WMBUS-MA-500-A2-X	MBUS master, 230V	Max 500 logical devices, max 32 MBUS loads, with external antenna

In addition to number of devices supported, some more parameters are configurable at purchase as below. For more details, refer to 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

OPTIONS FOR LAN-WMBUS-MA

LAN-WMBUS -	SERIES	-	SUPPORTED LOGICAL DEVICES	-	ENCLOSURE IP-CLASS	-	ANTENNA TYPE
	MA M-Bus master		**Number** Maximum numbers of supported logical devices		**A2** IP65 & IP67		**(Blank)** Dual internal antenna
							X SMA connector for external antenna

Examples	Battery	Mains	Dual Internal antenna	External SMA interface	Max transmissions per logical device	Typical lifetime expectancy*	Max M-Bus loads	Max logical devices	Optimized for
LAN-WMBUS-µMA-B	X		X		TBD	TBD	3	3	Smaller installations
LAN-WMBUS-MA-128-A2		X	X		60 min		32	128	Installations with up to stated logical devices
LAN-WMBUS-MA-500-A2		X	X		120 min		32	500	Installations with up to stated logical devices
LAN-WMBUS-MA-4-A2-X		X		X	15 min		16	4	Installations with up to stated logical devices with longer distance to a gateway

*The expected battery lifetime stated is based on simulations and true measurements at the stated recommended temperatures 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 and measurements can be sent upon request for your reference.

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