

DATALOGGER FOR METERS WITH WIRED AND WIRELESS M-BUS PROTOCOL



EQUOBOX RTU1X (SIN.EQRTU1X) is a datalogger to acquire data from devices that use wired and wireless standard M-Bus protocol such as meters, heat cost allocators. Manages up to 500 meters providing storage of daily readings for 10 years. The web interface allows accessing data, reports generating, the setup of the M-Bus networks and the management of local I/O.

It is equipped with a graphical display for setup, accessing data in real time and the status of the I / O without the need of a PC. It has inputs and outputs through which it is possible to interact with the system and perform actuations with combinatory AND / OR logics, sending emails, and manual controls via WEB interface.

At the datalogger up to 20 M-Bus meters* can be connected directly, with the help of SIN.EQLC1 repeater it is possible to increase the number of up to 250 meters.

For an easy installation a remote antenna with 1.5 mt of cable for W.M-Bus interface is included in the box.

* Meter means an M-Bus load unit $\leq 1,5$ mA

EASY TO USE

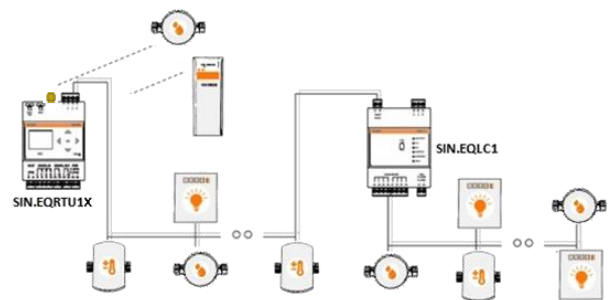
The graphic display allows to make the commissioning of the metering system in a few steps guided by a setup wizard. The main settings can be performed locally on the display or via WEB interface.

Equipped with two Ethernet ports with switch functionality, it allows to connect multiple devices in cascade without the aid of network devices, moreover it is possible to power the device also via Power over Ethernet (PoE).

ALWAYS UPDATED

Through the Internet the device will check for updates and notify the user who can decide to install them with a simple click in the web interface.

Maximum number of meters for interface	
WIRED METERS	WIRELESS METERS
250 (with SIN.EQLC1 repeaters)	250
20	480
0	500



SMART

The user can start scanning the M-Bus network to allow the acquisition of devices connected via cable or via radio through a single button. Automatic recognition of detected devices allows to immediately start the data acquisition and the automatic creation of reports using predefined data sets, user-changeable, complete with measurement unit, size type and description (language), with resulting elimination of need for further user activities.



ELECTRICAL CHARACTERISTICS

Power Supply	24Vdc +/- 10%, 24 Vac (min 20 Vac, max 40 Vac) or PoE (IEEE 802.3)
Installation category	Class II
Maximum consumption	7.5W
Ethernet	N°2 (1 MAC): ETH1: Ethernet 1(PoE), ETH2: Ethernet 2
Fieldbus	Total number of supported meters: 500 (wireless + wired)
Digital Inputs	Wired M-Bus interface max 20 meters
Digital Outputs	Wireless radio M-BUS interface
Auxiliary voltage for digital Inputs	N°3 - OFF=Vin<12Vdc, ON=Vin>12Vdc, max Vin=24vdc
	N°2 Relay, Contact load:
	5A@30Vdc (Resistive Load)
	2A@30Vdc (Inductive Load cosfi=0.4; L/R=7ms)
	15Vdcmax10mA

MECHANICAL CHARACTERISTICS

Temperature range	Operative: -20°C a +55°C / Storage: -25°C a +65°C
Dimensions	90x71x62 mm (HxLxP) - DIN
Mounting	35mm DIN Rail (EN60715)
Protection Grade	IP20 (EN60529)

WIRED M-BUS INTERFACE

Reference standard	EN13757-2 (Physical Layer), EN13757-3 (Application Layer)
Baud rate	Min. 300bps - Max. 9600bps
Number of supported M-Bus meters	Without repeater M-Bus: 20, with repeater: max 250
Reading frequency	15 min / 60 min / 6 hours / 12 hours / 1 day
Recognition of collisions on M-Bus network	Yes
Devices search / acquisition	Via Primary and Secondary Address

WIRELESS M-BUS INTERFACE

Reference standard	EN13757-4 (Physical Layer), EN13757-3 (Application Layer)
Frequency	868MHz
Number of supported W.M-Bus meters	500
Reading frequency	From 0 minto24h
W.M-Bus Mode	S / T / C+T / S & C+T
Methods of meters recognition	Based on data reception or message reception SND_IR

DATALOGGING

Data storage	1 year for intra-day data from wired meters, 2 monthsfor intra-day data from radio meters
Reports	XLS or CSV format
Download report	Mail SMTP, FTP (Client), Webserver (report generation and downloading)
Report scheduling	Daily / Monthly / Two-monthly/ Three-monthly / Four-month / biannual / Yearly

USER INTERFACE

Display	Graphic, bright, 16 grayscale, multilanguage
Keyboard	6 tactile membrane key
Led Power	Operating status
HTTP	Multilanguage web server for data consulting and configuration

LOGICS / ALARMS/PLANNING

Alarm notification from M-Bus network	Anomalies /alarmsmeters, communication failure, thresholds violation
On board I/O	notification by e-mail of digital Inputs status
Logic	AND/OR based on local I/O
Planned actions	Thresholds violation (max value, min value, range, maximum consumption) Local relay activation, sending of readings reports