

R-KEY-LT-P / Z-KEY-P

INDUSTRIAL GATEWAYS - PROFINET IO ↔ MODBUS RTU / ASCII / TCP-IP PROTOCOL CONVERTERS

Highlights

- **ModBUS ↔ Profinet IO Gateway**
- **2-way or 3-way isolation 1.5 kVac-**
- **Operating temperature -25..+65°C**
- **Nr.1 100BaseT Ethernet port**
- **Nr.1 or 2 serial ports RS232/RS485**
- **Support for up to 128 ModBUS RTU slave nodes and 10 ModBUS TCP-IP Servers**
- **Management of up to 500 tags**
- **Modbus RTU / ASCII / TCP-IP, Profinet IO support**
- **ModBUS Pass through function**
- **Configuration and diagnostics via Web Server, Easy Setup2, TiA Portal, Codesys**

R-KEY-LT-P and Z-KEY-P gateways support automation and Industry 4.0 applications, ensuring high standards of performance, ease of use and security. In particular, they transmit data bidirectionally between Profinet IO and ModBUS RTU / ASCII / TCP-IP. Equipped with 1 (R-KEYLT-P) or 2 (ZKEY-P) serial ports and 1 Ethernet 100BaseT port, on the Profinet IO side the devices are compatible with most common PLCs that support the same standard.

On the ModBUS side they run as master devices on serial enabling a subnetwork with 128 ModBUS RTU/ASCII slave nodes. They can connect with 10 ModBUS TCP-IP servers and support the connection of 1 ModBUS TCP-IP client. Gateways autonomously read device registers on serial bus or Ethernet and allow them to be accessed by a Profinet controller. A maximum of 500 variables (tags) can be defined. Each ModBUS-type variable (tag) is convertible to Profinet IO protocol. Configuration and diagnostics are done via built-in web server, dedicated Easy Setup 2 software, excel template (variable management and export), Simatic TiA environment TiAPortal (in case of system integration with Siemens PLC) and/or PLC Codesys



PROFINET IO GATEWAYS

R-KEY-LT-P



Gateway - Profinet IO ↔
ModBUS protocol converter
(1 serial port)

Z-KEY-P



Gateway - Profinet IO ↔
ModBUS protocol converter
(2 serial ports)

GENERAL DATA

Power supply	11..40 Vdc; 19..28 Vac	11..40 Vdc; 19..28 Vac
Max power consumption	1 W	1,5 W
LED - status indicators	Power Supply Rx/Tx RS232/R485 Ethernet ACT/LNK Profinet communication	Power Supply Ethernet ACT/LNK Profinet communication Rx/Tx RS232/R485 (COM1) Rx/Tx RS232/R485 (COM2)
Isolation	1.500 Vac @2-ways	1.500 Vac @3-ways
Protection degree	IP20	IP20
Operating temperature	-25...+65°C	-25...+65°C
Storage temperature	-30...+85°C	-30...+85°C
Connections	Screw terminals, 7-way removable screw, 5 mm pitch Screw terminals, 2-way removable screw, 5 mm pitch Ethernet connector	Removable 3-way screw terminals, 5 mm pitch IDC10 rear connector for DIN rail 46277 RJ45 front connector
Dimension (wxhxd)	32 x 53 x 90 mm	17,5 x 100 x 112 mm
Weight	80 g	170 g
Case	PC/ABS self-extinguishing UL94-V0 color Grey RAL 7035 For DIN rail (IEC EN 60715)	Nylon PA 6 30% glass fiber, self-extinguishing class V0 For DIN rail (IEC EN 60715)
Mounting		
Approvals	CE	CE

COMMUNICATION

Ethernet ports	Nr.1 Fast Ethernet 100 Tx autoswitch port, RJ45 on front panel	Nr.1 Fast Ethernet 100 Tx autoswitch port, RJ45 on front panel
Serial ports	Nr.1 RS232 / RS485 serial port switchable, baud rate max 115k on connector	Nr.1 RS232 / RS485 serial port switchable, baud rate max 115k on connector
Protocols	ModBUS TCP-IP, ModBUS RTU, ModBUS ASCII, Profinet IO	ModBUS TCP-IP, ModBUS RTU, ModBUS ASCII, Profinet IO

OPERATING MODE

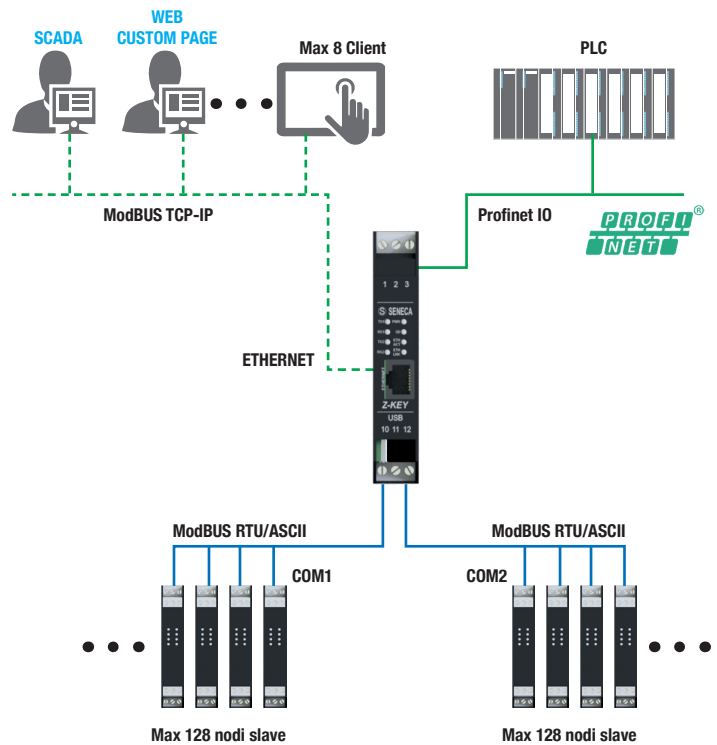
ModBUS RTU/ASCII TCP-IP Gateway	Yes	Yes
Nr. Max Tag	500	500
Memory dimension	1028 Byte	1028 Byte
Nr Max Server TCP IP	10	10
N° Max ModBUS RTU / ASCII slave nodes	128	128 per port

SETTINGS AND ADVANCED FUNCTIONS

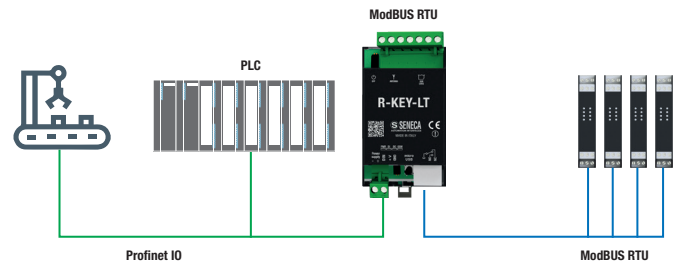
EASY SETUP 2	Yes	Yes
Web Server	Yes	Yes
CODESYS	Yes	Yes
TiA Portal / Step 7	Yes	Yes
ModBUS Pass Through	Yes	Yes
GSDML	Yes	Yes
Excel template (variable configuration)	No	Yes

CONNECTION SCHEMES

Z-KEY-P



R-KEY-LT-P



ORDER CODES

Code	Description
GATEWAYS	
R-KEY-LT-P	Gateway - Profinet IO ModBUS RTU / TCP-IP protocol converter (1 serial port)
Z-KEY-P	Gateway - Profinet IO ModBUS RTU / TCP-IP protocol converter (2 serial ports)
SOFTWARE	
EASY SETUP 2	PC software configurator
SDD	SENECA Discovery Device
SESC	SENECA Ethernet to Serial Connection
TEMP-TAG-Z-KEY	Template Excel gestione tag modalità gateway
ACCESSORIES	
CS-DB9M-MEF-1012	Z-KEY series serial communication cable (DB9M / MEF 1012)
CE-RJ45-RJ45-R	Straight ethernet cable (RJ45 / RJ45)
Z-PC-DIN2-17.5	DIN rail quick mounting bracket 2 slots pitch 17.5mm
Z-PC-DINAL2-17.5	DIN rail quick mounting bracket, head +2 slots pitch 17.5mm
Z-SUPPLY	Single-phase switching power supply 24V @ 1.5 A