



User Manual

STCU 2

Remote Reading Hub for M-Bus Meters





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1.0 INTRODUCTION

1.1 PRESENTATION

The STCU 2 is an M-Bus network hub designed to gather data from connected meters. Readings may be done locally using the “STCU READER” user program.

1.2 TECHNICAL SPECIFICATIONS

- Power supply:
 - STCU-015-01 230Vac 50/60Hz, 10 W (Max.).
 - STCU-032-01 230Vac 50/60Hz, 10 W (Max.).
 - STCU-060-01 230Vac 50/60Hz, 15 W (Max.).
- M-Bus line status indicator.
- USB port for local meter reading.
- Local reading by means of PC and “STCU Reader” software.
- M-Bus Master Port (2400 Baud) protected against overload and short-circuits.
- Device for 15, 32 or 60 meters.
- Operational temperature: 0 – 45 °C.
- Optional: Device with Data logger for reading and memorizing data.

1.3 FUNCTIONAL SPECIFICATIONS

- Meter and/or device reader with M-Bus interface.
- It has to be used locally with the “STCU Reader” software.

1.4 DIMENSIONAL CHARACTERISTICS

- Fastening: Fastening on DIN EN 607 rails.
- Color: Grey RAL 7035.
- Material: Self-extinguishing PPO.
- Dimensions: 8 DIN modules: 160mm x 90mm x 57mm

1.5 PRODUCT CODE

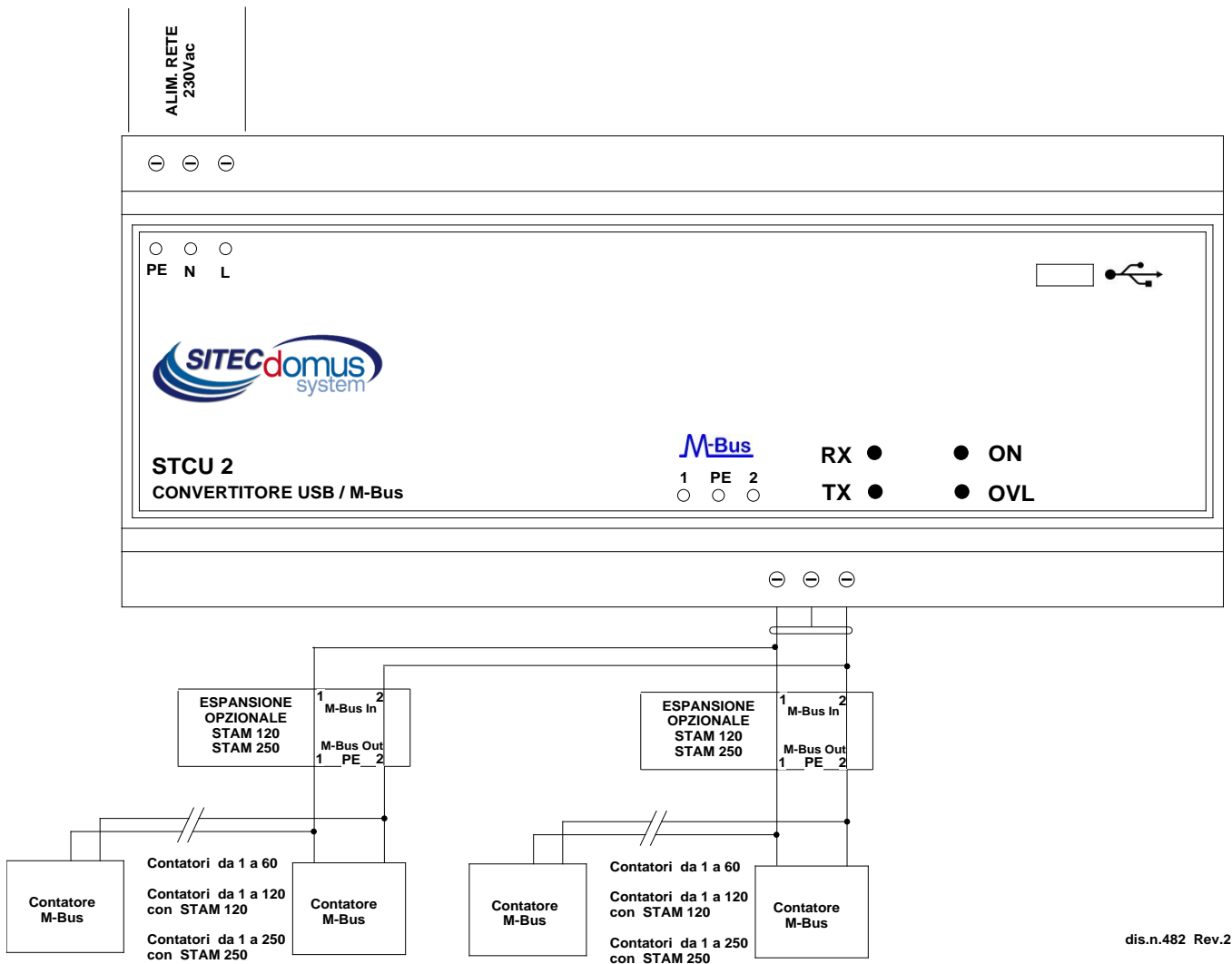
- STCU-015-01 Master M-Bus for 15 meters.
- STCU-032-01 Master M-Bus for 32 meters.
- STCU-060-01 Master M-Bus for 60 meters (expandable up to 500 with STAM amplifiers).

1.6 RELATED PRODUCTS

- ST-SWL-C01 Software for local reading of meters (STCU Reader).
- ST-AM-120-01 Amplifier module for extending network to an additional 120 devices.
- ST-AM-250-01 Amplifier module for extending network to an additional 250 devices.
- SG-PRG-USB Mini USB – PC cable (provided).

2.0 LAYOUT

2.1 CONNECTION DIAGRAMS



2.2 TERMINAL BOX DESCRIPTION

1. Device Power Supply:
 - PE Ground.
 - N 230 VAC 50 Hz Power Supply.
 - L 230 VAC 50 Hz Power Supply
2. RS232 Port (Optional)
 - RX RS232 Reception.
 - TX RS232 Transmission.
 - GND RS232 Ground.
3. Communication port for the M-Bus network:
 - 1 M-Bus.
 - PE M-Bus monitor cable.
 - 2 M-Bus.

2.3 FRONT PANEL LED DESCRIPTION

"OK" LED provides the following indications:

Status	Indication
● "OK" On	Device is on and working correctly.
○ "OK" Off	Device is off.

OVL (Overload) LED provides the following indications:

Status	Indication	Possible causes
● "OVL" On	Overload or Short-Circuit	M-Bus network with more than 60 devices. Problems in the network connection to the devices. There is a short-circuit on the M-BUS network.

"TX" and "RX" LED provide the following indications:

Status	Indication
● "TX" On	The device is transmitting data to the M-Bus network.
● "RX" Off	The device is receiving data to the M-Bus network.

3.0 INSTALLATION

3.1 INSTALLATION STEPS

- Place hub at least two meters from power devices (pumps, inverters, etc.).
- Fasten hub using the DIN rail support.
- Make the connections following the directions in the chapter: “Front Panel, Terminal Box and Connection Diagrams”.
- Verify the insulation of the M-Bus cable with respect to the ground or other voltages.
- Verify there are no short-circuits in the wiring.
- Switch on the device.
- Verify that the “OVL” LED is off. Otherwise, check the ground wires and other voltages, and ensure that the network is free of short-circuits;
- Create the list of devices (by using the “STCU Reader” software);

3.2 M-BUS WIRING

To connect the meters to the hub via the M-Bus network, we recommend using a cable of at least 2x0.8 mm wires or equivalent (JYStY N*2*0.8 mm).

M-Bus cable must not be placed in the same conduit as the power cables.

We recommend respecting a distance of at least 2m from the inverter and other power devices in order to avoid possible electrical interference.

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For further technical information, contact tech service via e-mail at:

info@telelettura.it



Sitec Srl
Elettronica Industriale
Via Antonio Tomba, 15
36078 Valdagno (VI) - ITALY
Tel. +39 0445 431576
Internet: www.telelettura.it

Fax: +39 0445 439588
E-mail: info@sitecsrl.it

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