

EtherNet/IP™

R-KEY-LT-E
Z-KEY-E | Z-KEY-2ETH-E

Modbus

MODBUS RTU / ASCII / TCP-IP -> ETHERNET/IP GATEWAY & PROTOCOL CONVERTERS

Highlights

- **Ethernet/IP Gateway Adapter / Master Modbus**
- **Isolation up to 1500 Vac**
- **Operating Temperature -25..+65°C**
- **Nr.1/2 Ethernet ports**
- **Nr.1/2 RS232/RS485 serial ports**
- **R/W memory areas 512 bytes**
- **Configuration via web server and PLC software third parties**
- **CE, UKCA, UL(*) certifications**

SENECA offers three Ethernet/IP gateway options, namely Z-KEY-E, R-KEY-LT-E, and Z-KEY-2ETH-E, catering to various form factors and Ethernet port configurations. These gateways serve as versatile communication bridges, supporting Modbus RTU/ASCII/TCP and EtherNet/IP protocols. Their primary function is to seamlessly integrate existing Modbus devices into an EtherNet/IP network by acting as Modbus masters for data acquisition and exchange with EtherNet/IP devices. In essence, these gateways convert Modbus data into EtherNet/IP packets, enabling EtherNet/IP scanners to control or monitor Modbus devices.

SENECA's Ethernet/IP gateways are highly configurable via a web server and operate in adapter/ModBUS Master mode. This allows for the connection of an Ethernet/IP PLC scanner to ModBUS RTU/ASCII Slave I/O devices.

Specifically, the gateways function by acting as ModBUS Master devices on the serial side while behaving as Ethernet/IP adapters on the Ethernet side. Modbus requests, such as read or write commands, are configured directly on the devices, and an EDS file is automatically generated. Once this file is imported into PLC development software, such as Rockwell STUDIO 5000, all configured I/O becomes accessible without further setup. Additionally, you can connect up to 3 Modbus TCP-IP servers in addition to serial devices.

(*) R-KEY-LT-E e Z-KEY-E models

SENECA

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MODBUS -> ETHERNET/IP GATEWAYS

	R-KEY-LT-E	Z-KEY-E | Z-KEY-2ETH-E
		
	ModBUS -> Ethernet/IP Gateway/Converter, 1 serial port, and 1 Ethernet port	**ModBUS -> Ethernet/IP Gateway/Converter, 2 serial ports, and 1 or 2 Ethernet ports**

TECHNICAL DATA

Power supply	10..40 Vdc 19..28 Vac	
Power consumption	1 W max	2 W max
LED - status indicators	Power supply Rx/Tx RS232/RS485 port IP powered / assegned Tx / Ethernet connection Ethernet/IP communication	Power supply Rx/Tx RS232/RS485 port Rx/Tx RS485 port Tx / Ethernet connection Ethernet/IP communication
Isolation	1.500 Vac	1.500 Vac 3-ways
Protection degree	IP20	
Operating Temperature	-25…+65°C	
Storage temperature	-30…+85°C	
Connections	Removable screw terminals 7-way, 5 mm pitch Removable screw terminals 2-way, 5 mm pitch RJ45 connector	Removable screw terminals 3-way, 5 mm pitch IDC10 rear connector for DIN rail 46277 RJ45 front connectors
Dimension (wxhxd)	53 x 90 x 32 mm	17,5 x 100 x 112 mm
Weight	80 g	170 g
Housing	PC/ABS self-extinguishing UL94-V0 color Grey RAL 7035	Nylon PA 6 30% glass fiber, self-extinguishing class V0
Certifications	CE, UKCA, UL	CE, UKCA, UL (Z-KEY-E model)
Installation	For DIN rail (IEC EN 60715)	

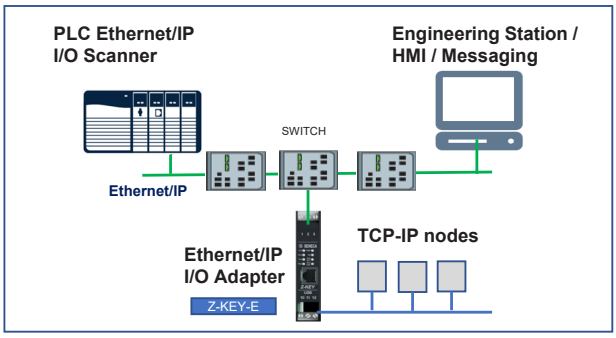
COMMUNICATION

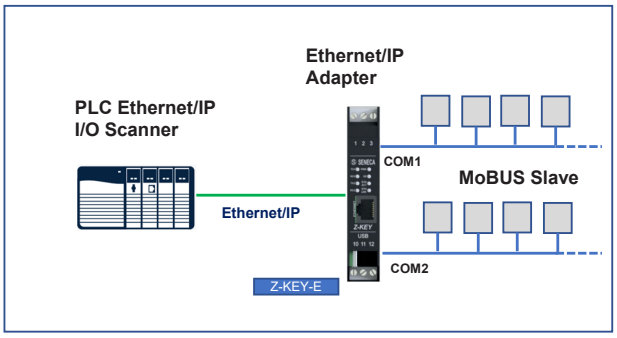
Ethernet Ports	Nr.1 Fast Ethernet 100 Tx autoswitch port, RJ45	Nr.1 Fast Ethernet 100 Tx autoswitch port, RJ45 front (Z-KEY-E) Nr.2 Fast Ethernet 100 Tx autoswitch ports, RJ45 front (Z-KEY-2ETH-E)
Serial Ports	Nr.1 RS232 / RS485 switchable port, max baud rate 115k on connector	Nr.1 RS232 / RS485 switchable port, baud rate max 115k on connector Nr.1 RS485 port, baud rate max 115k on connector IDC10 for bus and terminals
Supported Protocols	ModBUS RTU ModBUS TCP-IP ModBUS ASCII Ethernet/IP	
R/W memory areas	512 Byte	
Nr Max Server TCP IP	3	
N° Max ModBUS RTU / ASCII slave nodes	128	

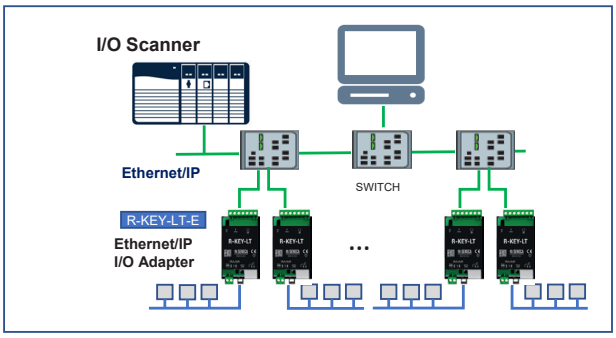
CONFIGURATION & SETTINGS

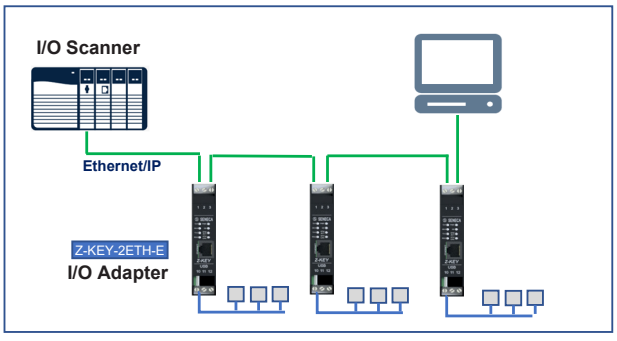
DIP switch	Flash memory IP address Serial activations
Web Server	Ethernet/IP Parameters ModBUS registers Firmware Upgrade Serial traffic I/O mapping EDS export
Ethernet/IP Programming Environments	EDS import, Module Configuration IP Configuration Read/write variables
Configuration file	EDS
SENECA Ethernet device identification software	SDD (Seneca discovery Device)

CONNECTION SCHEMES









ORDER CODES

Codes	Description
GATEWAYS	
R-KEY-LT-E	ModBUS -> Ethernet/IP gateway (1 serial port, 1 Ethernet port)
Z-KEY-E	ModBUS -> Ethernet/IP gateway (2 serial ports, 1 Ethernet ports)
Z-KEY-2ETH-E	ModBUS -> Ethernet/IP gateway (2 serial ports, 2 Ethernet ports)
SOFTWARE	
SDD	SENECA Ethernet device identification software
ACCESSORIES	
CS-DB9M-MEF-1012	Z-KEY serial communication cable (DB9M / MEF 10-12)
CE-RJ45-RJ45-R	Ethernet cable (RJ45 / RJ45)
Z-PC-DINAL2-17.5	DIN rail mounting bracket - HEAD +2 SLOT P=17.5mm
Z-PC-DIN2-17.5	DIN rail mounting bracket - 2 SLOT P=17.5mm
Z-PC-DIN8-17.5	DIN rail mounting bracket - 8 SLOT P=17.5mm
Z-SUPPLY	Single-phase switching power supply 24V @ 1.5 A

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