SENECA Z-KEY Gateway ModBUS Instruction Manual

Contents

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PRELIMINARY WARNINGS

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 module or devices supplied by the manufacturer as necessary for its correct operation, and if the instructions contained in this manual are not followed.

	**WARNING**: The full content of this manual must be read before any operation. The module must only be used by qualified electricians. Specific documentation is available via QR-CODE shown on page 1.
	The module must be repaired and damaged parts replaced by the Manufacturer. The product is s ensitive to electrostatic discharges. Take appropriate measures during any operation.
	Electrical and electronic waste disposal (applicable in the European Union and other countries wi th recycling). The symbol on the product or its packaging shows the product must be surrendered to a collection centre authorized to recycle electrical and electronic waste.

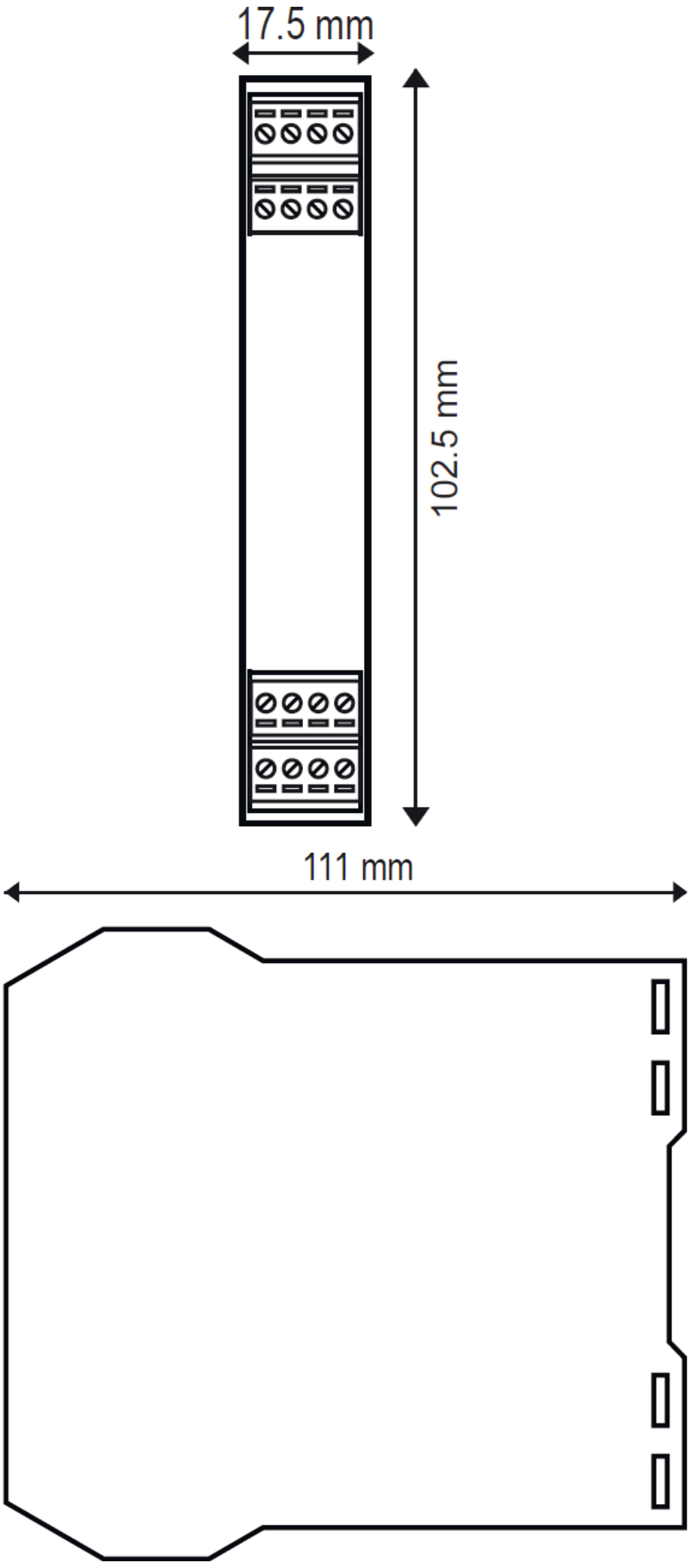
- DOCUMENTATION Z-KEY

- DOCUMENTATION Z-KEY-P

CONTACT INFORMATION

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

MODULE LAYOUT

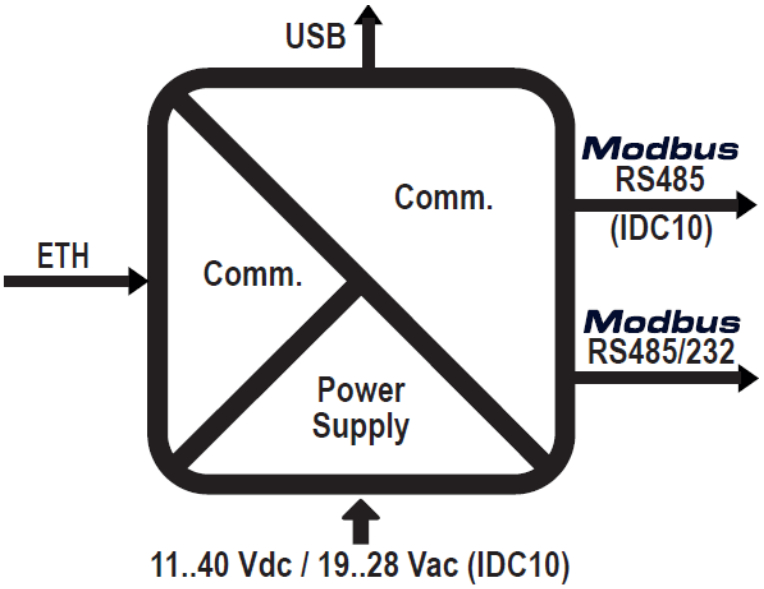

17.5 mm
102.5 mm
111 mm

Dimensions: 17.5 x 102.5 x 111 mm, Weight: 100 g; Enclosure: PA6, black

SIGNALS VIA LED ON FRONT PANEL

LED	STATUS	LED meaning
PWR	ON	The device is powered correctly
SD / COM Z-KEY version only	Flashing	Accessing the microSD card
SD / COM Z-KEY-P version only	Flashing	Profinet communication active
	Off	No Profinet communication
TX1	Flashing	Data transmission on port #1 RS485
RX1	Flashing	Data receipt on port #1 RS485
TX2	Flashing	Data transmission on port #2 RS485/RS232
RX2	Flashing	Data reception on port #2 RS485/RS232
ETH ACT Green	Flashing	Packet transmission on Ethernet port
ETH LNK Yellow	ON	Ethernet connection present

TECHNICAL SPECIFICATIONS

STANDARDS	**EN61000-6-4** Electromagnetic emissions, industrial environment. **EN61000-6-2** Electromagnetic immunity, industrial environment. **EN60950-1** Security in information processing equipment **Additional notes:** a 1 A delayed fuse must be installed near the module, in series with the power supply connection.
INSULATION	
ENVIRONMENTAL CONDITIONS	*Temperature*: -25 °C – + 65 °C *Humidity*: 30%– 90% non condensing. *Altitude:* Up to 2000 m above sea level *Storage temperature:* -30 °C – + 85 °C *Protection rating:* IP20 (Not evaluated by UL)
ASSEMBLY	IEC EN60715, 35mm DIN rail in vertical position.
CONNECTIONS	3-way removable screw terminals, pitch 5 mm Rear connector IDC10 for DIN bar 46277 RJ45 front connector SMA antenna connector side micro USB port microSD card slot
POWER SUPPLY	Voltage: 11 – 40 Vdc; 19 – 28 Vac 50 – 60 Hz Absorption: Max. 1,5W
COMMUNICATION PORTS	RS242 or RS485 switchable on terminal 10 – 11 – 12 Maximum Baud rate 115 k, maximum cable length RS232 < 3m
	RS485 IDC10 rear connector: Maximum Baud rate 115 k.
	RJ45 front Ethernet connector: 100 Mbit/s, maximum distance 100 m

ATTENTION

The device may only be powered by a power supply unit with a limited energy electric circuit max. 40Vdc / 28Vac

Max output in accordance with CAN/CSA-C22.2 No. 61010-1-12 / UL Std. No. 61010-1 (3rd Edition) chapter 6.3.1/6.3.2 and 9.4 or class 2 according to CSA 223/UL 1310.

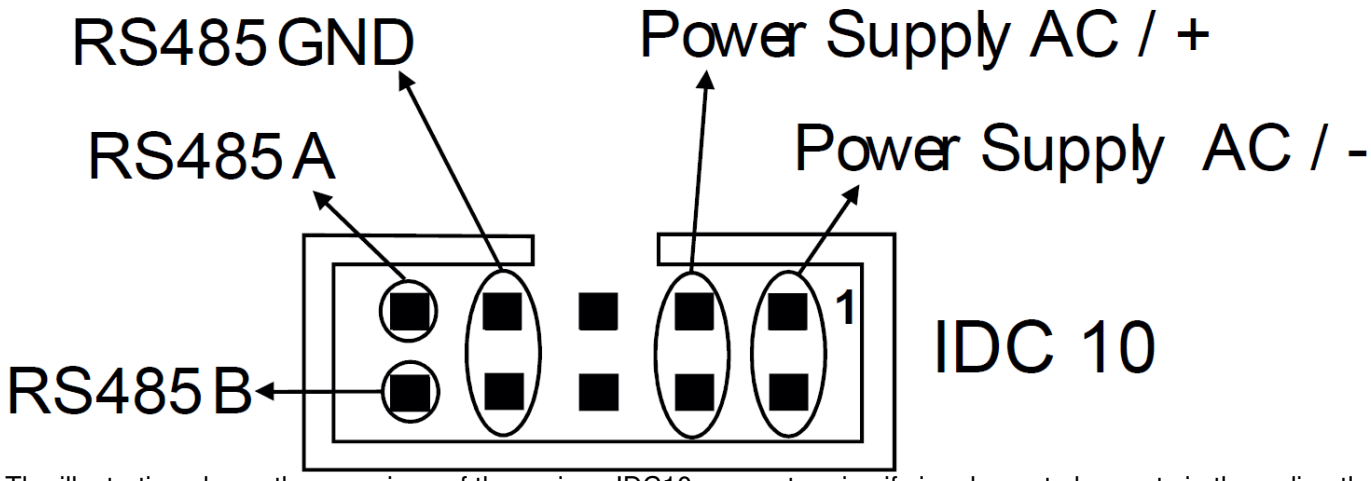
FACTORY IP ADDRESS

The default module IP address is static: 192.168.90.101

WEB SERVER

To access the maintenance Web Server with 192.168.90.101 factory IP address: Default user: admin, Default password: admin, http://192.168.90.101

IDC10 CONNECTOR



The illustration shows the meanings of the various IDC10 connector pins if signals are to be sent via them directly.

SETTING THE DIP-SWITCHES

SETTINGS OF FACTORY PARAMETERS

This procedure returns the IP to the factory one (192.168.90.101) and the Web Server/FTP server access credentials to user: admin and password: admin.

KEY		
1	ON	
0	OFF	

1. Turn the module off and set all eight SW1 DIP-switches to ON.
2. Turn on the module and wait 10 seconds.
3. Turn the module off and set all eight SW1 DIP-switches to OFF.

RS232/RS485 SETTING: RS232 or RS485 configuration on terminals 10-11-12 (serial port 2)

SW2			
1	ON		**RS232 ACTIVATION**
0	OFF		**RS485 ACTIVATION**

INSTALLATION REGULATIONS

The module has been designed for vertical installation on a DIN 46277 rail. For optimal operation and long life, adequate ventilation must be provided. Avoid positioning ducting or other objects that obstruct the ventilation slots. Avoid mounting modules over heat-generating equipment. Installation in the bottom part of the electrical panel is recommended.

ATTENTION

These are open-type devices and intended for installation in an end enclosure / panel offering mechanical protection and protection against spread of fire.

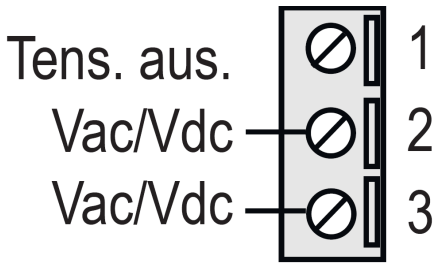
ELECTRICAL CONNECTIONS

CAUTION

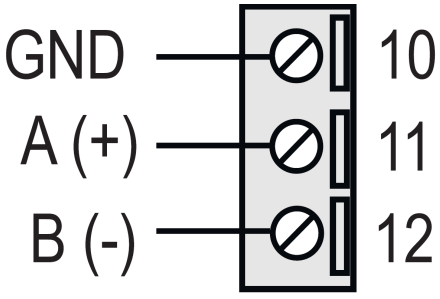
To meet the electromagnetic immunity requirements:

- use shielded signal cables;
- connect the shield to a preferential instrumentation earth system;
- separate shielded cables from other cables used for power installations (transformers, inverters, motors, etc…).

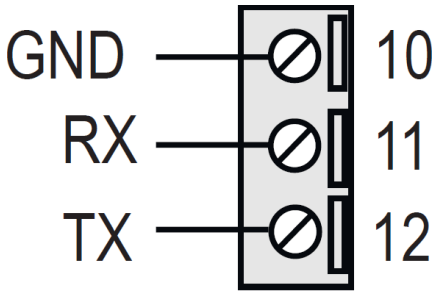
POWER SUPPLY



SERIAL PORT 2: RS485 SW2 = OFF



SERIAL PORT 2: RS232 SW2 = ON



ATTENTION

Use only copper or copper-clad aluminium or AL-CU or CU-AL conductors

Documents / Resources

	SENECA Z-KEY Gateway ModBUS [pdf] Instruction Manual Z-KEY, Gateway ModBUS, Z-KEY Gateway ModBUS, ModBUS