

RECEIVER/ RADIO REPEATER FOR METERS WITH M-BUS WIRELESS PROTOCOL (EN13757-4)



The sinapsitech® repeater family is represented by a range of wireless repeaters able to acquire the signal from one or more communicating meters according to the standard M-BUS wireless (868 MHz) and retransmitting the received data to a network of other sinapsitech® devices in order to extend their wireless range. Data can be also collected by the SIN.EQRTU1T data logger. Each RPT handles up to 500 mt and it is able to cover a distance of 500 meters in open air and 40 meters in building. The plastic case, from the simple and elegant design, the electrical connections fully retractable, antennas built into the device itself make the repeater suitable for wall installations in view. The commissioning of sinapsitech® repeaters is facilitated by the supplied software and LEDs to represent the intensity of the signal, also the search for the best point of installation is facilitated by the ability to power the device via USB making it possible to move during the search of better compromise signal/distance.

Easy to use

The USB interface allows the use of the “Equobox Toolkit” (SIN.EQSW1) software to read the data coming from meters and the commissioning of the repeater network.

Multi-HOP and open

The sinapsitech® repeaters have a multi-hop function that allows to extend the network coverage when used with other repeaters, it is also able to manage meters with wireless M-Bus (868 MHz) and OMS protocol. The received signals are retransmitted immediately without time-shifting so as to have consumption data in real time.

STRONG POINTS

- ✓ Multihop management with system ID network identification
- ✓ Openness to Wireless M-Bus multibrand transmitters, OMS
- ✓ Management of different operation modes (S / T / C+T / S & C+T)
- ✓ Extreme ease of configuration through the use of: onboard indicators, Equobox Toolkit (SIN.EQSW1) software, web interface of SIN.EQRTU1T
- ✓ USB port onboard for the repeater settings and the firmware updated (via Equobox Toolkit software), and power supply (especially indicated for commissioning phase)
- ✓ Grid network supply (no need to change batteries)
- ✓ Persistent data storage
- ✓ Management of data transmitted from devices that communicate with frequency up to 10 seconds (Wireless M-Bus receiving Channel always available)
- ✓ Wide area covered than any other wireless M-Bus system present in market
- ✓ Management up to 500 Wireless M-Bus transmitters not bidirectional.



SMART

The sinapsitech® repeater supports stand-alone mode, in effect it keeps track of the last received frame of each meter, providing the ability to download acquired data via USB port.

ELECTRICAL CHARACTERISTICS

Power Supply	100...240 Vac @ 50-60Hz During startup / reading data: 5Vdc via USB port (500mA)
Installation category	Class II
Maximum consumption	4.5W

MECHANICAL CHARACTERISTICS

Temperature range	Operating: -20°C a +55°C / Storage: -25°C a +85°C
Dimensions	160x160x35 mm (HxLxP) – DIN
Mounting	Wall with screws
Protection rating	IP 40 (EN60529)

MESH NETWORK INTERFACE

Frequency	868MHz
Maximum distance between two RPT	500mt free field - 40mt in building

WMBUS NETWORK INTERFACE

Reference standard	EN13757-4 (Physical Layer), EN13757-3 (Application Layer)
Supported application layer (in combination with SIN.EQRPT1T or with SIN.EQSW)	Radio M-Bus, OMS,
Frequency	868MHz – Max transmission power: 27dBm
Number of supported W-MBus meters	500
W-Bbus Mode	S / T / C+T / S & C+T
Modality of meters recognition	Based on data receipt Based on SND_IR message receipt Meters list import from file

DATALOGGING

Data retention	Last sample received 100 years
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USER INTERFACE

Power Led	Operating status
Power Led signal	No. 4 LEDs for displaying the signal strength of the wireless network backbone
TX/RX Status Led	No. 4 LEDs to display the status of the radio network backbone and meters receive / transmit

