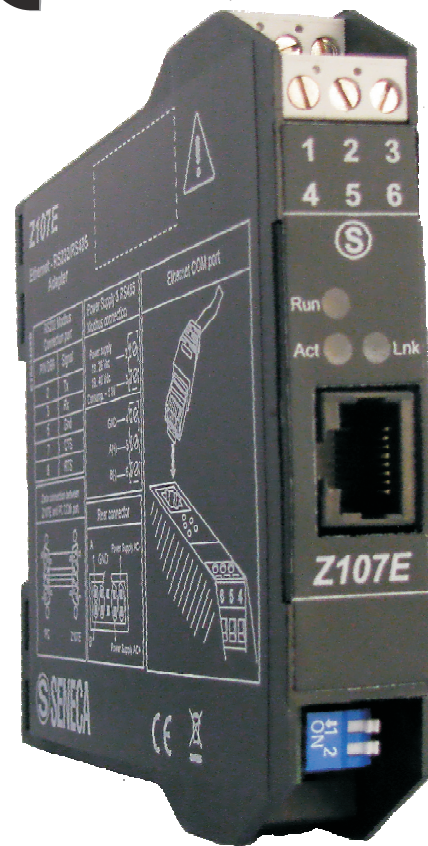




INSTALLATION AND USER'S GUIDE

Language manual	English
Product	Z-107E
Description	Ethernet RS485 / RS232 adapter

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1.0 DISCLAIMER



Before executing 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; it is responsibility of the manufacturer to verify that the installation complies with safety standards.



Only the Manufacturer is authorized to repair the module or to replace damaged components.



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



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2.0 DESCRIPTION AND GENERAL FEATURES

2.1 Description

The Z107E adapts the Ethernet communication signal into a serial signal RS485 or RS232; it can be used as a remote serial communication port via TCP or UDP port of the Ethernet network.

2.2 General features

- Ethernet to RS485 or RS232 communication through VIRTUAL COM PORT
- Communication POINT TO POINT with ethernet TCP or UDP protocol connection
- Communication POINT TO MULTIPOINT with ethernet connection
- Ethernet communication velocity: 10Mbit/s o 100Mbit/s
- 10-BaseT and 100-BaseT Ethernet port with TCP/IP communication protocol
- Up to 115200 Bps for Modbus protocol.
- 500 Vac output isolation compared with other low voltage circuits.
- Quick installation on DIN 46277 rail.
- Removable screw terminals with section of 2.5 mm²

3.0 TECHNICAL SPECIFICATIONS

3.1 General specifications

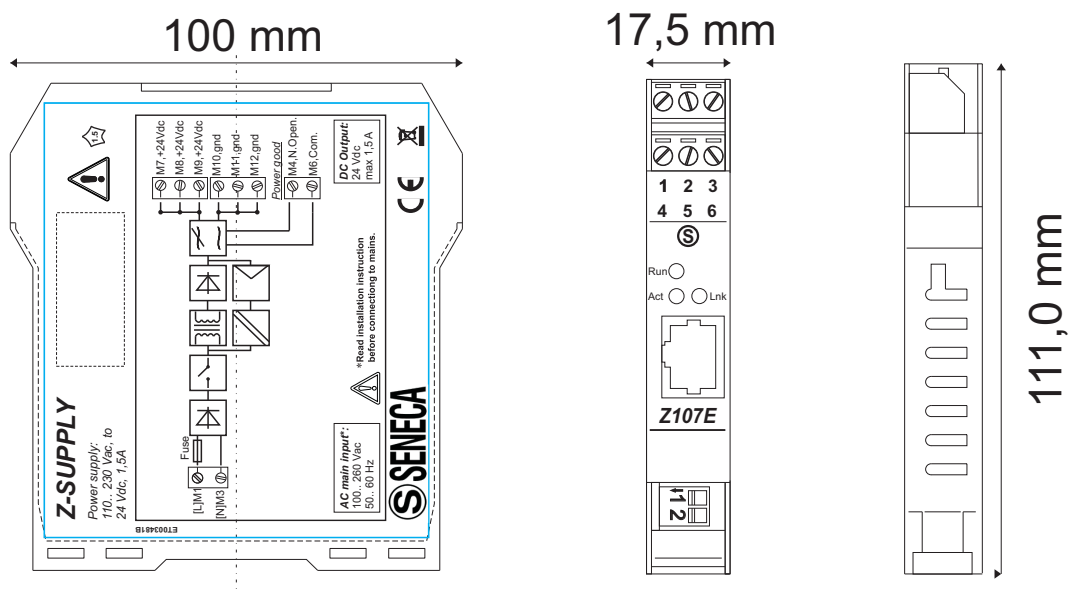
Power supply	12.. 28 Vac, 12.. 40 Vdc
maximum power consumption	1,2 W
Isolation	500 Vac

3.2 RS485 communication port

Maximum Baud rate	115 k
-------------------	-------

Connection	Removable screw terminal (M4, M5, M6) or IDC10 (rear connector)
3.3 Rs232 communication port	
Maximum Baud rate	115 K
Connection	DB9-F in the side of the module.
3.4 Ethernet communication port	
10 Base T	10 Mbit/s
100 Base T	100 Mbit/s
Protocol	TCP, UDP
Maximum connection length	100 m
Connection	RJ 45 front
3.5 Environmental condition	
Operating temperature	-20 °C.. +70 °C
Humidity	30 ..90% a 40 °C not condensing
Storage temperature	-40 .. +85°C
3.6 Box	
Dimension	100 x 17,5 x 111 mm
Box; protection class	Black plastic, IP20 (International protection)
3.7 Connectors	
Connectors	IDC with 10 pins for Seneca bus
	Removable screw terminals: pitch 5.08 mm
3.8 Standards	
EN 61000-6-4/ 2007	(electromagnetic emission, industrial environment)
EN 61000-6-2/ 2005	(electromagnetic immunity, industrial environment)
EN 61010-1/2001	(safety). All circuits must be isolated from the other circuits under dangerous voltage with double isolation. The power supply transformer must comply with EN 60742: «Isolated transformers and safety transformers»

3.9 Module layout



4.0 PRELIMINARY INSTRUCTIONS FOR USE

The module is designed to be installed on DIN 46277 rail (fig. 1) in vertical position.



No operation on the module is allowed while it is power on.
It is forbidden to install the module near heat-emitting devices



It is recommended that the use and installation operations are performed by an electrical-skilled technician

5.0 INSTALLATION

To install/remove the Z-SUPPLY on/from DIN 46277 rail, execute the following operations (Fig. 1a and Fig. 1b)

5.1 Installation on/removal from DIN 46277 rail

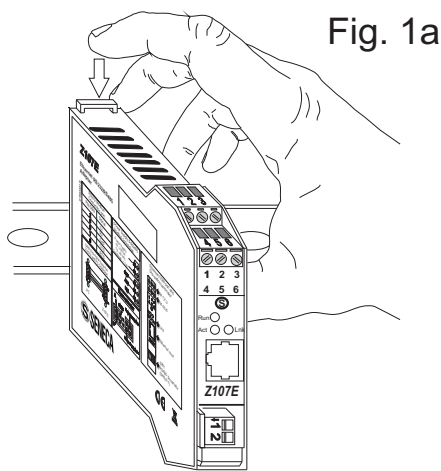


Fig. 1a

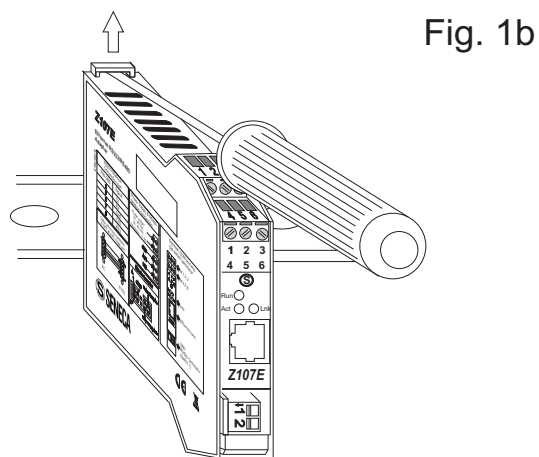


Fig. 1b

INSTALLATION

- 1) Pull the four latches (placed in the back-side panel) outwards;
- 2) insert the module in a DIN rail free slot;
- 3) make sure that the IDC10-connector pins are inserted on the slot correctly;
- 4) press the four latches inwards.

REMOVAL

- 1) Pull the four latches (placed in the back-side panel) outwards, using a screwdriver;
- 2) pull out the module gently.

It's important to insert the pins on the slot correctly because IDC10-connector is polarized; this connection is facilitated by use of a female/male insertion between IDC10 connector and DIN rail slot (Fig 1c and Fig 1d).

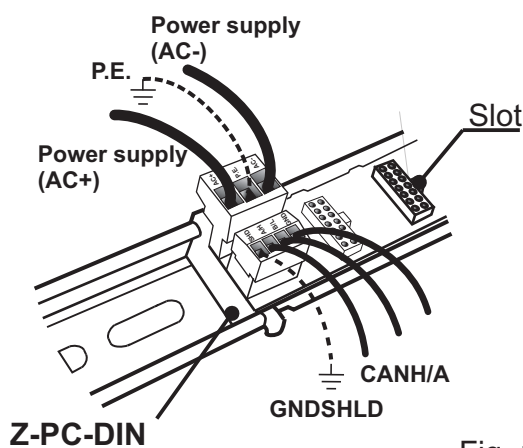


Fig. 1c

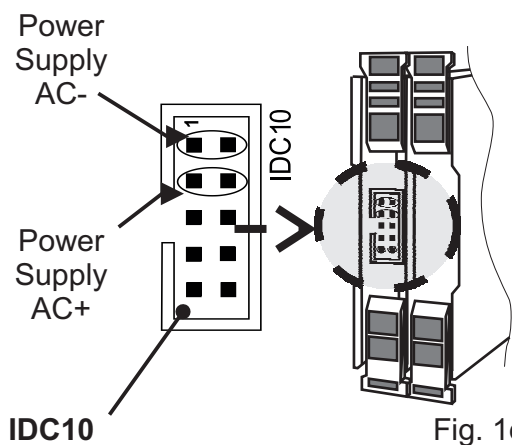
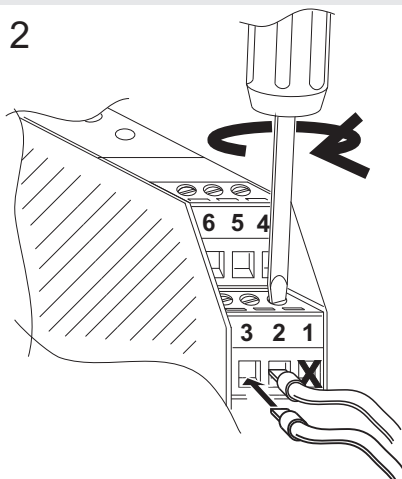


Fig. 1d

6.0 ELECTRICAL CONNECTIONS

6.1 Power supply

Fig. 2



Make sure that the Z107E is power off before executing any operations.

To power the Z107E is necessary to use a voltage between 12 .. 28 Vac or between 12 .. 40 Vdc through the terminal 2 and terminal 3.

Alternatively power supply can be provided through the rear connector IDC10, for Z-PC-DINAL bus.

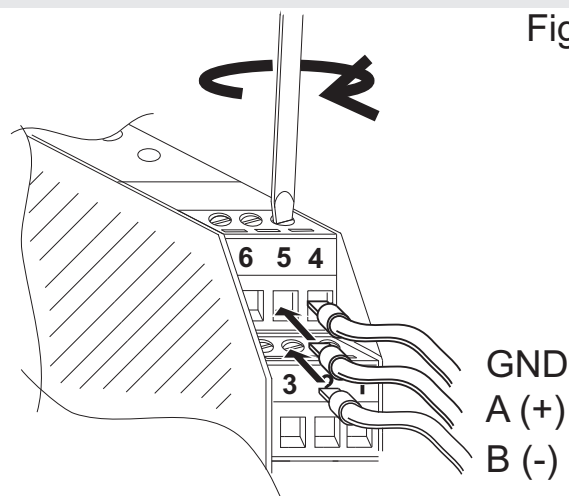
6.2 RS 485

The RS485 serial communication port is available on the screw terminals 4 (ground), 5 (A) e 6 (B) as shown in Fig 4.

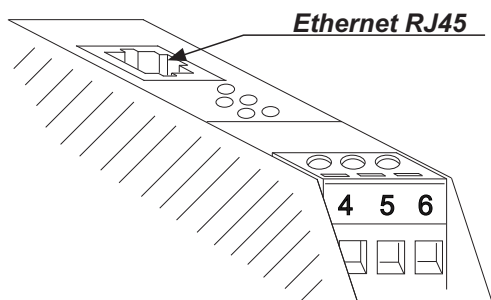
For the maximum performances it's recommended to use a specific shielded cable.

Alternatively RS485 can be provided through the rear connector IDC10, for Z-PC-DINAL bus.

Fig. 3



6.3 Ethernet



Ethernet communication port with RJ 45 on the front it's used to connect by the PC. Communication velocity up to 100 Mbit / s, with TCP and UDP protocol.

6.2 RS 232

The Rs232 serial communication port is available with DB9-F connector on the side of Z107E .

It can be used to download the configuration software in the Z107E when it is in «BOOT» mode.

The lenght of the cable don't have exceeded the 3 m and it must be a pin to pin type. The cable shall be as described in the following page.

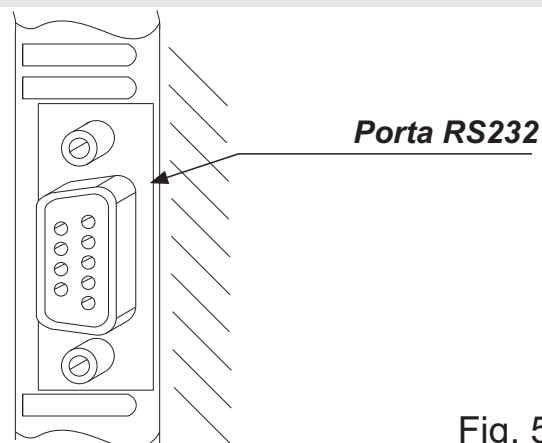
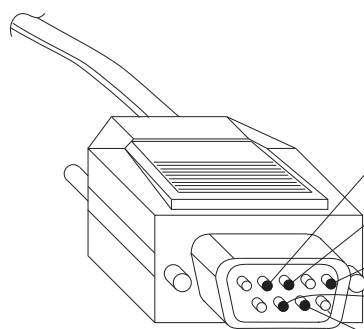


Fig. 5

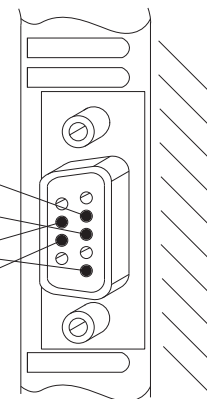
From PC

To Z107E



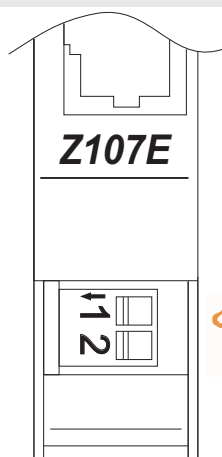
DESCRIPTION	PIN
Rx	2
Tx	3
Gnd	5
Rts	7
Cts	8

PIN	DESCRIPTION
2	Tx
3	Rx
5	Gnd
7	Cts
8	Rts



7.0 CONFIGURATION AND SETTINGS

7.1 Frontal Dip-switch



DIP-Switch	Position	Description
1		OFF= Disable the terminator of the RS485 / RS232 communication.
		ON= Enable the terminator of the RS485 / RS232 communication.
2		OFF= Restores the normal operation mode of the Z107E
		ON= Enable the «BOOT» mode that let the software configuration

7.2 Software configuration

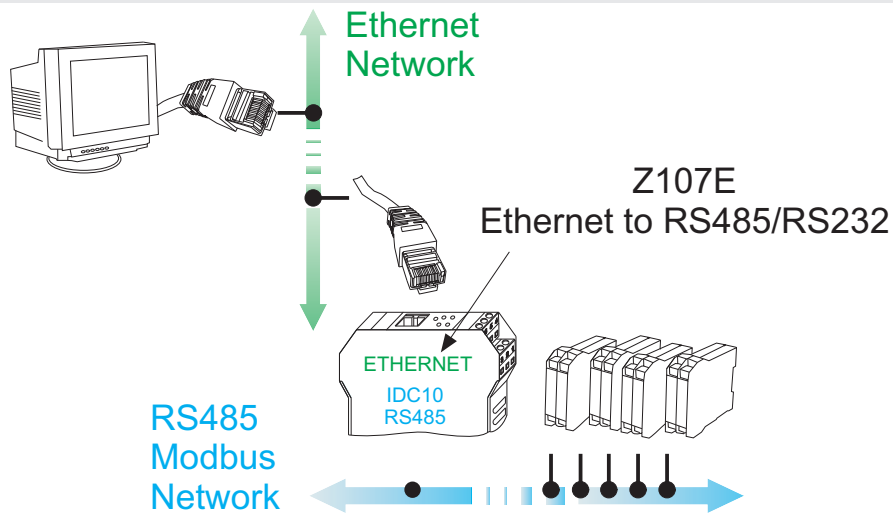
The first time the module is not configured, therefore in the following steps are present some simple instruction to download the software configuration.

- Turn off the module.
- Open the plastic side of the box.
- Enable the DIP-switch for «BOOT» mode
- Turn ON the module, the yellow led blink quickly.
- Now connect the DB9 cable (Z107E to PC)(PM002490).
- Open the configuration software: COMPOSITOR(*).
- Set the configuration parameters for yours application.
- Download the configuration to the module by RS232
- When the configuration is installed, TURN OFF the module.
- Disable the DIP-switch for «BOOT»mode.
- TAKE OFF the DB9 cable.
- Close the plastic side of the box.
- Connect the RJ45
- Turn on the module.
- Open configuration software: SERIALTOETHERNETCONNECTOR(SEC)(*)
- Configure the Virtual/RemoteCOM for yours application.
- End.

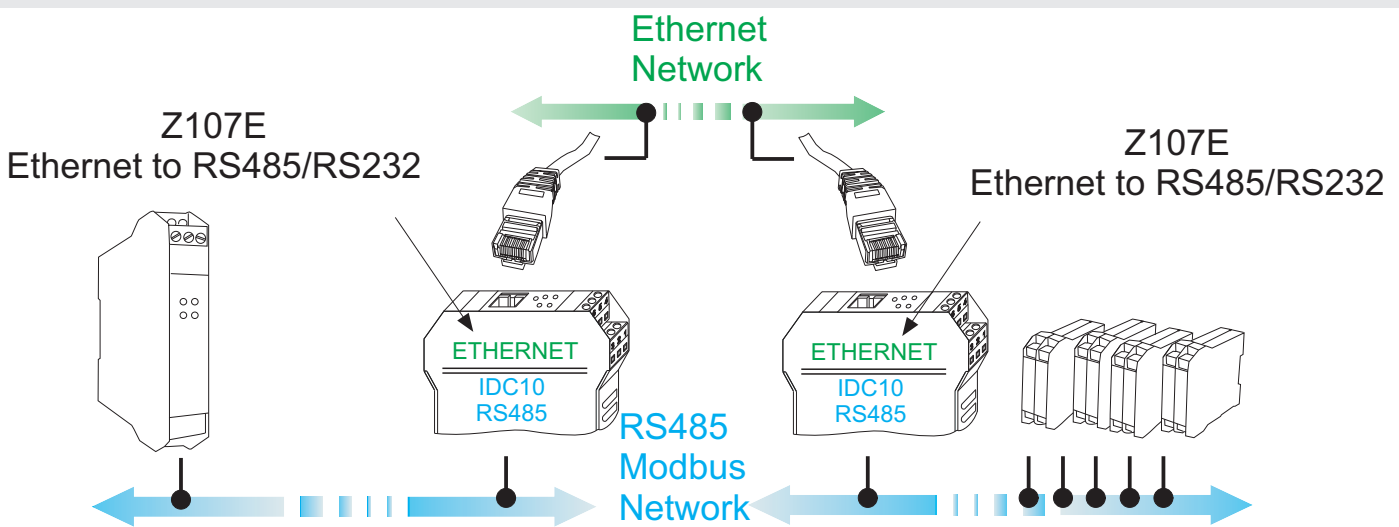
(*) For more information about a configuration software consult the seneca's configuration CD

8.0 ESEMPI APPLICATIVI

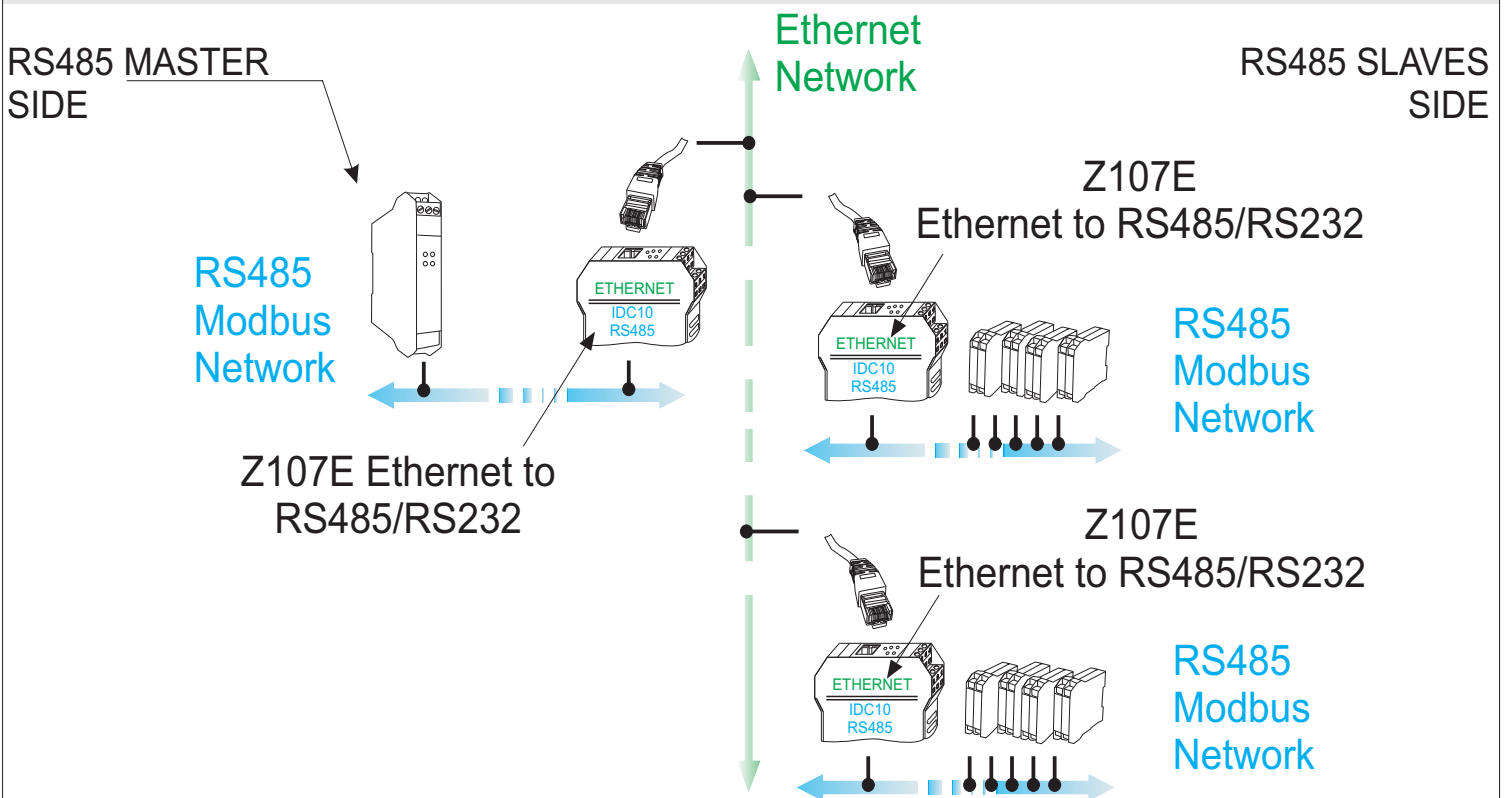
8.1 Remote COM port



8.2 Tunnel POINT to POINT



8.3 Tunnel POINT to MULTIPOINT



The following diagrams shows some examples of applications for different operating modes of the Z107E, in particular:

Application example 1: REMOTE COM PORT, allows to create a remote communication via ethernet by creating a virtual serial COM port for RS485 or RS232 bus.

Application example 2 : TUNNEL POINT TO POINT, ethernet communication repeater between two Z107E.

Application example 3 : TUNNEL POINT to MULTIPOINT; allows the connection between more Z107E.

9.0 SIGNALLING LEDS

LED	STATE	MEANING
Run	Slow blink	The Z107E work properly
	Fast blink	«BOOT» mode enable
Act	On	No data transfer from Ethernet
	Blinking	Data on Ethernet OK
Lnk	On	Connection OK
	Off	Ethernet not connected

10.0 ACCESSORIES

CODE	DESCRIPTION	
Z-PC-DIN	AL1-35	DIN rail support with screw terminals P=35 mm
	AL2-17,5	DIN rail support with screw terminals P=17,5 mm
Z-PC-DIN	1-35	DIN 1 slot support for rear connector P=35 mm
	2-17,5	DIN 2 slot support for rear connector P=17,5 mm
	4-35	DIN 4 slot support for rear connector P=35 mm
	8-17,5	DIN 8 slot support for rear connector P=17,5 mm
PM001450	Ethernet cable 1,5 m	
PM002490	RS232 cable (DB9M-DB9F), pin to pin	



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, waste disposal service of the retail store where you purchased this product.