INSTALLATION MANUAL

Serie Z PC

EN

Z-MODEM

INDUSTRIAL MODEM GSM/GPRS Quadband

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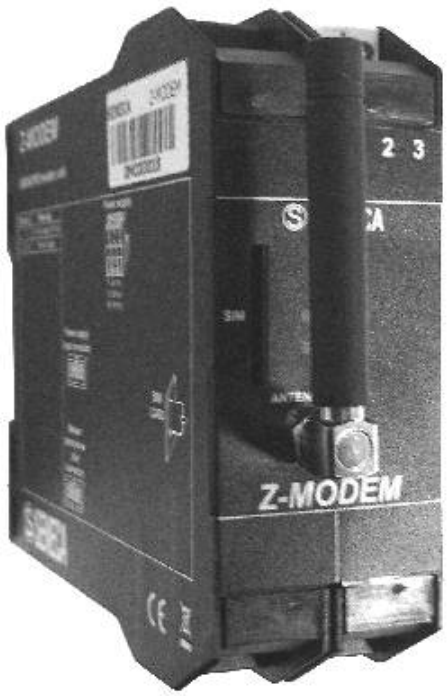
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1.0 PRELIMINARY WARNINGS



Before carrying out any operation it's mandatory to read all the content of this user manual. Only electrical-skilled technicians can use the module described in this user manual. Specific documentation is available on www.seneca.it



Only the manufacturer is authorized to repair the module or to replace damaged components. The product is susceptible to electrostatic discharge, take proper coutermeasures during any operation.



No warranty is guaranteed in connection with faults resulting from improper use, from modification or repairs carried out by Manufacturer-unauthorised personnel on the module, or if the content of this user Manual is not followed.

2.0 DESCRIPTION AND CHARACTERISTICS

2.1 Module description

Z-MODEM is an Industrial MODEM GSM/GPRS Quadband with RS232 serial port.

2.2 General characteristics

- Power supply 11..40 Vdc; 19..28 Vac
- Consumption 2W (standby) 6 .5 W (MAX)
- Protection degree IP20
- LEDs signalling: GSM, Power state
- SMA type antenna connector
- SIMcard standard (25 x15mm)
- Weight 280 g.
- Dimension 100x 112 x 35 (l x h x p)
- Quick DIN 46277 rail mounting
- PBT, black box

3.0 TECHNICAL SPECIFICATIONS

3.1 Communications

Serial Interface	RS232 IDC10 side
GSM	Quad-Band (GSM 850MHz, EGSM 900MHz, DCS 1800MHz, PCS 1900MHz)
Supported system protocol	Integrates the TCP/IP protocol (ftp, Smtp, Pop3, http, ...)
AT commands	According to v25 TER
GPRS	GPRS data downlink transfer: MAX 85.6 kbps
	GPRS data uplink transfer: MAX 42.8 kbps
	Coding scheme: CS-1, CS-2, CS-3 and CS-4
	Support the protocol PAP (Password Authentication Protocol) usually used for PPP connections
	Integrates the TCP/IP protocol (ftp, Smtp, Pop3, http, ...)
	Support Packet Switched Broadcast Control Channel (PBCCH)
CSD	CSD transmission rates: 2.4, 4.8, 9.6, 14.4 kbps, non-transparent
	Unstructured Supplementary Services Data (USSD) support
SMS	MT, MO, CB, Text and PDU mode
	MS storage: SIM card
FAX	Group 3 class 1
Phonebook management	Support phonebook types: SM, FD, LD, RC, ON, MC.
Realtime clock	Implemented
Timer function	Programmable by AT commands

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3.2 Power supply

Voltage	11..40 Vdc; 19..28Vac
Consumption	2 W (standby), 6,5 W (MAX)

3.3 Environmental conditions

Operating temperature	From -10 to +50 °C
Humidity	30..90% to 40°C not condensing
Storage Temperature	From -20 to +85 °C
Protection degree	IP 20

3.4 Standards

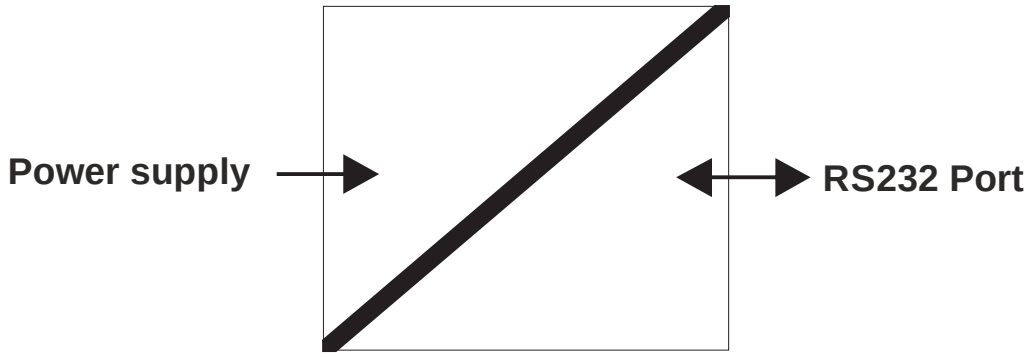
EN61000-6-4/2002-10	Electromagnetic emission, industrial environment.
EN61000-6-2/2006-10	Electromagnetic immunity, industrial environment.
EN 301 511	Harmonized standard for mobile stations in the GSM900 and 1800 bands.
EN 301 489-1	ElectroMagnetic Compatibility standard for radio equipment and service.
EN 301 489-7	Specific (EMC) condition for mobile radio equipment (GSM900 and 1800)
EN 60950	Safety of information Technology Equipment.

3.5 Module case

Dimensions and Weight	100 x 111 x 35 mm. 280g
Material	PBT, Black

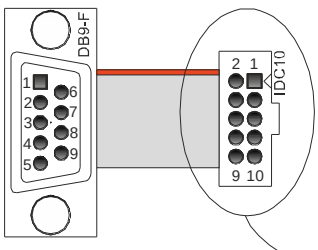
3.6 1500 Vac Insulation

Insulation	1500 Vac between power supply and other circuits

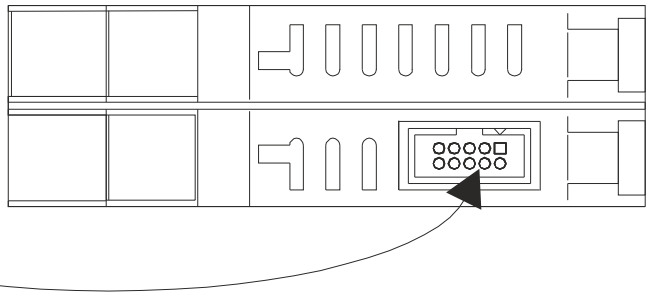


3.7 RS232 Connector

PM002390



Side view IDC10/RS232 position



Insert the IDC10 connector as shown above in order to use the RS232 DB9F port.

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4.0 PRELIMINARY INSTRUCTIONS FOR USE

. The module is designed to be installed on DIN46277 rail in vertical position.

It is forbidden to place anything that could obstruct the ventilation slits.
It is forbidden to install the module near heat sources.

«Severe operating conditions» are defined as follows:
- High power supply voltage: exceed 30Vdc or exceed 26 Vac
- The module power the sensor.

If the modules are installed side by side, **separate them by at least 5mm** in the following cases:
- the operating temperature exceed 45°C and at least one of the severe operating conditions exist;
- the operating temperature exceed 35°C and at least two of the severe operating conditions exist.

4.1 Installation and removal on DIN46277 rail

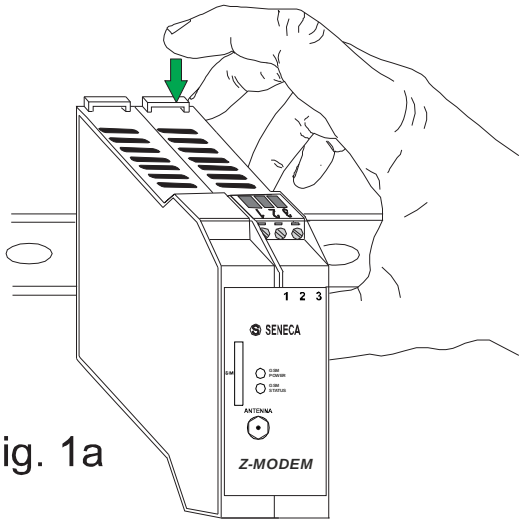


Fig. 1a

INSTALLATION:
1) Pull the four latches (placed in the backside panel) outwards;
2) Insert the module in a DIN46277 rail free slot;
3) Make sure that the IDC10-connector pins are inserted on the slot correctly;
4) Press the four latches inwards.

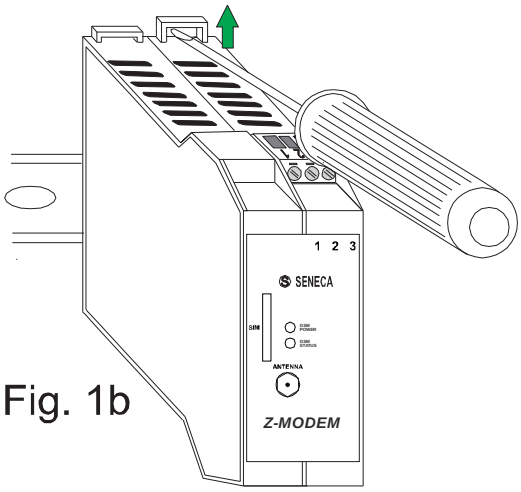


Fig. 1b

REMOVAL:
1) Pull the four latches (placed in the backside panel) outwards, using a screwdriver.
2) Pull out the module gently.

4.2 Use Z-PC-DINAL accessory

· It's important to insert the pins on the slot correctly because IDC 10-connector is polarized; this connection is facilitied by use of a female/male insertion between IDC10 connector and DIN rail slot. (Fig. 1c and Fig. 1d). Power supply from rear IDC10 Connector.

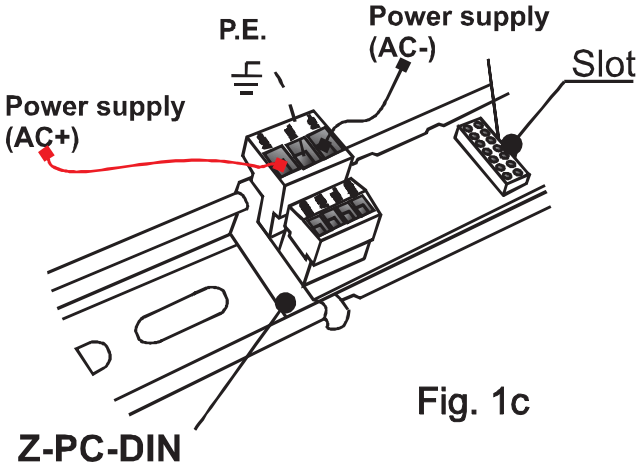


Fig. 1c

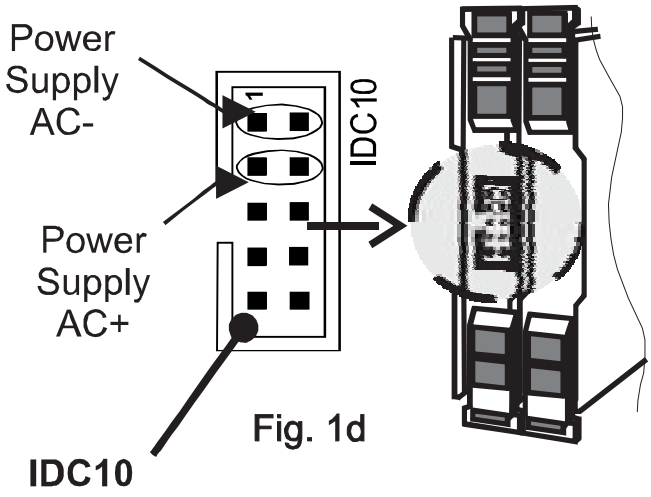


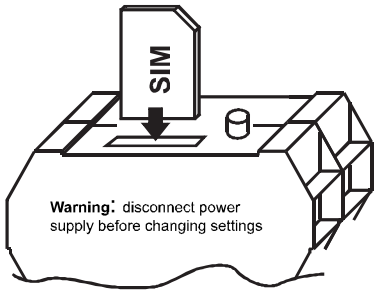
Fig. 1d

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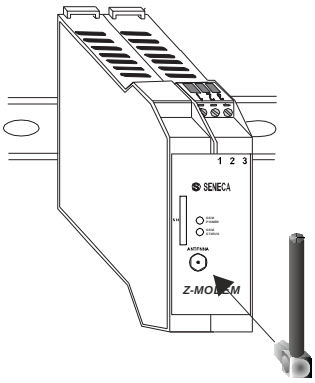
4.3 SIM card Inserting

Note: The SIM card must be inserted with Z-MODEM turned off to be detected.

SIM, from slide connector.
Front panel proper standoff insertion = 4.5mm.



After the SIM card insertion connect your antenna to **SMA** connector located in the middle of front panel be sure that the connector be tight in order to avoid signal losses.



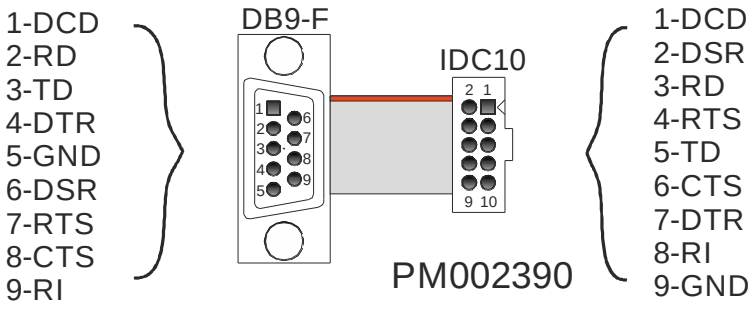
5.0 ELECTRICAL CONNECTIONS

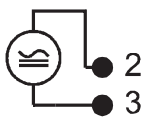
Power off the module before connecting:RS232 serial interface

In order to satisfy the electomagnetic compliance requirements:
- use shielded cables for signal transmittion;
- connect the shield to a earth wire used specifically for instrumentation;
- insert space between these shielded cables and other cables used for power appliance (transformers, inverters, motors, induction ovens, etc

5.1 Connections

RS232 link adapter	Power supply	Screw terminals





11..40 Vdc
19..28 Vac
6.5 W MAX



6.0 DISPLAYING

6.1 LEDs SIGNALLING

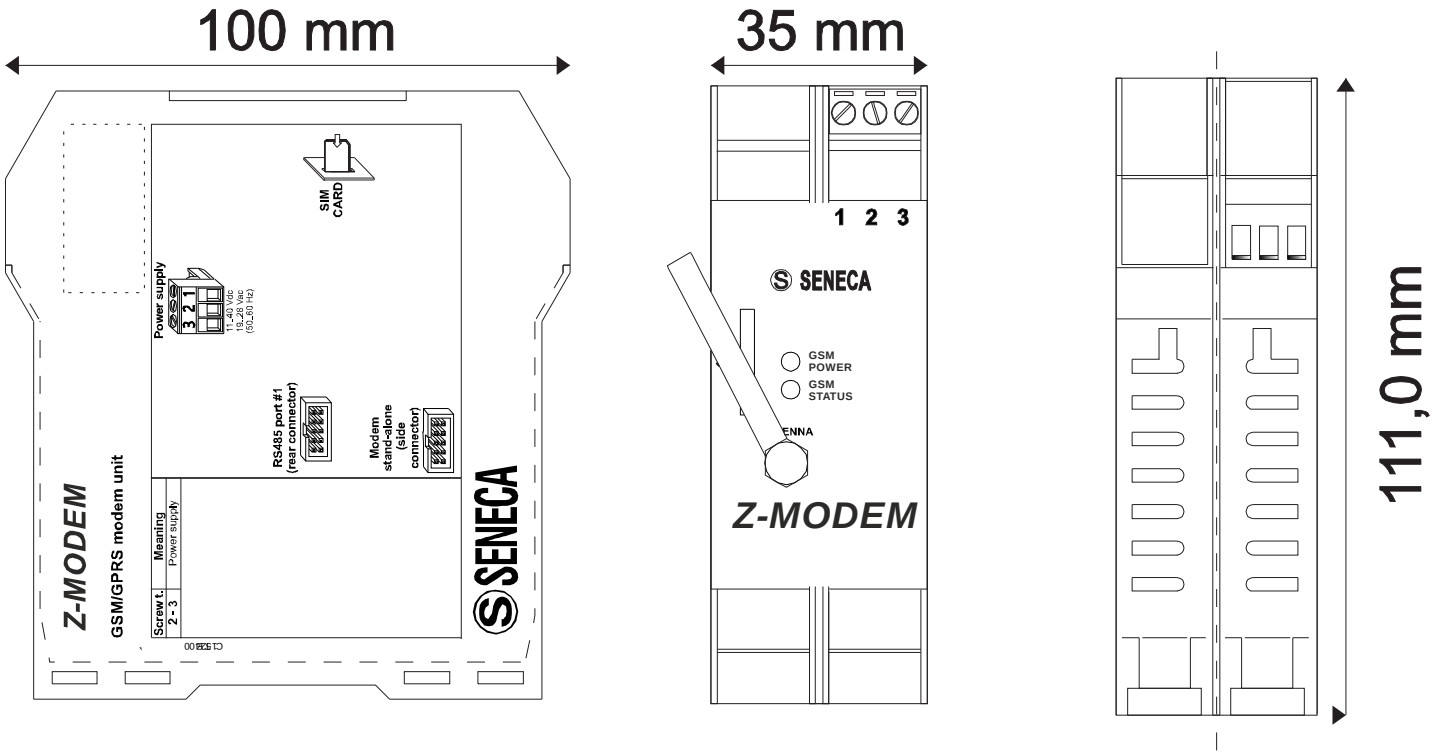
LED	Color	State	Meaning
GSM STATUS	Yellow	Blink (slow)	Linked on network GSM/GPRS
		Blink (quick)	Searching network
GSM PWR	Green	ON	Z-MODEM active.
		OFF	Z-MODEM off.

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7.0 PURCHASE ORDER CODE

Z-MODEM		GSM/GPRS Quadband Industrial MODEM
Z-PC-DIN	AL1-35	DIN rail support with screw terminal P=35 mm
	1-35	DIN 1 slot support for rear connector P=35 mm
PM002490		RS232 programming cable (DB9F-DB9M)
A-GSM		External GSM antenna dual band swing, cable 3,2 m
PM002390		RS232 link adapter (included)

8.0 MODULE LAYOUT



9.0 DECOMMISSIONING AND DISPOSAL



Disposal of Electrical & Electronic Equipment (Applicable throughout the European Union and other European countries with separate collections programs). This symbol, found on your product or on its packaging, indicates that this product should not be treated as household waste when you wish to dispose of it. Instead, it should be handed over to an applicable collection point for the recycling of electrical & electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences to the environment and human health, which could otherwise be caused by inappropriate disposal of this product. The recycling of materials will help to conserve natural resources. For more detailed information about the recycling of the product, please contact your local city office, the waste disposal service or the retail store where you purchased this product.

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