INICTALL ATION MANILLAL

	NSTALLATION MANUAL
Manual language	ENGLISH
Series	Z-PC
Product	Z-KEY
Description	Modbus Ethernet Serial Gateway and Serial Device Server
Content: 1. PRELIMINARY WA 2. PRELIMINARY USE 3. GENERAL SPECIF 4. TECHNICAL SPEC 5. INSTALLATION RE 6. ELECTRICAL CON 7. SIGNALS VIA LED 8. ACCESSORIES 9. FRONT PANEL / M 10. DECOMMISSIONIN	<text></text>
Manufacturer Solution Solution Bool Solution Website Mail This document is property The content of this document is property The content of this document is property The content of this document may be modified or supple	Seneca srl Registered offices: Via Austria 26 35127 – Z.I Padua – IT Tel. +39.049.8705355 - 8705355 Fax +39 049.8706287 <u>www.seneca.it</u> Technical support: <u>supporto@seneca.it</u> Product information: <u>commerciale@seneca.it</u> of SENECA srl. Copies and reproduction are prohibited unless authorised. ent corresponds to the described products and technologies. Indicated data mented for technical and/or sales purposes.
FOR FURTHER INFORMA	ATION, PLEASE SEE THE USER MANUAL.

Programming tools, manuals, templates, examples, etc. for the product can be downloaded free of charged at <u>www.seneca.it</u> in the Z-KEY section.



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 at www.seneca.it



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 correct operations, 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 32 bit

Possibility of configuration via Web-server.

Micro SD card slot, Max 32 GB (Optional) for custom webserver and FTP server pages.

One Ethernet 10-100 Mbits/s port

One RS485 port.

One RS485/RS232 commutable port.

One USB port.

1500 V \sim power insulation with respect to the remaining low voltage circuits.

Facilitated power and serial line cabling via Seneca bus that can be housed in the IEC EN 60715 omega guide.

Pull-out terminals, section 2.5 mm².

Power indication, RS485/RS232 Rx and Tx, ETHERNET connection and activity on SD card via LED on front panel.

Modbus Gateway from Modbus TCP to Modbus RTU: Ethernet / RS485 communication to remotely control modules connected to the Modbus RTU ports with the possibility of setting RS485 ports in Modbus master, Modbus slave mode.

Modbus TCP-IP / Modbus RTU bridge in real time.

Remote serial port (COM port) transparent to protocol.

Baud rate for Modbus RTU settable from 1200 to 115200 baud.

Firmware update via Web Server/ FTP Server / microSD card.

POSSIBLE CONFIGURATIONS

- BRIDGE FROM MODBUS TCP-IP TO MODBUS RTU

- GATEWAY FROM MODBUS TCP-IP TO MODBUS RTU (PORT 1 AND PORT 2 MODBUS MASTER)

- GATEWAY FROM MODBUS TCP-IP TO MODBUS RTU (1 PORT MASTER AND 1 PORT SLAVE)

- GATEWAY FROM MODBUS TCP-IP TO MODBUS RTU (2 PORT SLAVES)

- REMOTE SERIAL COM PORT



TECHNICAL SPECIFICATIONS				
Insulation	Standards			
	The instrument complies with the following			
1500 V V	standards:			
IDC10 10 11 12 RS485 RS232 IJSB	EN61000-6-4 (electromagnetic emission, industrial environment) EN61000-6-2 (electromagnetic immunity, industrial environment) EN60950-1 (safety).			
ALIMENTAZIONE 2.3 IDC10	SUPPLEMENTARY NOTES ON USE: A 1 A, delayed, fuse must be installed in series on the power connection, near the module.			
Commu	nication ports			
Commutable RS232 or RS485	Maximum Baud rate 115k, Maximum cable length			
Pull-out terminal (10 - 11 - 12)	RS232 < 3 m			
RS485 IDC10 rear connector	Modbus RTU master / Modbus RTU slave protocol			
NS485 IDE TO Teal connector	Modbus RTU master / Modbus RTU slave protocol			
RJ45 Ethernet connector on front	10/100 Mbit/s, Max distance 100 m with auto switch.			
USB	Plug-in: lateral micro USB			
Power supply				
Voltage	11 – 40 V≕; 19 – 28 V∿ 50 – 60 Hz			
Absorption	Typical: 1.5W @ 24 V≕ Max.: 2 W @ 24 V∿			
Ambier	nt conditions			
Temperature	-10 °C – +50 °C			
Humidity	30 – 90% to 40°C non condensing			
Altitude	up to 2000 m above sea level			
Storage temperature	-20 °C - +85 °C			
Protection rating IP20				
Connections				
3-way removable screw terminals, pitch 5 mm				
P 145 front connector				
Micro USB lateral connector				
Micro SD card slot				
Overall dimensions/case				
Dimensions/Weight	1 : 100 mm H: 111 mm W: 17 5 mm / 104 gr			
Case	PA6 black			



INSTALLATION REGULATIONS

The module has been designed for vertical installation on a IEC EN 60715 omega guide. For optimal operation and long life, adequate ventilation must be provided. Avoid positioning channels or other objects that obstruct the ventilation slots. Avoid mounting modules over equipment that general heat. Installation in the bottom part of the switchboard is recommended.





ELECTRICAL CONNECTIONS

IDC10 rear connector (POWER AND PORT 1)



Potential Z-PC-DINAL2-17.5 use



If the Z-PC-DINAL1-17.5 accessory is used, signals can be sent via terminal board. The illustration shows the meaning of the various terminals and DIP-switch position, found in all Seneca supports for IEC EN 60715 guide, not used for the Modbus network. GNDSHLD: Connection cable signal protection shield (recommended).







Factor IP address

The default module IP address is static: 192.168.90.101

Web Server

To access the maintenance Web Server with 192.168.90.101 factory IP address (Default user: admin; Default password: admin) <u>http://192.168.90.101/maintenance/index.html</u> To access the custom Web Server on SD card with 192.168.90.101 default IP address <u>http://192.168.90.101/index.html</u>

SW1 DIP-switch settings to upload factory settings				
This procedure restores the IP address to factory settings: 192.168.90.101 and Webserver/FTP server user login credentials: admin and password: admin.		KEY		
Turn off the Z-KEY module and set all eight SW1 DIP-switches ON .		∎ ↑		
Turn off the Z-KEY module and set all eight SW1 DIP-switches OFF .	OFF	∎↓		
SW2 DIP-switch settings				
RS232 or RS485 settings on terminals 10-11-12 (serial port 2)		KEY		
RS232	ON	₫ ↑		
RS485	OFF			

SIGNALS VIA LED ON FRONT PANEL				
LED	STATUS	LED meaning		
TX1 (Red)	Flashing	Data transmission on port #1 RS485		
RX1 (Red)	Flashing	Data receipt on port #1 RS485		
TX2 (Red)	Flashing	Data transmission on port #2 RS485		
RX2 (Red)	Flashing	Data receipt on port #2 RS485		
PWR (Green)	On	Device powered		
SD (Red)	Flashing	Access to micro SD card.		
ETH ACT (Green)	Flashing	Packet transmission on Ethernet port		
ETH ACT (Green)	On	No activity on Ethernet port		
ETH LNK (Yellow)	On	Ethernet port connected		
ETH LNK (Yellow)	Off	No Ethernet connection		

ACCESSORIES			
CODE	DESCRIPTION		
Z-PC-DINAL2-17.5	Support with power terminal 2 slots pitch 0 1705 mm		
Z-PC-DIN1-35	1 slot support for rear connector pitch = 35 mm		
Z-PC-DIN4-35	4 slot support for rear connector pitch = 35 mm		
PM001450	1.5 m Ethernet cable		
PM004611	Z-KEY / RS232-DB9 serial connection cable		
KIT-USB	Programming KIT (USB + CD cable)		
MICRO-SD 4GB-MP	4GN Micro-SD Flash card		



FRONT PANEL/MODULE LAYOUT



Z-KEY can be fully set up via integrated web server.

Product programming tools can be downloaded free of charge at <u>www.seneca.it</u>, in the Z-KEY section. To access settings, open the maintenance page in a browser at the Z-KEY IP address, for example: <u>http://192.168.90.101/maintenance/index.html</u>

and enter the following credential when required: Username: admin Password: admin. For further information, see the USER MANUAL available for free download at <u>www.seneca.it</u> in the Z-KEY section.

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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.



