SENECA Z-KEY-2ETH-P ModBUS or Ethernet Gateway Instruction Manual

Contents

SENECA Z-KEY-2ETH-P ModBUS or Ethernet Gateway

Product Information

The Z-KEY-2ETH and Z-KEY-2ETH-P are modules designed for industrial use. They are sensitive to electrostatic discharges and must be used by qualified electricians only. The manufacturer provides specific documentation through a QR code, which is available on page 1 of the manual. The module must be repaired and damaged parts replaced only by the manufacturer. Improper use or tampering with the module or devices supplied by the manufacturer as necessary for its correct operation will void the warranty. The module must be surrendered to a collection center authorized to recycle electrical and electronic waste for disposal.

Module Layout

The module dimensions are 17.5 x 102.5 x 111 mm, and it weighs 100 g. It is enclosed in PA6, black, and has signals via LED on the front panel. The LED signals indicate Ethernet connection status, data reception and transmission on port #1 and port #2 (RS485/RS232), Profinet communication status, and device power status.

Product Installation Regulations

The module is designed for vertical installation on a DIN 46277 rail. To ensure optimal operation and long life, adequate ventilation must be provided. Avoid positioning ducting or other objects that obstruct the ventilation slots, and do not mount the module over heat-generating equipment. It is recommended to install the module in the bottom part of the electrical panel. These devices are open type and intended for installation in an enclosure/end panel that offers mechanical protection and protection against the spread of fire.

Product Factory IP Address

- **The default module IP address is static:** 192.168.90.101.

Profinet and Webserver Mode

The device is normally in Profinet mode, which allows configuration only through the Easy Setup2 software. To access the internal webserver, the device must be put in Webserver mode using the Easy Setup2 or Seneca Device Discovery software. The operating mode can also be changed by pressing the side button PS1 following the procedure given in the user manual.

Product Usage Instructions

1. Read the entire manual before operation.
2. Use the module only if you are a qualified electrician.
3. For specific documentation, scan the QR code on page 1 of the manual.
4. Do not repair or replace damaged parts yourself. Contact the manufacturer for repairs.
5. Ensure proper disposal of the module at a collection center authorized to recycle electrical and electronic waste.
6. Install the module vertically on a DIN 46277 rail, providing adequate ventilation and avoiding obstructions to the ventilation slots. Do not mount over heat-generating equipment.
7. Install the module in an enclosure/end panel that offers mechanical protection and protection against the spread of fire.
8. The default module IP address is static: 192.168.90.101.
9. To access the internal webserver, put the device in Webserver mode using the Easy Setup2 or Seneca Device Discovery software. The operating mode can also be changed by pressing the side button PS1 following the procedure given in the user manual.

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.


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.


Electrical and electronic waste disposal (applicable in the European Union and other countries with 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.

Scan

DOCUMENTATION
Z-KEY-2ETH

DOCUMENTATION
Z-KEY-2ETH-P

CONTACT INFORMATION

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

SENECA s.r.l.;

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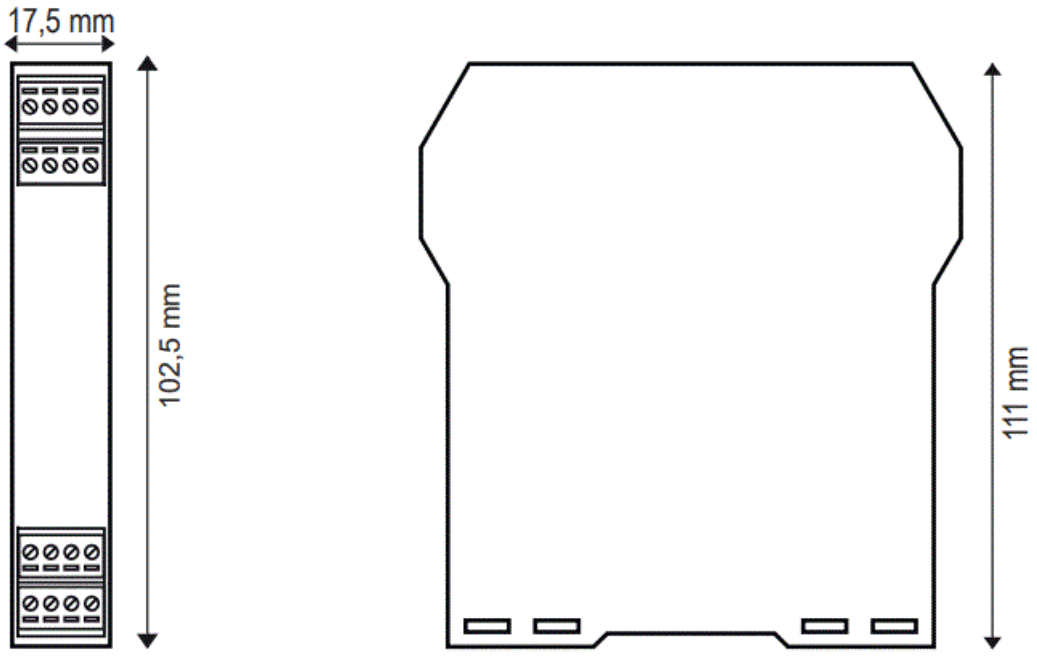
MODULE LAYOUT



- **Dimensions:** 17.5 x 102.5 x 111 mm,
- **Weight:** 100 g;

- **Enclosure:** PA6, black

SIGNALS ON FRONT PANEL

SIGNALS VIA LED ON FRONT PANEL

LED	STATUS	LED meaning
ET2	ON	Ethernet connection present
ET1	ON	Ethernet connection present
RX2	Flashing	Data reception on port #2 RS485/RS232
TX2	Flashing	Data transmission on port #2 RS485/RS232
RX1	Flashing	Data reception on port #1 RS485
TX1	Flashing	Data transmission on port #1 RS485
COM -P version only	Flashing	Profinet communication active
	Off	No Profinet communication
PWR	ON	The device is powered correctly

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 devices are open type and intended for installation in an enclosure/end panel that offers mechanical protection and protection against the spread of fire.

FACTORY IP ADDRESS

- ***The default module IP address is static:*** 192.168.90.101

PROFINET AND WEBSERVER MODE

The device is normally in Profinet mode; in Profinet mode the device can be configured only through the Easy Setup2 software. In order to access the internal webserver it is necessary to put the device in Webserver mode using the Easy Setup2 or Seneca Device Discovery software. it is also possible to change the operating mode by pressing the side button PS1 following the procedure given in the user manual.

WEB SERVER

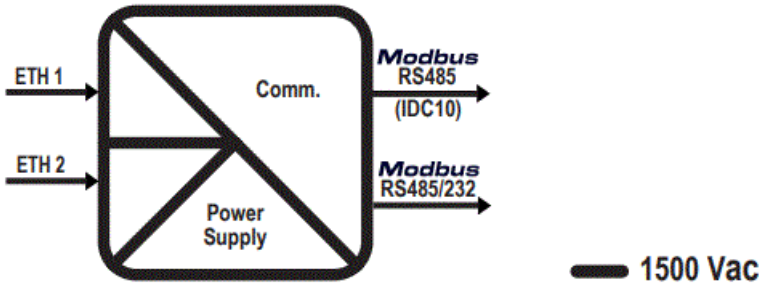
To access the maintenance Web Server with the factory IP address above, use the following credentials:

- **Username:** admin;
- **Password:** admin

N.B: For the Z-KEY-2ETH-P version it is first necessary to activate webserver mode.

CAUTION: DO NOT USE DEVICES WITH THE SAME IP ADDRESS IN THE SAME ETHERNET NETWORK.

TECHNICAL SPECIFICATIONS

CERTIFICATIONS	
INSULATION	
POWER SUPPLY	Voltage: 11 ÷ 40Vdc; 19 ÷ 28Vac; 50 ÷ 60Hz Absorption: Max. 2W
ENVIRONMENTAL CONDITIONS	Temperature: -25°C÷ + 65°C; Humidity: 30% ÷ 90% non-condensing; Storage temperature: -30°C÷ + 85°C; Degree of protection: IP20
ASSEMBLY	IEC EN60715, 35mm DIN rail in vertical position.
CONNECTIONS	3-way removable screw terminals, pitch 5 mm
COMMUNICATION PORTS	RS232 or RS485 switchable on terminal Maximum Baud rate 115K, Maximum cable length RS232 < 3 m.
	RS485 IDC10 rear connector: Maximum Baud rate 115k.
	2 Ethernet with front RJ45 connector: 100Mbit/s, maximum distance 100m

SETTING THE DIP-SWITCHES

WARNING

- The DIP-switch settings are read only at boot time. At each change, perform a restart.

SW1 DIP-SWITCH

Through DIP-SWITCH-SW1 it is possible to set the IP configuration of the device:

DESCRIPTION	DIP 1	DIP 2	DIP 3	DIP 4
To obtain the configuration from the Flash memory, both SW1 DIP switch selectors must be set to OFF			**RESERVED**	**RESERVED**
To reset the device to factory settings both SW1 DIP switches must be set to ON			**RESERVED**	**RESERVED**
To force the device's IP address to the standard value of SENECA Ethernet products: 192.168.90.101			**RESERVED**	**RESERVED**
Reserved			**RESERVED**	**RESERVED**

KEY			
ON			
OFF			

CAUTION

- Where present, DIP3 and DIP4 must be set to OFF.
- If set differently, the instrument will not work correctly.

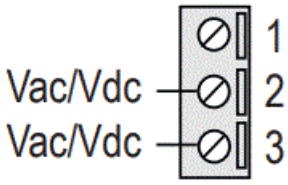
RS232/RS485 SETTING

- RS232 or RS485 setting on terminals 10 -11 -12 (serial port 2)

SW2				
ON				**RS232 ACTIVATION**
OFF				**RS485 ACTIVATION**

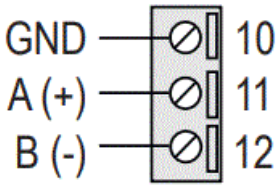
ELECTRICAL CONNECTIONS

Power supply



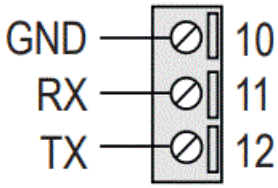
- Terminals 2 and 3 can be used to provide the module with power supply as an alternative to the connection using the Z-PC-DINx bus.
- Power voltage must be between 11 and 40Vdc (any polarity) or between 19 and 28Vac.
- The upper limits must not be exceeded in order to avoid serious damage to the module.
- If the power supply source is not protected against overload, a safety fuse with a 1A max permissible value must be installed in the power supply line.

Serial port 2: RS485 SW2 = OFF



- The module has a serial port that can be configured with the SW2 switch.
- If switch SW2 is in the OFF position, the RS485 COM 2 port is available at terminals 10-11- 12. The illustration shows how to complete connections.
- **N.B.:** the indication of the RS485 connection polarity is not standardized and in some devices may be inverted.

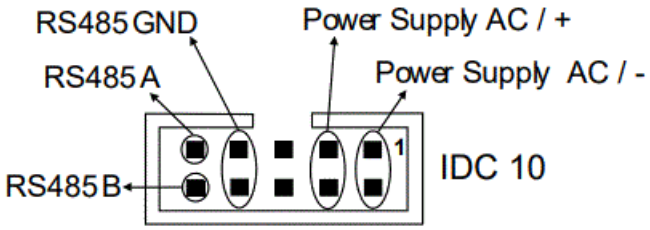
Serial port 2: RS232 SW2 = ON



- The module has a serial port that can be configured with the SW2 switch.
- If switch SW2 is in the ON position, the RS232 COM 2 port is available at terminals 10-11-12.
- The illustration shows how to complete connections.
- The RS232 interface is fully settable.

Power supply and Modbus interface are available using the Seneca DIN rail bus, via the IDC10 rear connector, or the Z-PC-DINAL2-17.5 accessory.

Back connector (IDC 10)



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

Documents / Resources

	SENECA Z-KEY-2ETH-P ModBUS or Ethernet Gateway [pdf] Instruction Manual Z-KEY-2ETH, Z-KEY-2ETH-P, Z-KEY-2ETH-P ModBUS or Ethernet Gateway, ModBUS or Ethernet Gateway, Ethernet Gateway, Gateway