

## Repeater for indoor and outdoor use

Wireless M-Bus repeater designed to extend the range between meters and a gateway. Plug-and-play with a discreet design, available with battery or mains power.

### Antenna

- 2 internal antennas (90° for optimal polarization) or 1 external
- SMA models for extended range and larger coverage

### Performance

Status packet transmitted every minute (incl. battery & traffic data).  
Battery life up to approx. 5 years (standard configuration).  
High immunity to electrical interference, suitable for demanding environments.

### Routing

- Collision avoidance algorithm
- Supports multihop (up to 4 repeaters in chain)
- Supports OMS and non-OMS packets

### Features

- OMS time synchronization
- AES-128 configuration encryption
- Transparent packet retransmission option
- Firmware upgradeable

### Conversion

Converts between M-Bus modes (e.g. C-mode ↔ S-mode)

### Configuration

Ready to use out of the box, highly configurable.  
Configured via dongle or gateway.

Example settings:

- Active/inactive scheduling
- Packet suppression
- Filtering (whitelist/manufacture ID)
- Static routing (multihop)
- RSSI value append



**FIRMWARE**

INPUT MODE T/C-mode (default) or S-mode  
 OUTPUT MODE C-mode (default) or T-mode or S-mode  
 REPETITION 2 times\* - Once on each internal antenna  
 MAX SENSORS R4/RX4 = 932 sensors μ R = 100 sensors  
 MAX PACKET LENGTH 255 bytes  
 FILTERING 0-30 min suppression timer, RSSI, manufacturer, whitelisting, etc.

SECURITY Supports routing of Security Profile A and B according to OMS 4  
 STATUS TX INTERVAL 60 seconds  
 MULTIHOP SUPPORT R4/RX4: Yes uR: Partly\*\*

**GENERAL INFORMATION**

POWER SUPPLY M: 85-305 VAC  
 R4-B: 2xER34615\*\*\*, 38Ah, 3.6V  
 BE: 2xER34615\*\*\*, 38Ah, 3.6V + supercap  
 uR-B: 2xER18505\*\*\*\*, 7.8Ah, 3.6V

STANDARDS 2014/53/EU (RED)  
 EN 13757-3/4:2013, OMS 4.0.2\*\*\*\*\*  
 EN 61000-6-1 (R4/uR, 3V/m)  
 EN 61000-6-2 (R4-LR/RX4, 10V/m)

TEMPERATURE M: Max: -35°C/+85°C, rec. -30°C/+50°C  
 B: Max: -20°C/+85°C, rec. 0°C/+50°C  
 BE: Max: -35°C/+85°C, rec. -30°C/+50°C

**RADIO**

RECEIVER CLASS 1.5 for μR/R4, 2 for R4-LR/RX4  
 OUTPUT POWER Radiated/conducted power  
 868.95 T/C-mode, 868.3 S-mode < 14 dBm  
 TRANSMISSION Listen before talk, polite spectrum access  
 HARDWARE FILTER For LTE/GSM/GPRS and other disturbances:  
 R4/μR: No  
 R4-LR: Yes  
 RX4: Yes (Enhanced)

**ENCLOSURE**

DIMENSIONS A1/A2: 150x150x53 mm,  
 uR: 80x80x25 mm  
 IP-CLASSIFICATION uR-B: IP40  
 M: IP40 (A1), IP65 (A2)  
 B(E): IP40 (A1)  
 B(E): IP65 (A2), external antennas  
 B(E): IP67 (A2), internal antennas

COLOR A1/A2: RAL 9003 (signal white)  
 uR: White

MATERIAL A1/A2: UV-resistant PC/ABS  
 uR: ABS

FLAMMABILITY RATING A1/A2: UL 94 HB  
 uR: Self-extinguishing

**ACCESSORY**

CONFIGURATOR Configuration software  
 LAN-A-PMB-KIT-ID58-78 Pole mounting kit  
 LAN-MAG-R4 Magnet with telescopic shaft  
 LAN-R4-IP-KIT Sealing kit for A2 enclosure

\*Models with external antenna send twice on the same antenna  
 \*\*Works in multihop systems if placed closest to meters, doesn't work between uR  
 \*\*\*Lithium < 5g/cell, UN3091 class 9  
 \*\*\*\*Lithium < 1g/cell, UN3091 limited quantity  
 \*\*\*\*\*Retransmit delay time 24-148 ms  
 \*\*\*\*\*Enhanced filtering  
 \*\*\*\*\*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.