INSTALLATION MANUAL

Series R-KEY-LT

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 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.

DOCUMENTATION
R-KEY-LT

QUALITY MANAGEMENT SYSTEM
ISO 9001:2015

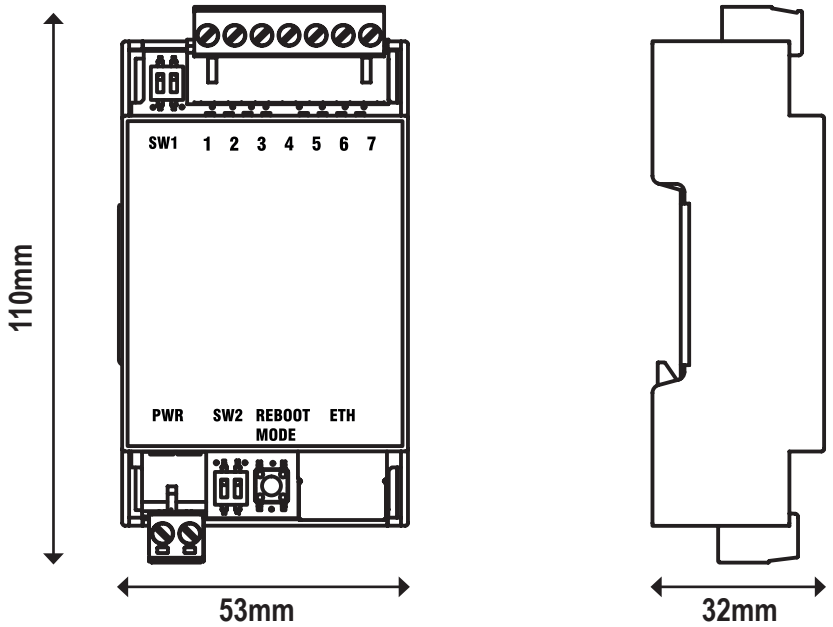
SENECA s.r.l.; Via Austria, 26 – 35127 – PADOVA – ITALY; Tel. +39.049.8705359 - Fax +39.049.8706287

CONTACT INFORMATION

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

REFERENCE PRODUCTS
R-KEY-LT-0 ModBUS version
R-KEY-LT-P with Profinet protocol
R-KEY-LT-I with IEC 61850 protocol
R-KEY-LT-U with OPC-UA protocol
R-KEY-LT-E with Ethernet/IP protocol
R-KEY-LT-C ModBUS to Cloud

MODULE LAYOUT



Weight: 80g; **Enclosure:** UL94-V0 self-extinguishing PC/ABS material, black.

SIGNALS VIA LED ON FRONT PANEL

LED	STATUS	LED meaning
PWR	On	LED operation varies depending on the protocol used. Please refer to the user manual for correct operation.
COM	Flashing	
TX	Flashing	Data transmission on port RS232/RS485
RX	Flashing	Data receipt on port RS232/RS485
ETH ACT (Yellow)	Flashing	Packet transit on Ethernet port
ETH LNK (Green)	Flashing	Ethernet port connected

DEVICE CONFIGURATION

The device 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 using the QR-CODE from the web address: For further information, refer to the USER MANUAL.

FACTORY IP ADDRESS

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

NOTE: The Profinet protocol version does not have a static IP address.

PROFINET AND WEBSERVER MODE

In devices with Profinet, OPC-UA and IEC61850 protocols, to access the internal webserver it is necessary to switch the device to Webserver mode using the Easy Setup2 or Seneca Device Discovery software, it is also possible to change the operating mode by pressing the PS1 side button following the procedure in the user manual.

WEB SERVER

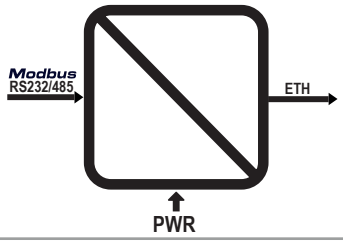
To access the maintenance Web Server with the factory IP address above, use the following credentials:
Username: admin; **Password:** admin

N.B.: For the R-KEY-LT-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	CE  c UL us LISTED 3LUT
INSULATION	 1500 Vac
POWER SUPPLY	Voltage: 11 ÷ 40Vdc; 19 ÷ 28Vac; 50 ÷ 60 Hz, max absorption: 1W
ENVIRONMENTAL CONDITIONS	Temperature: -25°C ÷ +65°C Humidity: 30% ÷ 90% non condensing Storage temperature: -30°C ÷ + 85°C Protection rating: IP20 (not rated by UL)
ASSEMBLY	DIN rail 35mm IEC EN60715, wall or panel with screws.
CPU	ARM 32 bit
OPERATING SYSTEM	Real time multitasking
CONFIGURATION	Configuration and FW update via webserver; Via DIP - SWITCH Via EASY SETUP 2 configuration software
CONNECTIONS	Removable 7-way screw terminals, 5 mm pitch, cable section up to 2.5 mm^2 Removable 2-way screw terminals, 5 mm pitch, cable section up to 2.5 mm^2 RJ45 connector for Ethernet cable
COMMUNICATION	RS232/RS485 on 1-7 terminal; maximum Baud rate 115k
ETHERNET PORTS	1 x 100Mbit Ethernet port with auto switch

DIP - SWITCH SETTINGS

⚠ 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 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		
NOT to polarize the bus on RS485, both SW1 DIP switch selectors must be set to OFF		

SW2 DIP-SWITCH:

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		

ELECTRICAL CONNECTIONS

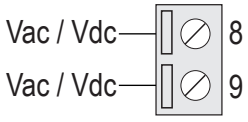
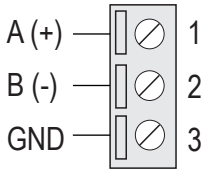
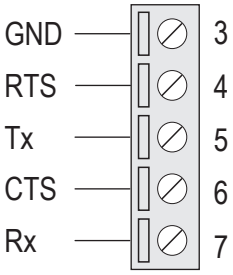
⚠ CAUTION

Switch the module off before connecting inputs and outputs.
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...).

⚠ CAUTION

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

POWER SUPPLY	RS485 SERIAL PORT	RS232 SERIAL PORT
		
The power supply source must be protected from any module malfunctions using appropriately-sized safety fuses.		

⚠ CAUTION

The device can only be powered by a power supply with a limited energy circuit 40Vdc / 28Vac max in output according to 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/UL1310.

⚠ CAUTION

These are open type devices intended for installation in a final casing/panel that offers mechanical protection and protection against the spread of fire.