User Manual

STAM

M-Bus Amplifier

SITECdomus system

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INTRODUCTION

The STAM is used for the M-Bus signal amplification, where the number of devices connected to the network is higher than the maximum supported by the master. It must be used with a STCM or STCU series device. Moreover, it can be used as repeater in M-Bus plants with very long wiring.
There are two models, for the amplification to additional 120 devices, or 250.

TECHNICAL SPECIFICATIONS

- Power supply:
  - STAM-120-01 $230V_{AC}$ 50/60Hz, 20 W (Max.).
  - STAM-250-01 $230V_{AC}$ 50/60Hz, 35 W (Max).
- M-Bus line status indicator led.
- M-Bus master port (2400 Baud), protected against overloads and short-circuits.
- Amplifier for 120 or 250 devices.
- Operating temperature: 0 – 45 °C.

FUNCTIONAL SPECIFICATIONS

- M-Bus signal amplification.
- M-Bus signal repeater.
- In an M-Bus plant can be used more STAM, in order to be capable of connecting a very high number of devices.

DIMENSIONAL CHARACTERISTICS

- Fastening: Fastening on DIN EN 607 rails.
- Color: Gray RAL 7035.
- Material: Self-extinguishing PPO.
- Dimensioni: 9 DIN modules.

PRODUCT CODE

- STAM-120-01 Amplifier module for extending network to an additional 120 devices.
- STAM-250-01 Amplifier module for extending network to an additional 250 devices.

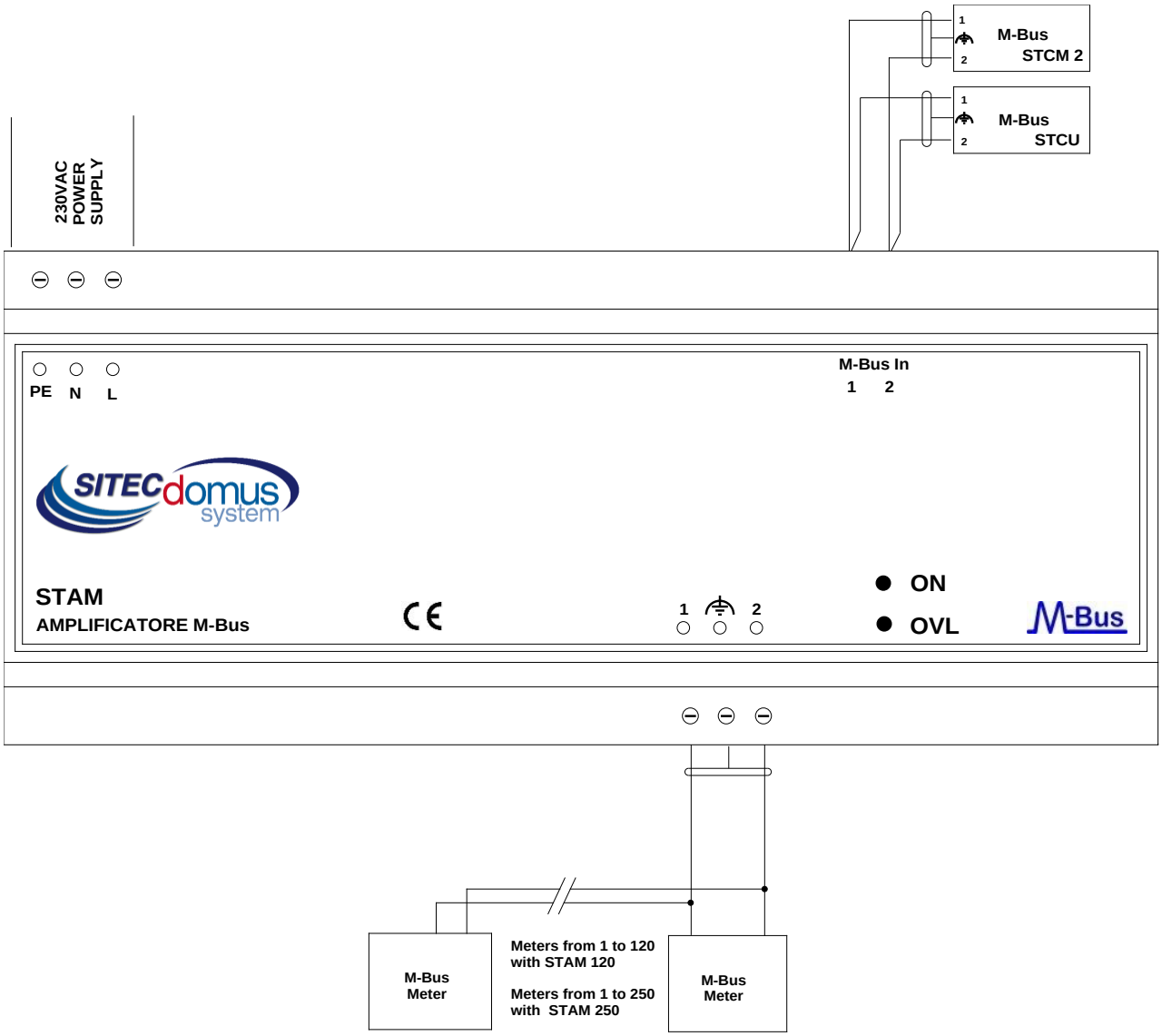
RELATED PRODUCTS

- STCM Series Master for M-Bus devices readings and data sending via E-Mail, using Ethernet or GPRS network (depending on model).
- STCU Series Master for M-Bus devices reading, with display and/or datalogger (depending on model)

CONFORMITY TO REGULATION STANDARDS

- Low Voltage Directive.
- EMC Directive.

FRONT PANEL, TERMINAL BOX AND CONNECTION DIAGRAMS



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- Device power supply:
  - PE Ground.
  - N $230V_{AC}$ 50Hz Power Supply.
  - L $230V_{AC}$ 50Hz Power Supply.
- M-Bus In: Connection between STAM and M-Bus master (STCM or STCU series device):
  - 1 M-Bus.
  - 2 M-Bus.
- M-Bus Out: Connection between STAM and M-Bus devices:
  - 1 M-Bus.
  - PE M-Bus shielded cable (do not connect to ground).
  - 2 M-Bus.

FRONT PANEL DESCRIPTION

The "OK" led provides the following indications:

Stato	Indicazione
"OK" On	The device is powered on.
"OK" Off	The device is powered off.

The “OVL” (overload) led provides the following indications:

Stato	Indicazione
"OVL" On	• There is short-circuit on “M-Bus Out” wiring. • On “M-Bus Out” line, are connected more devices minding the maximum supported.

INSTALLATION AND TESTING

- Place hub at least two meters from power devices (pumps, inverters etc.).
- Fasten hub using the DIN rail support.
- Make the connections according the directions in the chapter “Front panel, terminal box and connection diagrams”.
- Make sure that M-Bus wires are insulated from ground or any other voltage.
- Check there is no short circuit on wiring.
- Power on device.
- Check that “OVL” led is powered off. If not, verify again the M-Bus cable insulation to ground or any other voltage, and check there is no short circuit on wiring.

M-BUS WIRING

For the M-Bus wiring, refer to EN13757-2 (Annex E M-Bus Cable installation) and standards relating to the wiring of buildings.
To connect the meters to the master via the M-Bus network, we recommend using a twisted 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.
With the cable above the total length of the wired segment can be up to 2 km with 250 Unit Loads.
The shield must only be connected to the appropriate terminal of the concentrator base (see connection diagram),
but must be opened by the side of the terminal for direct current (DC) and low-frequency signals.

09030.008.00D.020.003 - STAM User Manual R3_ENG.docx
Publication Date: 25/03/2016

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