



User Manual

STCU DS1

**Reading master with display for
M-Bus devices**



SOMMARIO

SOMMARIO	3
INTRODUCTION	4
TECHNICAL SPECIFICATIONS	4
FUNCIONAL SPECIFICATIONS	4
DIMENSIONAL CHARACTERISTICS	4
PRODUCT CODE	4
RELATED PRODUCTS	5
CONFORMITY TO REGULATION STANDARDS	5
SUPPORTED DEVICES	5
FRONT PANEL, TERMINAL BOX AND CONNECTION DIAGRAMS	6
FRONT PANEL DESCRIPTION	6
TERMINAL BOX DESCRIPTION	6
INSTALLATION AND TESTING	7
M-BUS WIRING	7
USE	8
KEYPAD	8
SETTINGS MENÙ	8
DEVICE SEARCH MENÙ	8
BRIGHTNESS MENÙ	9

INTRODUCTION

The STCU DS1 LOG is an M-Bus network hub, designed to gather data from connected meters, and show them to the user via the display of which is provided.

Alternatively, logs may be made using the “STCU Reader” user program, provided separately.

Also, is available the model with data logger for saving the readings.

TECHNICAL SPECIFICATIONS

- Power supply:
 - STCU-060-DS1 230Vac 50/60Hz, 15 W (Max.).
 - STCU-120-DS1 230Vac 50/60Hz, 20 W (Max.).
 - STCU-250-DS1 230Vac 50/60Hz, 35 W (Max.).
- Operational temperature: 0 – 45 °C.
- M-Bus line status indicator led.
- USB port for local meter reading and configuration.
- Local reading by means of display or by means of PC and “STCU Reader” software.
- M-Bus Master Port (2400 Baud) protected against overload and short-circuits.
- Reporting of an overload in the M-Bus line.
- Different models for readings for up to 60,120 or 250 devices. (expandable up to 500, by means of STAM amplifiers).

FUNCTIONAL SPECIFICATIONS

- Meter and/or device reader with M-Bus interface.
- Display for the configuration and visualization of the reading values.
- The possibility of reading the device’s instantaneous values by means of display or by means of PC and the dedicated software (“STCU Reader”).

DIMENSIONAL CHARACTERISTICS

- Color: Grey RAL 7035.
- Material: PPO self-extinguishing.
- Dimensions: 150mm x 200mm x 78mm.
- Protection: IP 66.

PRODUCT CODE

- STCU-060-DS1 Master M-Bus with display for 60 meters (expandable up to 500 with STAM amplifiers).
- STCU-120-DS1 Master M-Bus with display for 120 meters (expandable up to 500 with STAM amplifiers).
- STCU-250-DS1 Master M-Bus with display for 250 meters (expandable up to 500 with STAM amplifiers).

RELATED PRODUCTS

- SG-PRG-USB Mini USB B – USB A cable (provided).
- 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.
- ST-SWL-C01 Software for local reading of meters (STCU Reader).

For a complete list of products or updates, please visit www.telelettura.it.

CONFORMITY TO REGULATION STANDARDS

- Low Voltage Directive.
- EMC Directive.

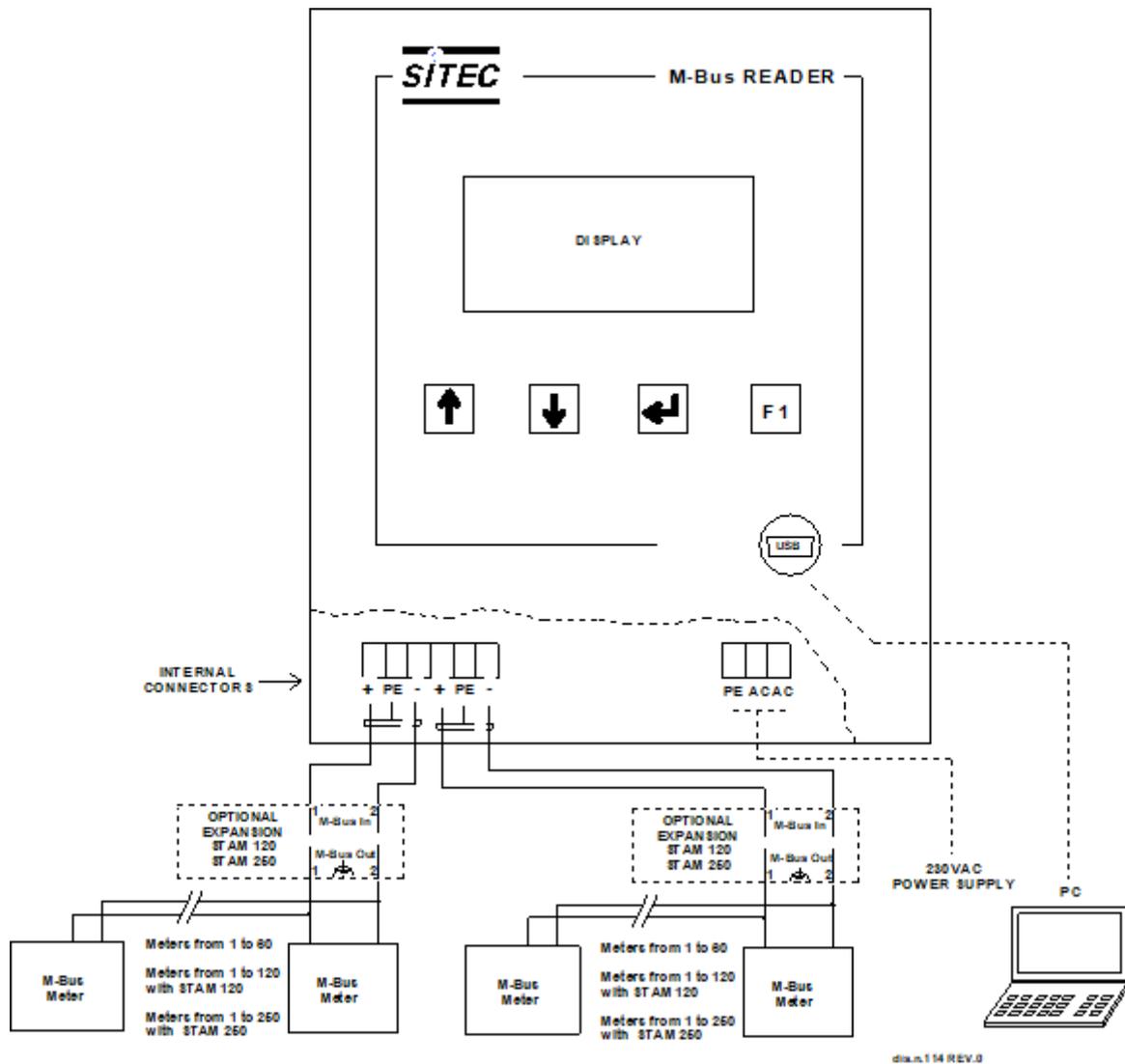
SUPPORTED DEVICES

Currently the following meters are supported:

Manufacturer	Model
Zenner	ZELSIUS
	MULTIDATA S1
	MULTIDATA WR3
	IZM 972
	MULTIPULSE
	ZELSIUS C5
EngelMann	SensoStar 2C US
	SensoStar 2
Actaris	Integral-V MaXX
AR Therm	Excelsius
Siemens	WFN 21 e WFH 21
	AEW 310.2
	UH 50
	WFN 532
Relay	Padpulse M2
Qundis	G20
IME	CE4DT1 (M-Bus)
Apator	ELF
Socomec	Countis E26

(Other devices, not included on the list, may have been added after the printing of this manual, or may be compatible even if not listed. Contact Sitec Srl to verify or add other devices).

FRONT PANEL, TERMINAL BOX AND CONNECTION DIAGRAMS



FRONT PANEL DESCRIPTION

- LCD Display.
- Keypad.
- USB Interface Connector.

TERMINAL BOX DESCRIPTION

- Device Power Supply
 - PE Ground.
 - AC 230VAC 50Hz Power Supply.
 - AC 230VAC 50Hz Power Supply.
- Communication port with the M-Bus network
 - + (M-Bus)
 - PE M-Bus shielded cable (do not connect to ground).
 - - (M-Bus)

INSTALLATION AND TESTING

- Place hub at least two meters from power devices (pumps, inverters, etc.).
- Fasten hub using the fastening supports inside the package.
- 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 and wait until the startup is completed.
- Verify that the "OVL" LED is off at the bottom right of the screen. Otherwise, check the ground wires and other voltages, and ensure that the network is free of short-circuits.
- Create the list of devices (see chapter: "Device Search Menu").

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.

USE

The STCU DS1 LOG can be commanded directly through the keypad found under the display.

KEYPAD

Key	Meaning	Description
	Enter	The "Enter" key is used to open the menu and start the selection processes.
	Up	The "Up" key is used for scrolling up in the menu, and for increasing the values inside specific menus.
	Down	The "Down" key is used for scrolling down in the menu and for decreasing the values inside specific menus.
	F1	The "F1" key is used for returning to the previous menu.

SETTINGS MENU

Within this menu you can implement all of the device settings and operations. To enter the menu, from the start menu simultaneously press the [Up] and [F1] buttons. Particularly you can access the following sub-menus:

- Device Search: Create the list of devices connected to the M-Bus network.
- Brightness: Set up display brightness.
- Contrast: Set up display contrast.

The currently selected parameter is indicated by the hyphen next to it, as is shown in the image. In this example, the selected parameter is "Device Search". To enter the desired menu, just press the [Enter] key. To scroll through the various parameters in the menu, just press the [Up] or [Down] keys. To return to the previous menu, press [F1].

```
SETTINGS
-Device search
Brightness
<-:Select
```

DEVICE SEARCH MENU

```
DEVICE SEARCH
X Found 10
Please wait...
```

To access this menu, from the settings menu, position the cursor on "Device Search" and press the [Enter] key. The search begins as soon as that button is pressed.

The number of meters revealed is continuously updated, as soon as new devices are found. Further, there is a variable character, designed to indicate

the search status to the user; if the character continues to vary this indicates that the search is being executed properly; otherwise there is a problem within the device.

You cannot interrupt the device search. The process must complete itself before you can take back control of the display.

```
DEVICE SEARCH
Search completed
Found: 27
F1:Exit
```

When the search is complete, a screen similar to this image will appear, indicating the number of devices found. To see the list you must access the "Current Readings Menu".

BRIGHTNESS MENU

To access this menu, from the "Settings" menu, select "Brightness" and press [Enter].

```
BRIGHTNESS
      UP: +  DOWN: -
      F1: Exit
```

The screen that appears will be like the one here to the left. As indicated by the screen, press the [Up] button to increase the value, and [Down] to decrease it.

Finally, press [F1] to save the set parameter and return to the previous menu.

Once the brightness is set up, it remains unchanged until a new set-up, even should the device gets turned off.

CONTRAST MENU

To access this menu, from the "Settings" menu select "Contrast" and press [Enter].

```
CONTRAST
      UP: +  DOWN: -
      F1: Exit
```

The screen that appears will be like the one here to the left. As indicated by the screen, press the [Up] button to increase the value, and [Down] to decrease it.

Press [F1] to save the set parameter and return to the previous menu. As with

the Brightness, once the contrast is set up, it remains unchanged until a new set-up, even should the device gets turned off.

09030.012.00D.014.004.A - User Manual STCU DS1 - R4.A [ENG].docx
Publication Date: 11/04/2018

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](http://www.telelettura.it)

Fax: +39 0445 [439588](tel:+390445439588)
E-mail: info@sitecsrl.it

Sitec Srl reserves the right to modify this document as necessary, without notice, in order to adapt it to future developments and/or new business needs; has prohibited the disclosure, although partial, if not expressly permitted.

Also Sitec Srl assumes no liability arising from the use of this document.