INSTALLATION MANUAL

Z-LTE-WW
Z-LTE-EU

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

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

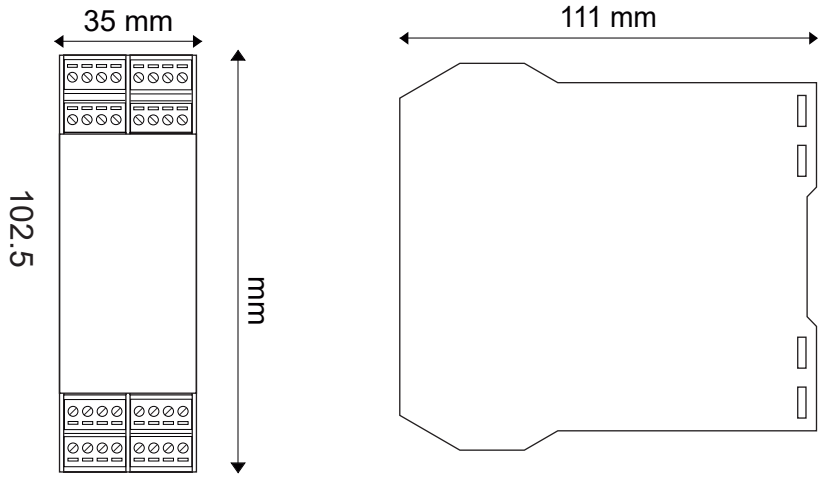
CONTACT INFORMATION

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

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MODULE LAYOUT



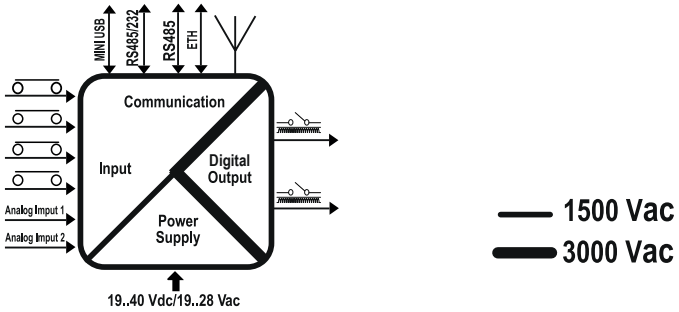
Weight: 270 g;
Container: PA6, Black

SIGNALS VIA LED ON FRONT PANEL

LED	STATUS	LED meaning
PWR (Green)	ON	Log not active and status waiting for startup
	Slow flashing	Log active and status in normal operation
	Flashing intermittently	Status in operation from backup battery (battery life 1 hour)
	Fast flashing	Error, see Webserver diagnostics
	Off	Device OFF
(GSM LEVEL) (Green)	ON	Maximum signal (Level 4)
	Flashing	3 flashes (Level 3)
		2 flashes (Level 2)
		1 flash (Level 1)
	Off	Minimum signal
GSM (STATUS) (Yellow)	Short flash	Network search (200ms High / 1800 ms Low)
	Long flash	Connected (1800 ms High / 200ms Low)
	Fast flashing	Data transfer in progress (125ms High / 125ms Low)
	On	Voice call
MOD (Yellow)	On	Recorded on 4G network
	Off	Connected to another network
DO (1 and 2) (Red)	On	Digital output, relay energised
	Off	Digital output, relay de-energised
DI (from 1 to 4) (Red)	ON (NPN)	Digital input energised (GND closed contact)
	ON (PNP)	Digital input energised (contact closed to +12 V)
	Off	Digital input not energised
COM (Red)	Slow flashing	Activity in the RS485 or RS232 serial interface
	Off	RS485 or RS232 serial interfaced not used
	Fast flashing	Timeout in the RS485 or RS232 communication
SD (Red)	On	SD card inserted correctly
	Slow flashing	Activity on SD card
	Fast flashing	SD card error
	Off	No SD card
ETH LNK	Flashing	Connection on RJ45 active
ETH ACT	Flashing	Packet transit on Ethernet port

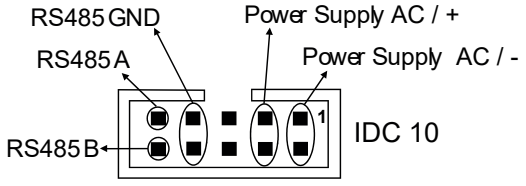
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TECHNICAL SPECIFICATIONS

CERTIFICAZIONI	**Z-LTE-WW** **Z-LTE-EU** https://www.seneca.it/products/z-lte-ww/doc/CE_declaration https://www.seneca.it/products/z-lte/doc/CE_declaration
INSULATION	
ENVIRONMENTAL CONDITIONS	Temperature: -25– + 50°C / (-10– + 40°C if the internal UPS is used). Humidity: 30%– 90% non condensing. Storage temperature: -30– + 65°C / (-20– + 45°C < 6 months if the internal UPS is used). protection rating: IP20.
ASSEMBLY	IEC EN60715, 35mm DIN rail in vertical position.
INTERNAL UPS	Rechargeable backup batteries NiMh 3,6 V, 0,8 Ah type. Duration: up to 1 hour.
CONNECTIONS	Removable 3-way screw terminals, 5 mm pitch for cable up to 2.5 mm², Rear IDC10, RJ45 socket, Micro USB socket and 2 SMA for 4G antenna and GPS antenna.
POWER SUPPLY	Voltage: 11 ÷ 40Vdc or 19 ÷ 28Vac 50 ÷ 60Hz. Absorption: 8W.
DIGITAL INPUTS	Number of channels 4. Configurable PNP or NPN. Voltage OFF<4V, ON>8V (Max. 24Vdc). Max frequency 30Hz. Absorbed current 3mA @ 12Vdc, 10mA @ 24Vdc.
TOTALIZERS	4 x 32-bit totalizers on non-volatile memory
COUNTERS:	4 x 32-bit resettable counters on non-volatile memory.
DIGITAL OUTPUTS	Number of channels 2. SPDT free contact relay. Max. voltage 250Vac. Max. current 2A.
ANALOGUE INPUTS	Number of channels 2. Configurable mA or Vdc. Voltage input 0 – 30V. precision 0.1% of Full Scale, impedance: 200 kohm. Current input 0– 20mA precision 0.1% of Full Scale, impedance: < 60 ohm. Input protection 40V / 25mA. Resolution 16 bit.
COMMUNICATION PORTS	RS485 COM1 on rear IDC10 connector, RS485 or RS232 on terminals M10-M11-M12, Ethernet 100 base T and micro USB on side socket.
4G / LTE WORLD WIDE MODEM (Z-LTE-WW)	For further information, refer to the User Manual.
MODEM 4G (Z-LTE-EU)	For further information, refer to the User Manual.
GNSS	GPS / GLONASS / BeiDou(compass) / Galileo / QZSS
SD CARD SLOT	Push-push type for microSD and microSDHC 32GB max.
SIM CARD SLOT	Push-push type for miniSIM card 15 X 25 mm
CPU / S.O.	CPU 32bit, operating system: Real Time Multitasking.

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IDC10 CONNECTOR



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

PROCEDURE FOR MODULE SWITCH-OFF

The module is equipped with an integrated UPS that allows it to remain on even in the absence of external power. To turn off the module, first disconnect the external power supply and then press the PS1 button on the right side of the module for at least 6 seconds. When the button is released, the PWR LED turns off to indicate that the module is turned off.

DIP - SWITCH SETTINGS

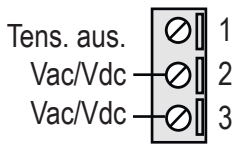
DIP-SWITCHES			
SW1	Default settings: all DIP switches in OFF position. For more information see the **USER MANUAL**.		
SW2	RS232 or RS485 settings on terminals 10-11-12 (COM2 serial port)		
	RS232	**ON**	
	RS485	**OFF**	

ELECTRICAL CONNECTIONS

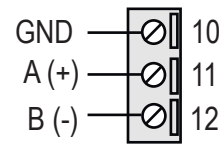
⚠ CAUTION

On first start-up the module must be supplied without any interruptions for at least 72 hours to charge the internal batteries. Switch the module off with the PS1 button 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...).

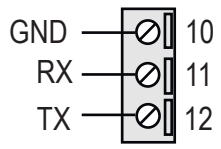
POWER SUPPLY



SERIAL PORT RS485
SW2 = OFF

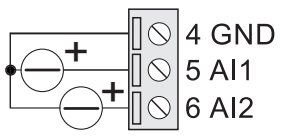


SERIAL PORT RS232
SW2 = ON

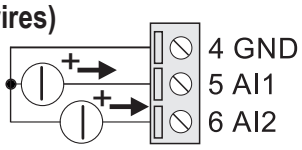


ANALOGUE INPUTS

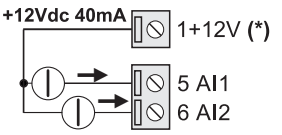
Voltage



Active sensor current (4 wires)



Passive sensor current (2 wires)

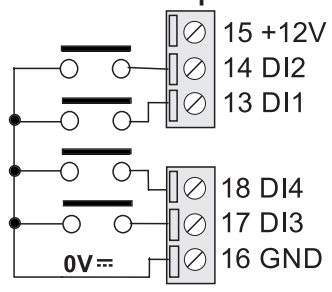


(*) Not available without external power supply

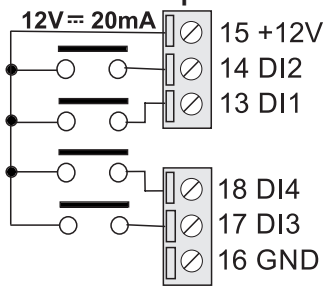
The module has two analogue inputs that can be configured via software as voltage or current. For the configuration software, see the user manual.

DIGITAL INPUTS

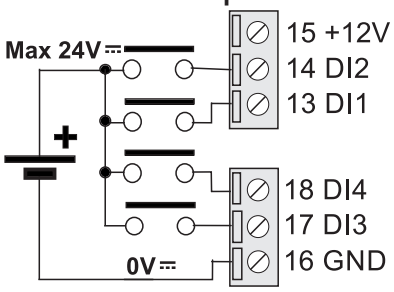
NPN with internal power



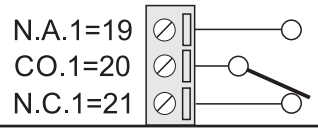
PNP with internal power

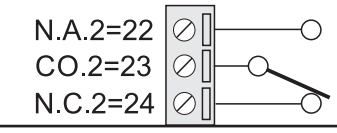


PNP with external power



DIGITAL OUTPUTS





The module has two digital outputs with free contacts. The figures show the internal relay contacts available.

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