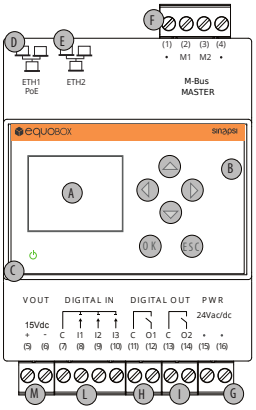
SIN.EQRTU4 - QuickStart Guide

Datalogger for meters with M-Bus protocol



1. OVERVIEW

- Datalogger with web server interface
- Manages up to 250 M-Bus meters (Meter-Bus)
- Archived data over the last 10 years
- Meters data acquisition interval from 15' to 1 month
- Meters reading, report sending, system remote management
- 24Vdc +/-10% or 24Vac (min20Vac, max40Vac) power supply or PoE
- DIN rail mounting (4 modules)
- Graphic display and digital I/O

A. Graphic display
B. Navigation keys
C. Led power supply
D. Ethernet Port 1 (PoE)
E. Ethernet Port 2
F. M-Bus connector (max 20 meters*)
G. Power supply Connector
H. Relay 1 connector
I. Relay 2 connector
L. Digital Input connector
M. Auxiliary ouput voltage connector

*At the SIN.EQRTU4 up to 20 M-Bus meters can be connected; meter means an M-Bus load unit ≤ 1,5 mA.
With the SIN.EQLC1 repeater upo to 250 meters can be managed.

2. CONNECTIONS

Digital Inputs:
(7) - Common for digital Inputs
(8) - Digital Input 1 (Vin 12-24Vdc)
(9) - Digital Input 2 (Vin 12-24Vdc)
(10) - Digital Input 3 (Vin 12-24Vdc)

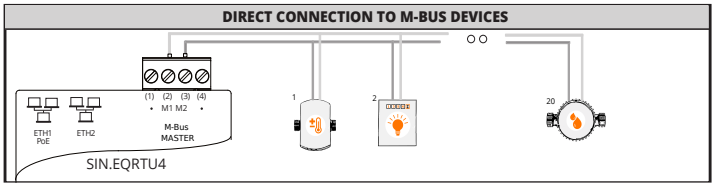
Relay Output:
(11) - Common Relay 1
(12) - NO Relay 1 Contact
(13) - Common Relay 2
(14) - NO Relay 2 Contact

Interface for SIN.EQLC1
(1) - Not connected
(2) - M1 for connection with M-Bus dev.
(3) - M2 for connection with M-Bus dev.
(4) - Not connected

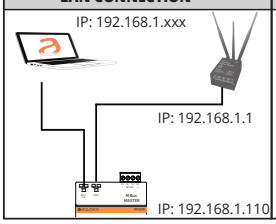
Power supply:
(15) - Input 1 for device power supply
(16) - Input 2 for device power supply
(ETH1) - Ethernet Port for LAN connection (PoE)

Auxiliary output voltage:
(5) - Vout positive pin +15V, Imax = 10mA
(6) - Vout negative pin

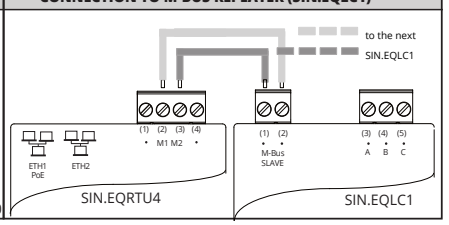
DIRECT CONNECTION TO M-BUS DEVICES



LAN CONNECTION

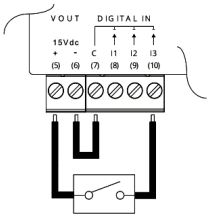


CONNECTION TO M-BUS REPEATER (SIN.EQLC1)

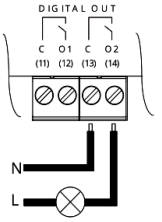


Apply to the device a supply voltage equal to 24Vdc +/- 10%, 24 Vac (min 20 Vac, max 40 Vac)
Before making any connections, turn off the power, remove the terminals, complete wiring and the plug terminals with the correct position

FREE VOLTAGE INPUT CONNECTION

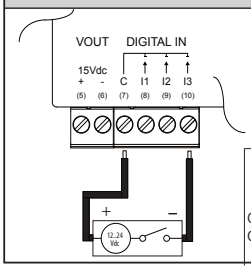


RELAY OUTPUT CONNECTION



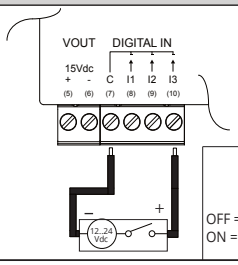
Vmax = 30Vac

NEGATIVE VOLTAGE INPUT CONNECTION



OFF = 0-12Vdc
ON = 12-24Vdc

POSITIVE VOLTAGE INPUT CONNECTION

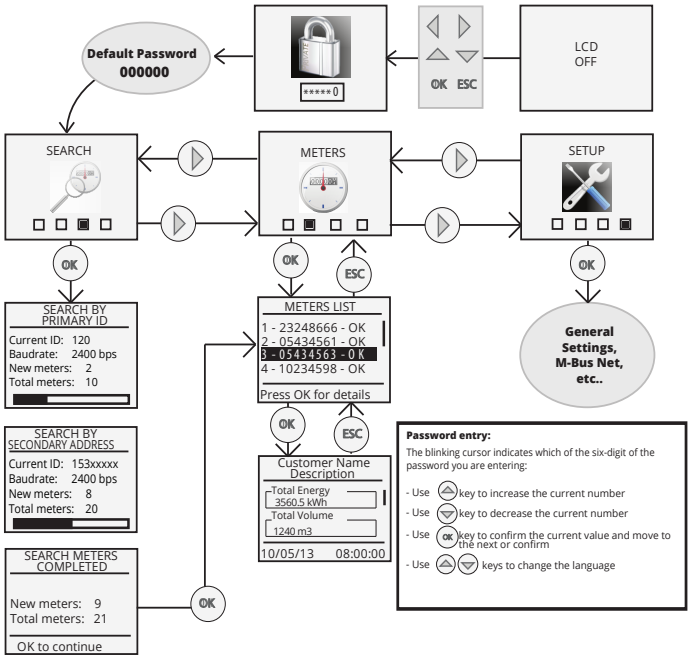


OFF = 0-12Vdc
ON = 12-24Vdc

3. FIRST SETUP VIA DISPLAY

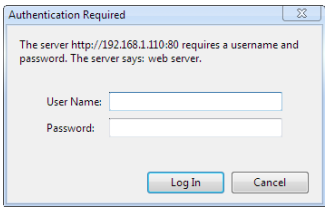
On first use of the device:

1) Connect the M-Bus devices to SIN.EQRTU4 to terminals M1(2) and M2 (3) as indicated in the manufacturer's guide
2) Enter the default password 000000 to access the menu
3) Press OK at the menu "SEARCH" and follow the instructions given below.



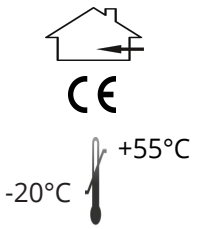
4. FIRST ACCESS TO THE WEBSERVER

1) Connect one of the two Ethernet ports to your PC or LAN
2) Make sure that you PC has an IP address of 192.168.1.xxx type where xxx is a number between 1 and 254 different from 110
3) Open an internet browser (Chrome, Firefox or Safari)
4) On the address bar digit **192.168.1.110**
5) At autenthication request enter the default password (User Name: **admin** Password: **admin**)
6) To use follow the instructions provided in the User Guide



5. TECHNICAL DATA

Temperature range:	Operative: -20°C ... +55°C Storage: -25°C ...+65°C
Protection Grade:	IP 20 (EN60529)
Mounting:	35 mm DIN Rail (EN60715)
Dimensions:	4 DIN modules (90x72x64,5)
Power supply:	24Vdc +/- 10% or 24 Vac (min 20 Vac, max 40 Vac)
Consumption:	5W
Relays max load:	5A@30Vdc (Resistive Load) 2A@30Vdc (Inductive Load cosfi=0.4:L/R=7ms)



TROUBLESHOOTING

1) The datalogger does not turn ON:
- Check with the aid of a multimeter that the voltage between the terminals (15) and (16) is 24Vdc +/- 10% or 24 Vac (min 20 Vac, max 40 Vac)
- In case of power supply from the LAN (Power Over Ethernet) verify that the LAN cable is connected to the PoE switch

2) The display is off:
- After 10 minutes of inactivity, the display turns off. To turn on again, press any key

3) Not all meters are detected:
- Verify that not detected meters support 2400bps default communicaton speed and addressing for primary and secondary address
- Verify that the maximum number of allowed wired meters hasn't been already configured

4) None of the meters is detected:
- Check the M-Bus interface connection to the meters
- Verify that the datalogger and the M-Bus interface (SIN.EQLC1) are connected
- Check for short circuit on M-Bus wiring

5) Unable to access the webserver:
- Verify that your PC has an address in the same network as the datalogger. The datalogger default IP address is 192.168.1.110, then the PC must have a 192.168.1.xxx address different from 192.168.1.110
- Verify that there is no firewall blocking the TCP/IP 80 port