INSTALLATION MANUAL

R-GWR

Modbus TCP/RTU radio Hub

EN



SENECA

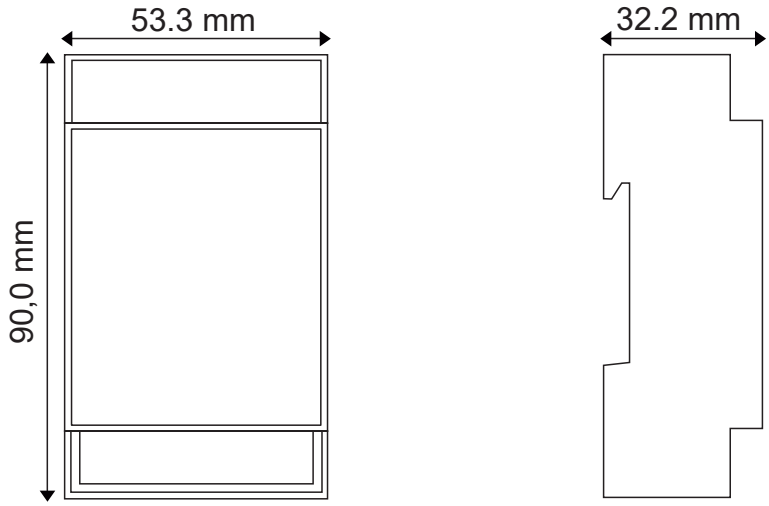
ISO 9001:2015

SENECA s.r.l.
Via Austria, 26 – 35127 – PADOVA – ITALY
Tel. +39.049.8705355 - 8705359 - Fax +39.049.8706287

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

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MODULE LAYOUT



Dimensions (LxHxD)	53.3 x 90 x 32.2	Weight	80 g	Case	Self-extinguishing UL94-V0 PC / ABS material

SIGNALS VIA LED ON FRONT PANEL

LED	STATUS	LED meaning
PWR (Green)	ON	The device is powered with assigned IP
PWR (Green)	Flashing	IP not assigned
Tx (Red)	Flashing	Data transmission on port RS232 / RS485
Rx (Red)	Flashing	Data reception on port RS232 / RS485
Radio Rx	Flashing	Sensor data packet reception
STS	ON	At least one sensor coupled and functional
STS	Flashing	Gateway waiting for pairing of a sensor
STS	Off	No associated sensors
FAIL	ON	At least one sensor is in error or has a dead battery

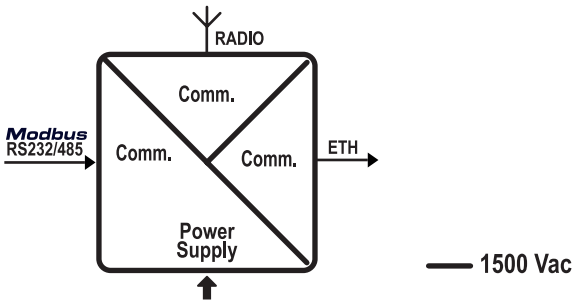
PRELIMINARY WARNINGS

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 at www.seneca.it/products/r-gwr
	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.

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TECHNICAL SPECIFICATIONS

STANDARDS	**ETSI EN 301 489-1 v.2.2.3** **ETSI EN 301 409-3 v.2.1.1** **EN 60950**
POWER SUPPLY Voltage Absorption	 10 – 40 Vdc, 19 - 28 Vac, 50 - 60 Hz 1 W Max.
INSULATION	
CONNECTIONS	Screw terminals, 7-way removable screw terminals, 5 mm pitch (*) Screw terminals, 2-way removable screw terminals, 5 mm pitch (*) Ethernet connector (*) with 2.5mm² max cable section
CPU	ARM 32 bit
OPERATING SYSTEM	Real time multitasking
ENVIRONMENTAL CONDITIONS Operating temperature Humidity Storage temperature Protection rating	 from -20°C to +70°C 10%– 90% non condensing. from -40°C to +85°C IP20
COMMUNICATION PORTS	RS232/RS485: switchable on removable terminal (1-7); Maximum Baud rate 115 kbps; Ethernet (RJ45): 100 Mbps, max. distance 100 m
CONFIGURATION	Configuration and FW update via webserver DIP-switch
INSTALLATION	On DIN IEC EN 60715 rail or wall fixing

RECEIVER AND SENSOR SPECIFICATIONS

TECHNOLOGY	LoRa ®
FREQUENCY BAND	Frequency band: 865-865 MHz Rated frequency: 863.110 MHz, Bandwidth 25 KHz, Max power +14 DBm
SENSITIVITY	Up to -146 dBm
RF POWER	+ 14 dBm
SENSOR COUPLING	Maximum number of sensors that can be coupled: 32

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DEVICE CONFIGURATION

R-GWR can be fully set up via integrated web server. The product programming and/or configuration tools, as well as all the manuals, can be downloaded at the web address:
www.seneca.it/products/r-gwr.
For further information, refer to the USER manual that can be downloaded from the above site.

FIRST STARTUP AND IP CONFIGURATION

At the first startup the IP address is configured in static mode with address 192.168.90.101
By default the SW2 DIP-switch selectors are set to OFF.
In the case of configuration with an IP address retrieved from DHCP, and if a DHCP server is not present in your network, the device, after 5 minutes from startup, will initialize with the IP address: **169.254.x.y where the x and y values are the last two MAC address digits (see product side label)**.
N.B: through the software for the **SDD** (SENECA Discovery Device) Windows PC, downloadable for free from the www.seneca.it/products/sdd site, it is possible to easily identify the device on the network and view / change the IP address in a few steps (see USER manual for details).

WEB SERVER

To access the configuration web server, simply enter the product's IP address in your navigation browser and log in with the following credentials:
User: **admin** Password: **admin**.

SW1 DIP-SWITCH SETTINGS

Through DIP-SWITCH-SW1 it is possible to set the polarization of the bus relative to the RS485 port:

DESCRIPTION	DIP 1	DIP 2	
To polarize the bus on RS485, both SW1 DIP switch selectors must be set to ON			**ON**
NOT to polarize the bus on RS485, both SW1 DIP switch selectors must be set to OFF			**OFF**

KEY	
	**ON**
	**OFF**

SW2 DIP-SWITCH SETTINGS

Through DIP-SWITCH-SW2 it is possible to set the IP configuration of the device:

DESCRIPTION	DIP 1	DIP 2
To obtain the configuration from the Flash memory, both SW2 DIP switch selectors must be set to OFF		
To reset the device to factory settings both SW2 DIP switches must be set to ON		
To force the device's IP address to the standard value of SENECA ethernet products: 192.168.90.101		
Reserved		

⚠ WARNING

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

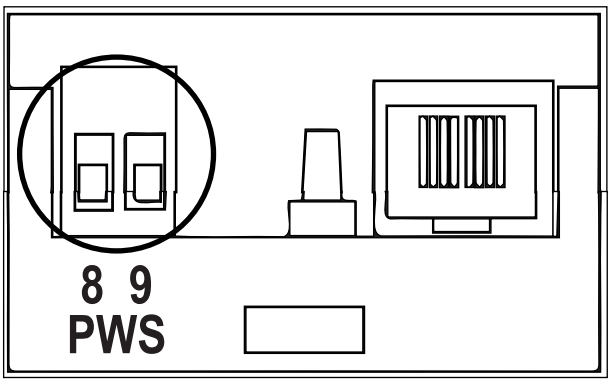
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ELECTRICAL CONNECTIONS

Power supply:

Electrical power connections are available from terminals 8 and 9. Power voltage must be between 10 and 40 Vdc or between 19 and 28 Vac (any polarity). **The upper limits must not be exceeded in order to avoid serious damage to the device.**

The power supply source must be protected from the malfunctions of the module through an appropriately-sized safety fuse.

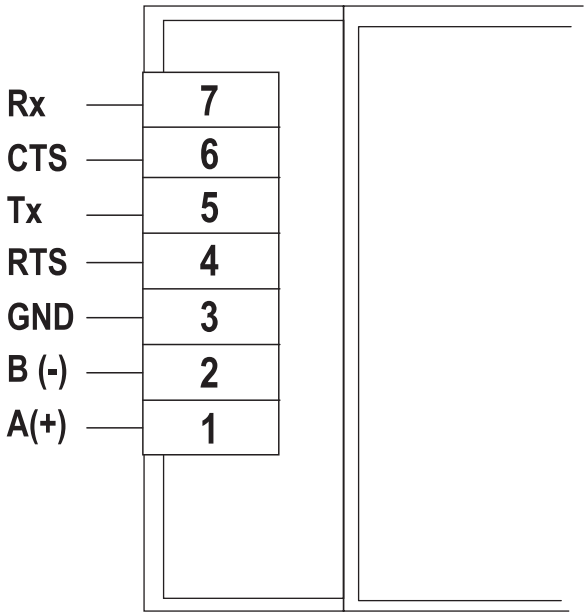


RS232/RS485 switchable serial port:

To use the **COM RS232** serial port, make the electrical connections via the **GND, RTS, Tx, CTS** and **Rx** terminals.

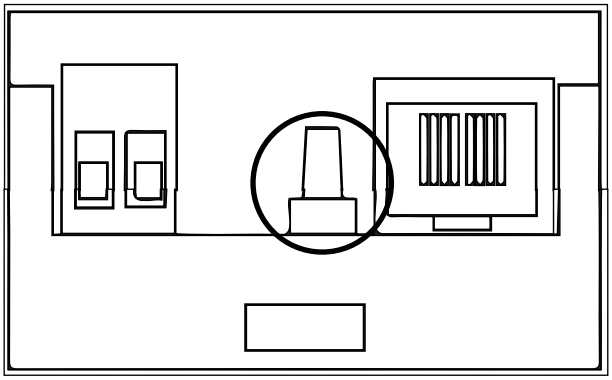
To use the **COM RS485** serial port, make the electrical connections via terminals **A (+), B (-)** and **GND**.
N.B: the indication of the RS485 connection polarity (terminals A+ and B-) is not standardised and in some devices may be inverted.

The figure alongside shows the key of the terminals.
N.B.: see the **SETTINGS** paragraph on page 4 in case of communication problems.



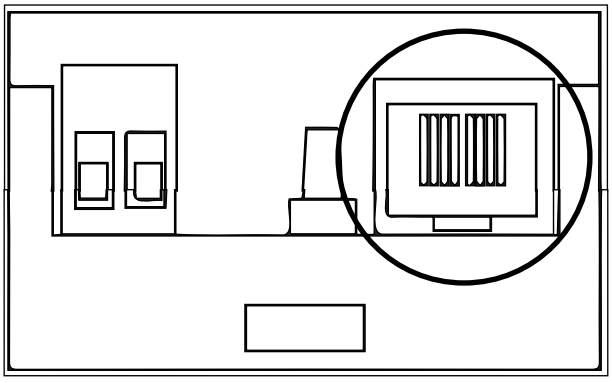
Restart button:

The button is located between the SW2 DIP-switch and the Ethernet port. To reboot the device, **keep the key pressed for 5 seconds.** Release it when all the LEDs light up.



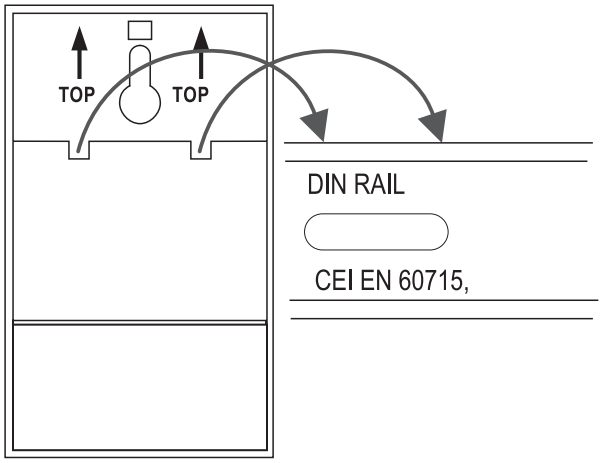
RJ45 Ethernet port:

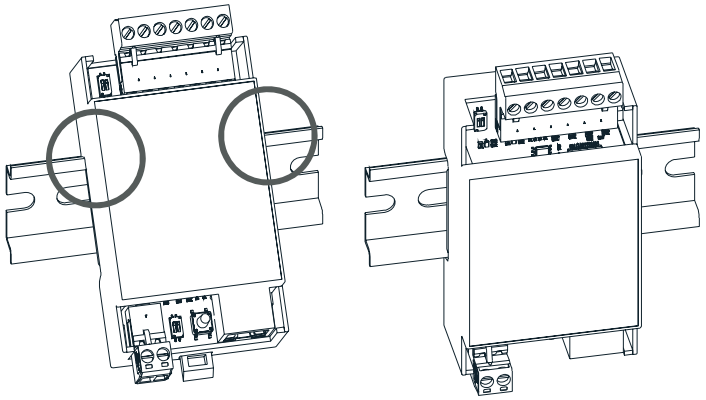
The R-GWR has an Ethernet 100 port with RJ45 connector in the lower part of the module.



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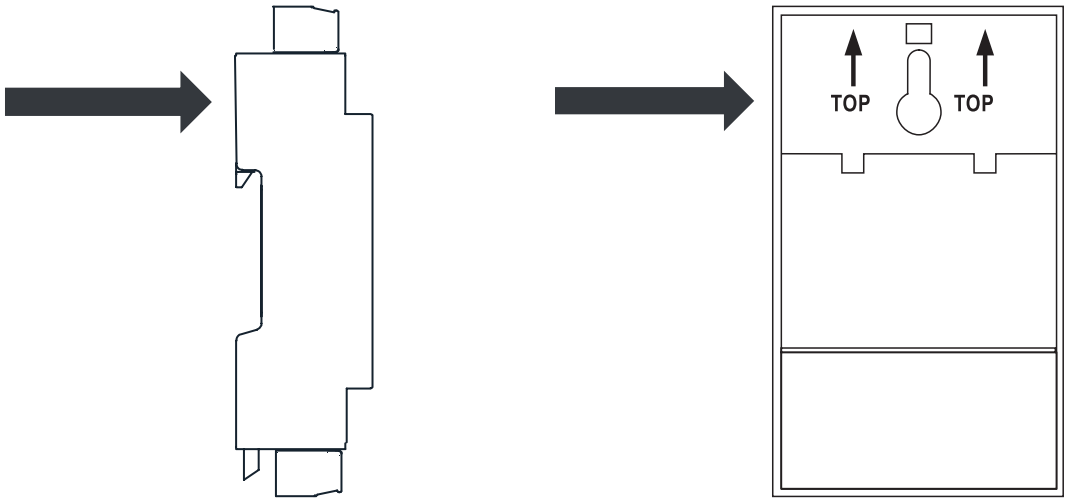
INSTALLATION ON DIN-IEC EN 60715 RAIL





Installation: Position the device on the OMEGA rail resting the upper teeth from top to bottom.
Push the lower part towards the rail until the locking system engages.
Removal: Turn off the module, with the help of a slotted screwdriver unlock the locking system.

WALL MOUNTING



Installation: The device is provided with a hole for wall-mounting. Install the device after having prepared the dowel and relative screw on the wall.
Removal: Turn off the module, exert a slight upward pressure and move the product away from the wall.

⚠ WARNING

The device must be installed with a maximum height of 2 meters from the floor.

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ACCESSORIES

CODE	DESCRIPTION
CE-RJ45-RJ45-R	1.5m long RJ45-RJ45 Ethernet cable
ALIM-MY2	230 V / 12 V optional power supply

CONTACT INFORMATION

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

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