INSTALLATION MANUAL

Z-MBus

Converter module
From RS232 / USB to M-Bus (Meter-Bus)

EN



CE

SENECA

CERTIFICATE N. 9115.SENE - REGISTRATION NUMBER IT-827
CSQ IQNet CERTIFIED MANAGEMENT SYSTEM
azienda con sistema di gestione per la qualità certificato
ISO 9001:2008

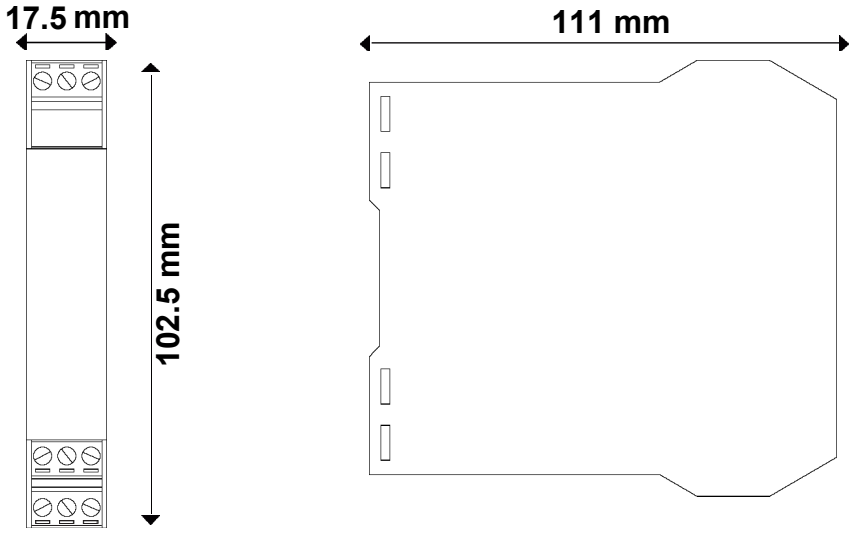
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For manuals in other languages and the configuration software, visit www.seneca.it/products/z-mbus

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MODULE LAYOUT

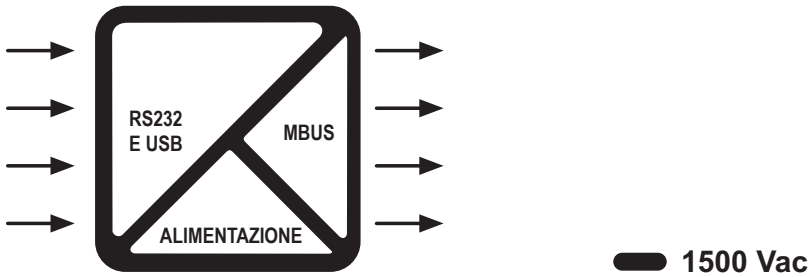


Weigh	120 g.	**Case**	Materiale PA6, colore nero

LED SIGNALS ON THE FRONT PANEL

LED	Status	LED meaning
PWR	ON ❑	Device ON
	OFF ■	Device OFF
TX	Flashing ❑■	Transmission of data packet
RX	ON ❑	Anomaly on the M-Bus (Meter-Bus)
	Flashing ❑■	Reception of data packet

TECHNICAL SPECIFICATIONS

STANDARDS	**EN61000-6-4** electromagnetic emissions, industrial environment **EN61000-6-2**. Electromagnetic immunity, industrial environment **EN61010-1** Safety
INSULATION	
ENVIRONMENTAL CONDITIONS	*Temperature:* -20—+70°C *Humidity:* 30%–90% non-condensing *Storage temperature:* -20—+85°C *Protection rating:* IP20
ASSEMBLY	On omega guide DIN IEC EN 60715
CONNECTIONS	Removable 3-way screw terminals, 5 mm pitch for cable up to 2.5 mm^2, micro USB connector on the front and IDC10 back connector.
POWER SUPPLY	*Voltage:* *11— 40 Vdc; 19 — 28 Vac 50 — 60 Hz* *Absorption:* *2.4 W*

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TECHNICAL SPECIFICATIONS

M-Bus (Meter-Bus) PORT	on M10-M12 terminals *Number of slaves:* 25 Max. Speed : 300 – 38k4 Baud *Voltage:* 28 Vdc Maximum length: 3000 m
RS232 PORT	on M7-M8-M9 terminals
USB PORT	micro USB on the front panel

PRELIMINARY WARNINGS

WARNING: The full content of this manual must be read before operation. The module must only be used by qualified electricians. Specific documentation is available at www.seneca.it\produtcs\z-mbus

The word WARNING preceded by the symbol ⚠ indicates conditions or actions that put the user's safety at risk.

The word **ATTENTION** preceded by the symbol ⚠ indicates conditions or actions that might damage the instrument or the connected equipment.

The warranty shall become null and void in the event of improper use or tampering with the device or accessories supplied by the manufacturer as necessary for its correct operation, and if the instructions contained in this manual are not followed.

The module must be repaired and damaged parts replaced by the Manufacturer. The product is sensitive to electrostatic discharges. Take appropriate measures during any operation.

ATTENTION: Installing the module next to devices that generate heat is prohibited.

Electrical and electronic waste disposal (applicable in the European Union and other countries with recycling). The symbol on the product or its packaging shows that the product must be disposed of at a collection centre authorised to recycle **electrical and electronic waste.**

ASSEMBLY STANDARDS

The module has been designed for vertical installation on an IEC EN 60715 omega guide. For optimal operation and long life, adequate ventilation must be provided. Avoid positioning channels or other objects that obstruct the ventilation slots. Avoid mounting modules over equipment generating heat. Installation in the bottom part of the switchboard is recommended.

USE OF THE Z-PC-DINAL ACCESSORY

ATTENTION: Do not turn the module upside down and **do not force the insertion** of the IDC10 connector into the slot. The module's rear IDC10 connector must be plugged into a free slot on the Z-PC-DIN bus. The figure shows the IDC10 connector pins the supply the module.

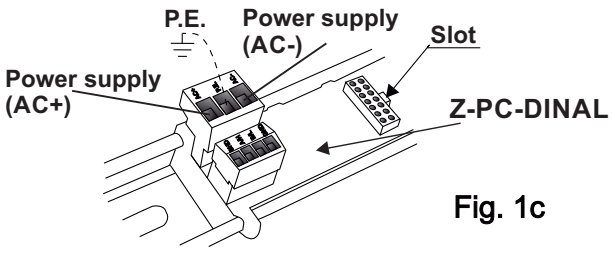


Fig. 1c

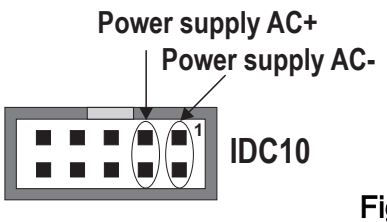


Fig. 1d

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INSTALLATION ON AND REMOVAL FROM THE IEC EN 60715 RAIL

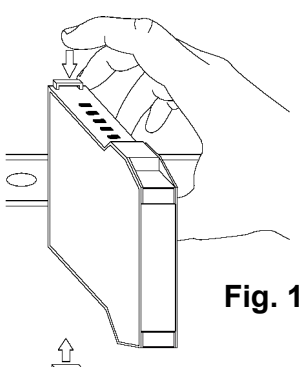
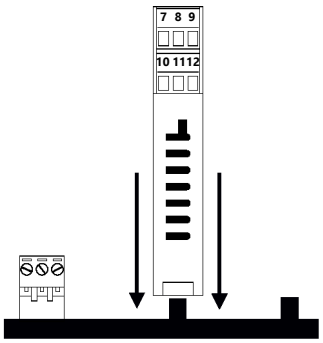


Fig. 1



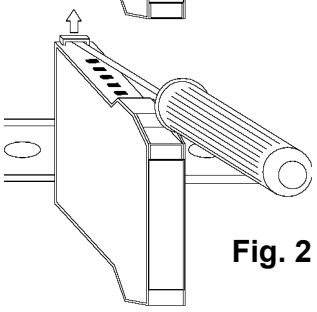
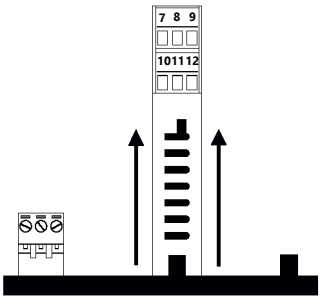


Fig. 2



Insertion in the IEC EN 60715 rail:
1) Move the two hooks on the back of the module outwards as illustrated in **Fig.2**.
2) Insert the rear IDC10 connector of the module on a free slot of the IEC EN 60715 rail accessory as shown in **Fig.1** . (insertion is univocal as connectors are polarised).
3) To secure the module to the OMEGA rail, tighten the four hooks on the side of the IDC10 rear connector as shown in **Fig.1.**

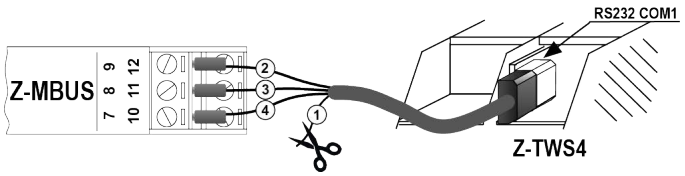
Removal from the IEC EN 60715 guide: As illustrated in **Fig.2**:
1) With the help of a screwdriver, pull the two hooks on the side of the module outwards.
2) Extract the module from the rail.

ELECTRICAL CONNECTIONS

Attention: The upper power supply limits must not be exceeded, as this could cause serious damage to the module. Turn off the module before connecting or disconnecting the input and output ports.

POWER SUPPLY	RS232	M-Bus
19 – 28 Vac 50 – 60 Hz Supply 11 – 40 Vdc 2.4 W Power supply 1 2 3	GND 7 Tx 8 Rx 9	+M-Bus 10 11 -M-Bus 12

Z-TWS4



Through the CS-TIP-MEF-PH cable, available as an accessory, it is possible to connect the Z-M-Bus converter to the multi-function Z-TWS4 WEB controller. The connection cable can be purchased from www.seneca.it/products/z-mbus using code CS-TIP-MEF-PH.

CONNECTION STANDARDS

Type of installation	Maximum speed	Connection maximum distance	Connection total length	Type of cable
Small in house	38400	< 350 m	< 1000 m	0.5 mm^2, R < 30 Ω
Large in house	9600	< 350 m	< 3000 m	0.5 mm^2, R < 30 Ω
Small wide area	2400	< 1000 m	< 3000 m	1.5 mm^2, R < 90 Ω

The M-Bus is a non-polarized bus. For the connection it is possible to use a two-wire shielded telephone cable or an unshielded duplex cable following the indications in the table.
If a shielded cable is used this must be **connected to earth only from the Z-Mbus converter side**.

CONTACT INFORMATION

Technical	support@seneca.it	Product information	sales@seneca.it

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