

M-BUS ADAPTER/REPEATER



The EQUOBOX SIN.EQLC1 M-Bus level converter allows interfacing to a network of devices compliant with the M-Bus standard (EN13757 -2 Physical Layer) up to a maximum of 60 slaves *.

It is designed to be used with EQUOBOX TOOLKIT (SIN.EQSW1) software, in combination with the SIN.EQRU1 datalogger, or as M-Bus repeater. Typically, it is used with SIN.EQRU4, SIN.EQRU1T/X or SIN.EQRUEVO1T.

* Slave means an M-Bus load unit (≤ 1.5 mA)

FLEXIBLE

It can be used as a master in an M-Bus network connected via a serial port to a data logger/concentrator, or as a repeater in order to extend an existing M-Bus network with up to 60 additional M-Bus loads. Its modularity allows the optimization of the cost of the reading system.

In "MASTER" mode, the device allows the EQUOBOX TOOLKIT (SIN.EQSW1) application software to communicate with the meters connected to M-Bus Master port. Using the EQUOBOX TOOLKIT software several can be supervised by reading the meters and generating reports.

The device also allows the EQUOBOX family datalogger SIN.EQRU1 to communicate with M-Bus devices, connected to the M-Bus Master port.

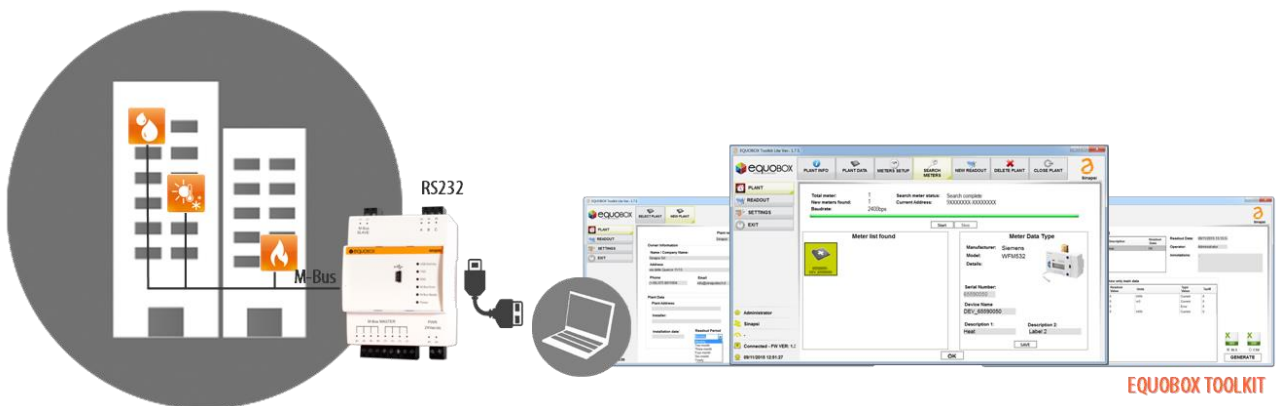
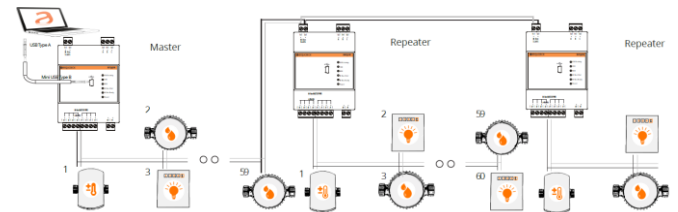
The datalogger must be connected to the level converter via the RS232 serial bus.

COMPLETE

In "REPEATER/SLAVE" mode, the device works as an M-Bus signal amplifier/regenerator, thus allowing for the extension of an existing M-Bus network in terms of distance and total devices connected (60 more).

Typical use in combination with SIN.EQRU4, SIN.EQRU1T/X or SIN.EQRUEVO1T datalogger.

CONNECTION EXAMPLE



ELECTRICAL FEATURES

Rated Voltage 24Vdc +/- 10% (Rev. HW 1.0 or if not specified)
24Vdc +/- 10%, 24Vac (min 20Vac, max 40Vac) 50/60Hz for HW 2.0 versions

(*) It is suggested to prefer continuous power supply (dc) in order to limit thermal dissipation and consumption

Installation category Class III
Rated consumption 3W + (0.07* number of M-Bus loads)
Maximum consumption 12W

MECHANICAL FEATURES

Operating temperature range From -20°C to +55°C
Storage temperature range From -25°C to +65°C
Dimensions 90x71x62 mm (HxLxD) – DIN
Installation type 35mm DIN bar (EN60715)
Protection rating IP20 (EN60529)
Connections M-Bus Slave: to connect as a repeater/extender
M-Bus Master: for connection to the M-Bus meters
Mini-USB Type B: for connection to the EQUOBOX TOOLKIT (SIN.EQSW1) software

Installation and positioning It is suggested not to place the device in adherence with others in order to avoid their overheating

M-BUS SECTION

Reference standard EN13757-2 (Physical Layer)
Baud rate Min. 300bps – Max. 9600bps
M-Bus-RS232 isolation 1KV AC
M-Bus-USB isolation 1KV AC
Max. number of M-Bus devices (loads) 60
Max. number of Repeaters Unlimited in stand-alone mode for reading current data via an RS232 or USB connection
Four (4) as slaves to the EQUOBOX RTU M-Bus

Transmission speed Minimum: 300bps
Typical: 2400bps
Maximum: 9600bps

Bus voltage 42V – 30V
Short circuit protection Yes

SIGNALING LEDs

USB Activity (orange LED) Connection status with EQUOBOX TOOLKIT software
TXD (Green LED) Transmission status on the M-Bus Master
RXD (Green LED) Reception status from the M-Bus Master
M-Bus ERROR (Red Led) Indicates a short circuit or the overloading of the M-Bus
M-Bus Ready (Green Led) Indicates level converter is ready to work
POWER (Red Led) Indicates the correct power supply of the device