INSTALLATION MANUAL

Manual language	ENGLISH
Series	Z-PC
Product	**Z-PASS1-0**
Description	Modbus Ethernet / Serial Gateway and Serial Device Server with VPN

CONTENTS:

PRELIMINARY WARNINGS 2
PRELIMINARY USE INSTRUCTIONS 2
GENERAL SPECIFICATIONS 2
TECHNICAL SPECIFICATIONS 3
INSTALLATION RULES 4
ELECTRICAL CONNECTIONS 4
LED INDICATIONS ON THE FRONTAL PANEL 6
ACCESSORIES 6
FRONT PANEL/MODULE LAYOUT 7
DECOMMISSIONING AND DISPOSAL 7

CE

Manufacturer

CSQ IQNet ISO 9001:2008

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PRELIMINARY WARNINGS

The full content of this manual must be read before performing any operation. The module must only be used by qualified electricians. Specific documentation is available from www.seneca.it/products/z-pass1.
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.

The warranty is null and void in the event the module or devices supplied by the Manufacturer, necessary for its correct operation, are improperly used or tampered with and, in any case, if the instructions contained in this manual were not followed.

PRELIMINARY USE INSTRUCTIONS

Obstructing ventilation slots with any object is prohibited.
Installing the module next to devices that generate heat is prohibited.

GENERAL SPECIFICATIONS

CPU ARM 9 32bit, S.O. Linux Kernel 2.6.28
1 GB Flash memory
64 KB RAM memory
Double Ethernet port on the front (internal hub switch)
Three RS485 ports
One RS232 port (as an alternative to one RS485 port)
Two USB HOST ports
One slot for micro SD card, 32 Gb max.
1500 V∿ power insulation compared with the remaining low voltage circuits
Facilitated power and serial line cabling via bus housed in the IEC EN 60715 omega guide.
Pull-out terminals, section 2.5mm2

Functionality

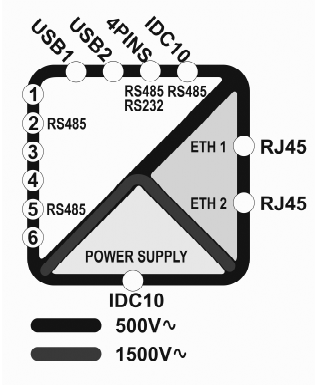
The Z-PASS1-0 device is an advanced Modbus Ethernet / Serial Gateway and a Serial Device Server with VPN support.

The Z-PASS1-0 can be connected to the Seneca Z-MODEM-3G (UMTS / HSPA +).

For more information, refer to the user manual.

TECHNICAL SPECIFICATIONS

Insulation *1500 V∿*	*Standards*
	The instrument complies with the following standards:



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EN61000-6-4 (electromagnetic emission, industrial environment)
EN61000-6-2 (electromagnetic immunity, industrial environment)
EN61010-1 (safety).

SUPPLEMENTARY NOTES ON USE:
A 1 A, delayed fuse must be installed in series on the power connection, near the module.

Communication ports	
Commutable RS232 or RS485	Maximum Baud rate 115 kbps COM 1 (removable 4-pole connector)
RS485	Maximum Baud rate 115 kbps COM 2 (terminals 1-2-3 or IDC10 connector) COM 4 (terminals 4-5-6)
Ethernet 1 and Ethernet 2	Fast Ethernet 10/100 Mbps Communication port: front with RJ45 connector Connection maximum distance 100m
USB #1 HOST	Plug-in: USB type A
USB #2 HOST	Plug-in: micro USB

Power supply	
Voltage	11 – 40 V⎓; 19 – 28 V∿ 50 – 60 Hz
Absorption	4W @ 24 V⎓

Environmental conditions	
Temperature	-20°C – +55°C
Humidity	30 – 90% to 40°C non condensing
Altitude	up to 2000 m above sea level
Storage temperature	-20 – +85°C
Protection rating	IP20

Connections
3-way removable screw terminals, pitch 5 mm
IDC10 rear connector for IEC EN 60715 guide
Removable 4-pole connector, RJ45, USB, micro USB
Micro SD card slot

Overall dimensions/case	
Dimensions/Weight	L: 100 mm; H: 112 mm; W: 35 mm / 220 g
Case	PA6, black

INSTALLATION RULES

The module has been designed for vertical installation on an IEC EN 60715 omega guide. For optimal operation and long working life, adequate ventilation must be provided. Avoid positioning cable ducts or other objects so that they obstruct the ventilation slots. Avoid mounting modules over equipment generating heat. Installation in the bottom part of the distribution board is recommended.

OMEGA IEC EN 60715 guide installation and removal.

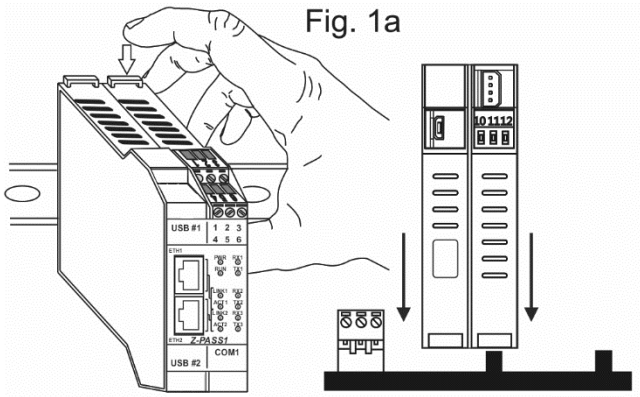


Fig. 1a

Insertion on the IEC EN 60715 guide:
1) Move the four hooks on the back of the module outwards as illustrated in fig. 1b.
2) Insert the module aligning the IDC10 rear connector to the female of the Seneca support for the IEC EN 60715 guide.
3) To secure the module to the guide, tighten the four hooks on the side of the IDC10 rear connector as shown in fig. 1a.

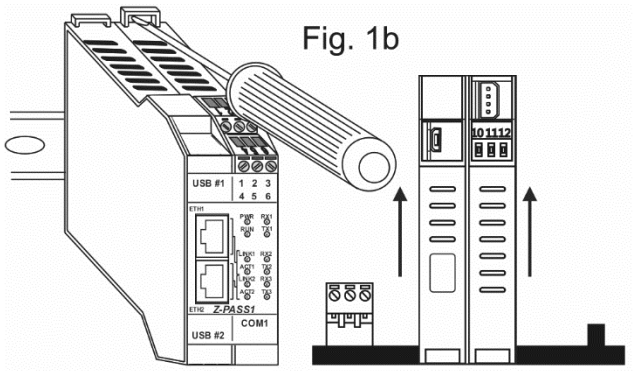
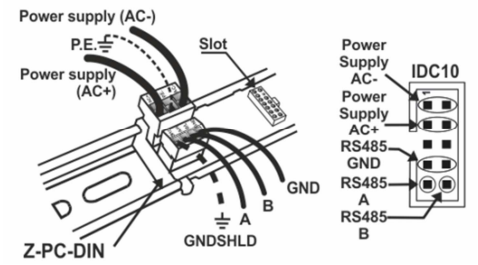


Fig. 1b

Removal from the IEC EN 60715 guide:
As illustrated in figure 1b:
1) Move outwards the four hooks on the side of the module, using a screwdriver.
2) Extract the module from the guide.

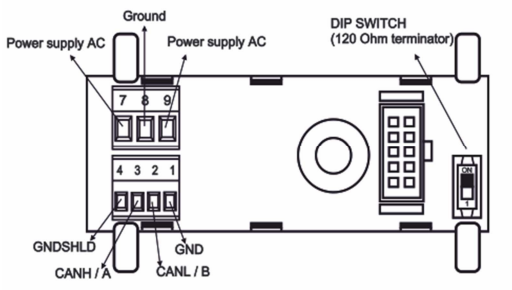
ELECTRICAL CONNECTIONS

IDC10 rear connector



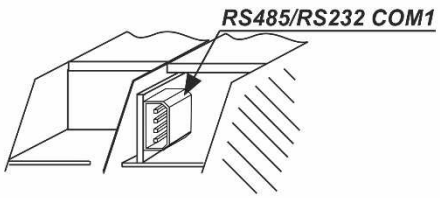
In the figure you can see the meaning of the IDC10 connector pins if you want to provide signals through them.
Module power is available only from the rear connector.

Potential Z-PC-DINAL 1-35 use



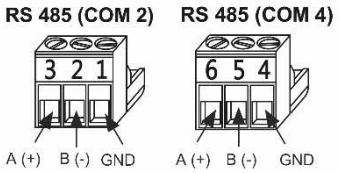
If the Z-PC-DINAL 1-35 accessory is used, the power supply and communication signals may be provided by the terminals block.
The illustration shows the meaning of the various terminals and DIP-switch position, found in all Seneca supports for the IEC EN 60715 guide (not used for the Modbus network).
GNDSHLD: Connection cable signal protection shield (recommended).

RS232 or RS485 COM1 port (4 Poles)



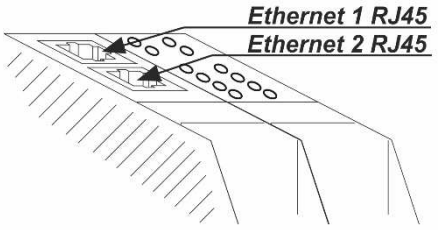
The Z-PASS1-0 has a 4-pin connector for an RS232 COM1 serial port or, alternatively, a third RS485 COM1 port.
To select the RS232 port on the 4-pole connector, turn the SW2 switch to ON.
To select the RS485 port on the 4-pole connector, turn the SW2 switch to OFF.
The length of the cable, for the RS232 interface, must not exceed 3 metres.

RS485 COM 2 and RS485 COM 4 ports



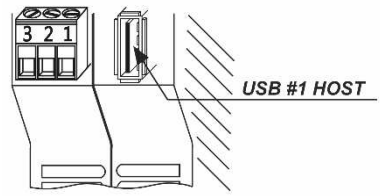
The Z-PASS1-0 has two RS485 communication serial ports: COM 4 and COM 2. The COM 2 RS485 connection can be done with terminals 1-2-3 or, alternatively, it is available from connector IDC10. To switch the RS485 port to connector IDC10, turn switch SW1 to OFF.

RJ45 Ethernet ports (on front)



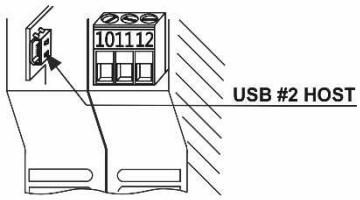
The Z-PASS1-0 has two Ethernet ports with RJ45 connectors on the front of the module. The two ports are connected in HUB/SWITCH mode. The MAC address for the two ports is the same.

USB #1 HOST port

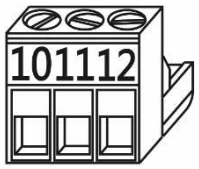


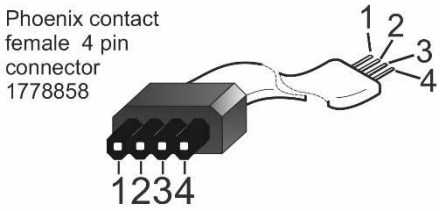
The Z-PASS1-0 has one USB HOST type-A female connector that can be used to connect one external memory. Maximum available current 100 mA.

USB #2 HOST port



The Z-PASS1-0 has a micro-USB USB HOST connector that can be used to connect a Seneca Z-MODEM-3G.
Maximum available current 100 mA.

Terminal 10-11-12	
	This terminal is currently unused.

Cable assembly for RS232	
	The 4-pole removable connection cable for RS232 serial communication can be assembled as shown in the side figure. (connector code: Phoenix contact: 1778858) Connector PIN key: 4 = GND, 3 =RX / A , 2 = TX / B, 1 = CTS. The length of the cable must not exceed 3 metres.

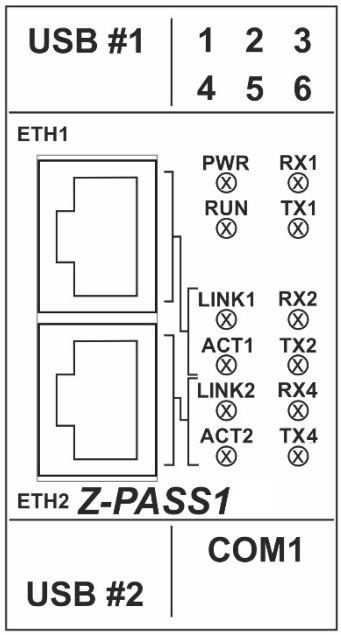
LED INDICATIONS ON THE FRONTAL PANEL

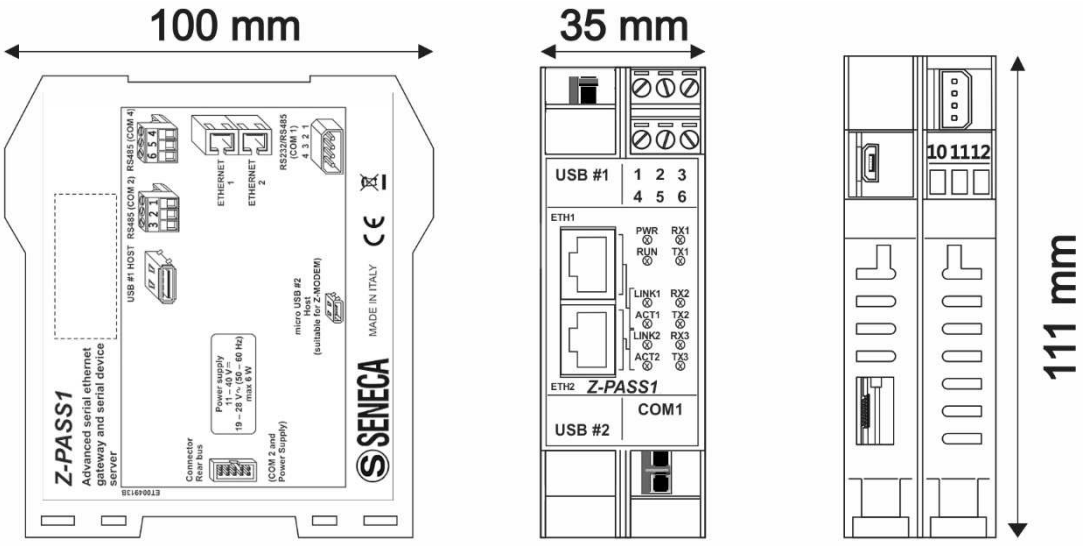
LED	*STATUS*	*LED meaning*
PWR Green	ON	The device is supplied correctly
RUN Red	Flashing	The device is ready for use
LNK1-2 Yellow	ON	Ethernet connection 1-2 active
LNK1-2 Yellow	OFF	Ethernet connection 1-2 inactive
ACT1-2 Green	Flashing	Data exchange present (Ethernet 1-2)
ACT1-2 Green	ON	Data exchange absent (Ethernet 1-2)
RX1-2-4 Red	Flashing	Data reception signal (COM 1-2-4)
RX1-2-4 Red	ON	Check the connection (COM 1-2-4)
TX1-2-4 Red	Flashing	Data transmission signal (COM 1-2-4)
TX1-2-4 Red	ON	Check the connection (COM 1-2-4)

ACCESSORIES

CODE	**DESCRIPTION**
Z-PC-DINAL1-35	Support with power terminals 1 slot pitch = 35mm
Z-PC-DIN1-35	1 slot support for rear connector pitch = 35 mm
Z-PC-DIN4-35	4-slot support for rear connector pitch = 35mm
CS-DB9M-MEF-PH	CABLE RS232/485 1.5m -Z-TW4 (4-wire version)

FRONT PANEL/MODULE LAYOUT





The Z-PASS1-0 can be wholly configured via a set of WEB configuration pages.
To access the configuration, connect using a browser to the IP address of the Z-PASS on port 8080, for instance: http://192.168.90.101:8080 and, when prompted, enter the following credentials:
Username: admin Password: admin.
You can now see the configuration page. For further information, refer to the USER MANUAL.

DECOMMISSIONING AND DISPOSAL

Electrical and electronic waste disposal (applicable in the European Union and other countries with recycling). The symbol on the product or packaging indicates that the product cannot be discarded as domestic waste. It should be taken to an authorised recycling centre for electrical and electronic waste. Ensuring that the product is suitably discarded will avoid potential negative impacts on the environment and human health, that could be caused by non compliant product disposal. Material recycling will contribute to the preservation of natural resources. To receive further information, please contact your local waste disposal service centre or product dealer.