SMART KIT M-BUS
Data logger for M-Bus meters

The SMART KIT M-BUS is an advanced data logging system that collects data from devices that use M-Bus protocol such as meters, digital inputs/outputs, analogue inputs/outputs.
The kit is available in two versions: 1.ETRSEQ.0001 that supports up to 20 connected devices through the integrated level converter and 1.ETRSEQ.0002 that supports up to 240 connected devices using multiple external level converters (1.ETRSEQ.0003). Data read is stored and daily readings are available for up to 10 years. The web interface allows accessing data, reports generating, the association of logged devices and the management of 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 sending emails, acting with combinatory AND/OR logics and manual controls via web interface.

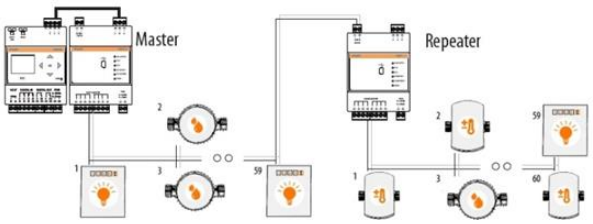
EASE OF USE

The graphic display allows the user to set up the metering system in just a few simple steps, all of which are prompted by a convenient setup wizard.
All the settings linked to the system's functionality are performed locally on the display or via web interface.
Thanks to the presence of two Ethernet ports with switch functionality, the system allows multiple devices to be connected in cascade, with no need for additional network equipment, in addition, it is possible to power the device via Power over Ethernet (PoE).

ALWAYS UPDATED

When connected to the internet, the device's web interface automatically checks for updates and allows the user to proceed with a simple click in web interface.

CONNECTION EXAMPLE



SMART

The user can scan the M-Bus to allow the acquisition of all meters connected via a single button.
Automatic recognition of detected devices allows immediately to start data acquisition and automatic creation of reports with predefined data sets, user-changeable, including units, type size and description (language), without further activities by the user.

ELECTRICAL CHARACTERISTICS

Power supply	24 Vdc +/- 10%, 24 Vac (min 20 Vac, max 40 Vac) or PoE (IEEE 802.3)
Installation category	Class II
Maximum consumption	3 W
Ethernet	N° 2 (1 MAC): ETH1: Ethernet 1(PoE), ETH2: Ethernet 2
Digital inputs	N° 3 - OFF=Vin<12Vdc, ON=Vin>12 Vdc, max Vin=24 Vdc
Digital outputs	N° 2 relay, loads relays: 5 A @ 250 Vac (resistive load) 5 A @ 30 Vdc (resistive load) 2 A @ 250 Vac (inductive load cosfi=0.4 ; L/R=7ms) 2 A @ 30 Vdc (inductive load cosfi=0.4 ; L/R=7ms)
Auxiliary voltage for digital inputs	15 Vdc max. 10 mA

MECHANICAL CHARACTERISTICS

Temperature range	Operating: -10 °C to +55 °C/Storage: -25 °C to +65 °C
Dimensions	90 x 71 x 62 mm (H x L x D) – DIN
Installation typology	35 mm DIN bar (EN 60715)
Protection rating	IP20 (EN 60529)

M-BUS COMMUNICATION

Reference standard	M-Bus (EN 13757-2 and EN 13757-3)
Connection to M-Bus network	Through SIN.EQLC1
Baud rate	Min. 300 bps – max. 9600 bps
Max. number of supported M-Bus meters	240
Reading frequency	15 min./60 min./6 hours/12 hours/1 day/1 month
Collision detection	Yes
Meter acquisition	Via primary and secondary address

DATA LOGGING

Data storage	1 year for the intra-day data from wired meters 10 years for each daily reading
Reports	XLS or CSV format
Download report	(SMTP), FTP (Client), webserver (report generation and downloading)
Report scheduling	Daily/Monthly/Every two months/Every three months/Every four months/Every six months/Yearly

USER INTERFACE

Display	Graphic, bright, 16 grayscale, multi-language
Keyboard	6 tactile membrane keys
Power LED	Operating status
HTTP	Multi-language webserver for data consulting and configuration

LOGIC/ALARM/MANAGEMENT

Alarm notification to M-Bus network	Anomalies/alarms meters, anomaly communication, threshold violations
On board I/O	Email notification of digital inputs' status
Logics	AND/OR based on local I/O Thresholds violation (max. value, min. range, max. consumption)
Planned actions	Local relay activation, sending reports of the readings

maddalena®
METERING EXPERTISE

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