AUTOMATION INTERFACES
SHORT FORM CATALOG

100% Made & Designed in Italy

DATA ACQUISITION AND AUTOMATION SYSTEMS

INDUSTRIAL COMMUNICATION AND REMOTE CONTROL

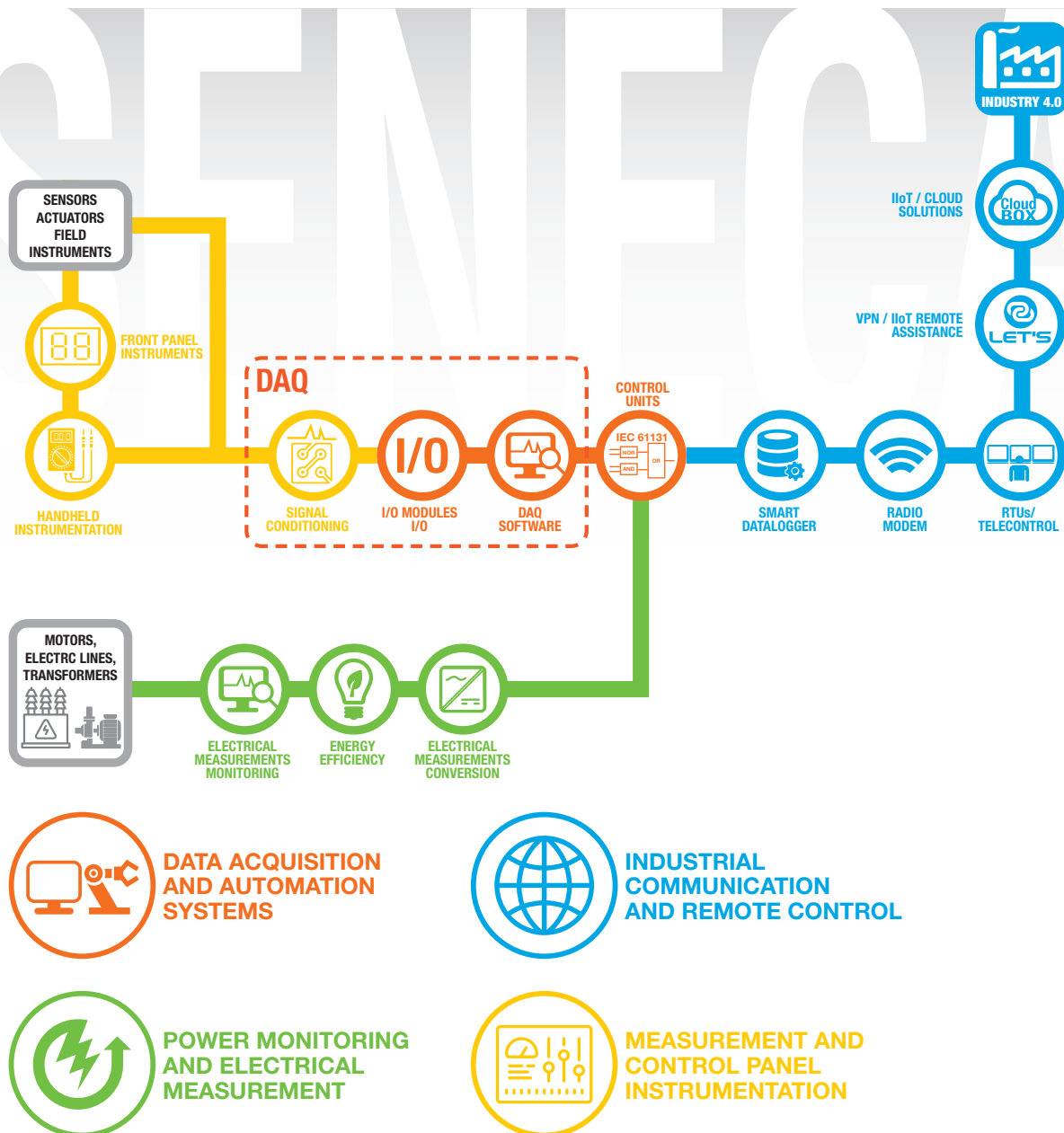**POWER MONITORING AND ELECTRICAL MEASUREMENT**

MEASUREMENT AND CONTROL PANEL INSTRUMENTATION

SENECA
www.seneca.it

MISSION: WE HANDLE THE SIGNAL FROM THE SENSOR TO INDUSTRY 4.0
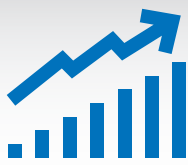
One of the leading companies in Europe to design and produce galvanic isolators and signal conditioners, SENECA offers a comprehensive catalogue of high-performance and cost-effective products and systems with which it is possible to feed, isolate, convert, capture, display and transmit safely by cable, bus or radio, most industrial signals, in other words, to ensure the integrity of the data processing cycle. In the 4.0 age, an increasing number of manufacturing companies, builders of machines, utilities, chemical and process industries must be able to rely on decentralised devices and control systems to monitor the progress of machines and systems. In this scenario the intent of SENECA is to ensure the real-time knowledge of the data available in order to offer the customer new information and concrete economic opportunities. This is the essence of the innovation process called Industry 4.0, in which the functions of data collection and interconnection are fundamental.


INDUSTRY 4.0

IIoT / CLOUD SOLUTIONS — Cloud BOX

VPN / IIoT REMOTE ASSISTANCE — LET'S

SENSORS ACTUATORS FIELD INSTRUMENTS

FRONT PANEL INSTRUMENTS

HANDHELD INSTRUMENTATION

DAQ
SIGNAL CONDITIONING — I/O MODULES I/O — DAQ SOFTWARE

CONTROL UNITS
IEC 61131

SMART DATALOGGER

RADIO MODEM

RTUs/ TELECONTROL

MOTORS, ELECTRC LINES, TRANSFORMERS

ELECTRICAL MEASUREMENTS MONITORING

ENERGY EFFICIENCY

ELECTRICAL MEASUREMENTS CONVERSION

DATA ACQUISITION AND AUTOMATION SYSTEMS

INDUSTRIAL COMMUNICATION AND REMOTE CONTROL

POWER MONITORING AND ELECTRICAL MEASUREMENT

MEASUREMENT AND CONTROL PANEL INSTRUMENTATION

FACTS & FIGURES

SENECA

Main italian manufacturer of automation interfaces

CAGR last 5 years 14%

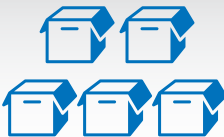**ISO 9001 quality certification since 1997**
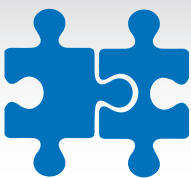
2 synergic business units

International product and process certifications

Global sales network with about 70 partners

200,000 pieces sold on average each year

Latest generation Pick&Place 50.000 comp./hour
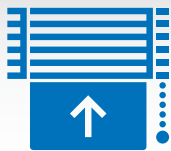
4 product lines >700 article codes

Average time for order processing 48h

Over 2,500 active customers

Multichannel technical support within 48h

Automated warehouses with over 90,000 pieces in stock

Average MTBF over 1 million hours

High-tech headquarters of over 5,000 sqm
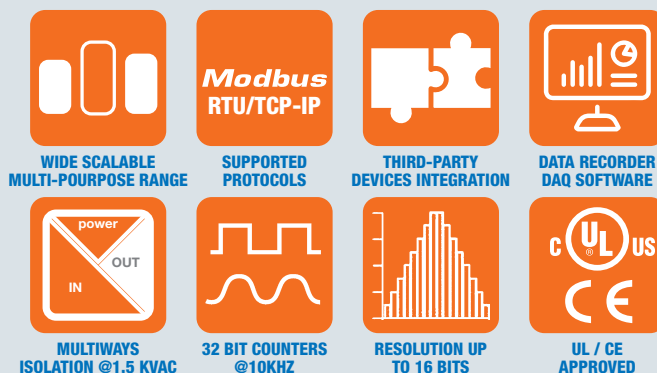
Customized warranty up to 60 months

INDEX

1

DATA ACQUISITION AND AUTOMATION SYSTEMS

Z-PC Line is a modular automation system for managing from a single signal to thousands of I/Os. ZPC series includes the maximum variety of I/O modules: digital inputs, fast counters, digital relay and mosfet outputs, analog channels (mA, V, Ohm, mV), strain gauge, resistance thermometers, thermocouples, electrical signals, galvanically isolated and with Mod-BUS, CANopen, Ethernet, M-BUS communication protocols. The I/O modules support RS485 serial communication with ModBUS RTU protocol, up to 64 nodes without repeater and speeds up to 115 kbps.

WIDE SCALABLE MULTI-POURPOSE RANGE

Modbus RTU/TCP-IP — **SUPPORTED PROTOCOLS**

THIRD-PARTY DEVICES INTEGRATION

DATA RECORDER DAQ SOFTWARE

power OUT IN — **MULTIWAYS ISOLATION @1,5 KVAC**

32 BIT COUNTERS @10KHZ

RESOLUTION UP TO 16 BITS

UL / CE APPROVED

TOP SELLING PRODUCTS

Z-8AI

8-CH Analog Input module
RS485 ModBUS RTU

Z-SG

Strain gauge module
Analogue Output + ModBUS RTU
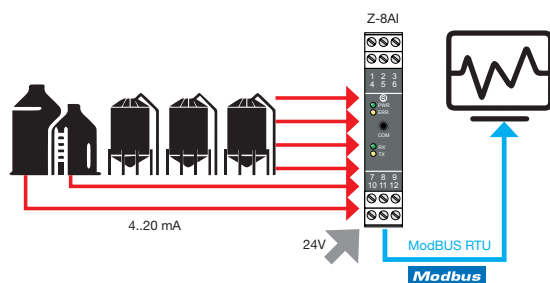
Z-10-D-IN

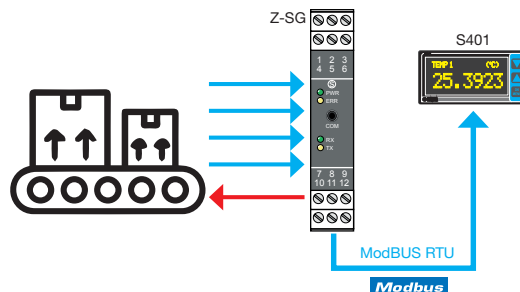10-CH Digital Input module
RS485 ModBUS RTU

Z-4RTD2

4-CH RTD Input module
RS485 ModBUS RTU

APPLICATION EXAMPLES

PROCESS MEASUREMENT AND DATA RETRANSMISSION VIA MODBUS RTU

Z-8AI

4..20 mA

24V

ModBUS RTU

Modbus

MODBUS ACQUISITION AND DISPLAY FOR WEIGHING SYSTEMS

Z-SG

S401

25.3923

ModBUS RTU

Modbus

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
Z-10-D-IN	10-CH Digital Input module / RS485 ModBUS RTU	Z-8TC-LAB	8-CH TC input module@15 bits, ModBUS interchang. clamps
Z-10-D-OUT	10-CH Digital Output module / RS485 ModBUS TU	ZC-16DI-8DO	16 CH DI / 8 CH DO module / CANopen-RS485 ModBUS RTU
Z-3AO	3-CH analog output module / RS485 ModBUS RTU	ZC-24DI	24-CH digital input CANopen / ModBUS
Z-4AI	4-CH analog input module / RS485 ModBUS RTU	ZC-24DO	24-CH digital output CANopen / ModBUS
Z-4RTD2	4-CH RTD input module / RS485 ModBUS RTU	ZE-2AI	2-CH AI Modbus RTU - Modbus RTU-Modbus TCP-IP module
Z-4TC	4-CH thermocouple input module / RS485 ModBUS RTU	ZE-4DI-2AI-2DO	CH DI / 2-CH AI, 2-CH DO Modbus RTU-Modbus TCP-IP module
Z-5DI-2DO	5CH Digital Input - 2CH Digital Output RS485-ModBUS RTU	Z-DAQ-PID	1 CH AI / RS485 ModBUS RTU with PID regulation
Z-8AI	8-CH analog input module / RS485 ModBUS RTU	Z-D-IN	5 CH DI module / RS485 ModBUS RTU
Z-8NTC	8-CH NTC input module / RS485 ModBUS RTU	Z-D-OUT	5 CH DO Relay module / RS485 ModBUS RTU
Z-8TC-1	8-CH TC input module / RS485 ModBUS RTU, Micro USB port	Z-SG2	Advanced strain gauge input module / RS485 ModBUS RTU

Additional order codes and information

CANopen Z-PC Line is a truly distributed I/O system based on IEC 61131 programming that does not require the use of couplers, controllers or repeaters for each communication line. All modules have an interface CAN communication with speeds up to 1 Mbps. CANopen Z-PC Line modules can be integrated with configurators and master controllers / network managers of third parties, even on existing machines and installations. The advantage of not needing an end-of-line coupler significantly reduces the cost factor for small to medium installations CANopen.

0,01%
HIGH ACCURACY

power OUT IN
ISOLATION 1,5 kVac (up to 6 ways)
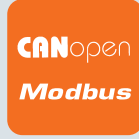
BAUD RATE UP TO 1 Mbps

CODESYS
CODESYS PROGRAMMING

UP TO 8 POWERED SENSORS PER MODULE

DIRECT CONNECTION (NO COUPLERS)

AC/DC POWER ON THE SAME HARDWARE

CANopen Modbus
CANOPEN/MODBUS ON DIGITAL MODULES

TOP SELLING PRODUCTS

ZC-24DI

24-CH digital inputs CANopen / ModBUS module

ZC-24DO

24-CH digital outputs CANopen / ModBUS module

ZC-16DI-8DO

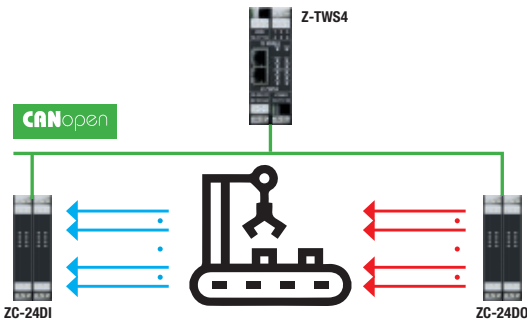16 CH DI / 8 CH DO CANopen / ModBUS module

ZC-8AI

8-CH analog input (mA, V) CANopen module

APPLICATION EXAMPLES

PROGRAMMABLE HANDLING SYSTEM

Z-TWS4

CANopen

ZC-24DI

ZC-24DO

AUTOMATIC BOTTLING SYSTEM
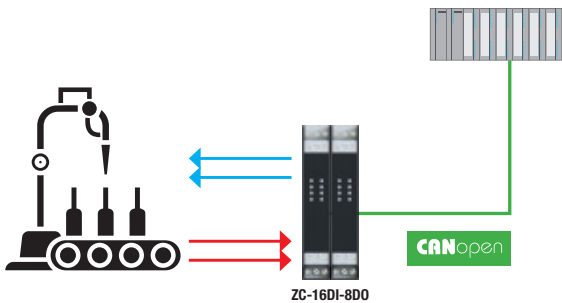
CANopen

ZC-16DI-8DO

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
ZC-16DI-8DO	16 CH DI / 8 CH DO CANopen-ModBUS module	ZC-4RTD	4-CH RTD input CANopen module
ZC-24DI	24-CH digital input CANopen / ModBUS	ZC-8AI	8-CH analog input (mA, V) CANopen module
ZC-24DO	24-CH digital output CANopen / ModBUS	ZC-8TC	8-CH Thermocouple (J,K,E,N,S,R,B,T) CANopen module
ZC-3AO	3-CH analog output (mA, V) CANopen module	ZC-SG	1-CH strain gauge CANopen module

Additional order codes and information

REMOTE I/O MODULES – R-LINE MODBUS RTU / TCP-IP

R Line I/O modules are designed for flexible wiring needs, small installation spaces, high I/O density applications with integrated ModBUS / Ethernet communication. Configuration can be done through dedicated software, web server with HTML5 support and DIP switches. Capable of powering external sensors and with 1,500 Vac isolation, R Line modules can be daisy chained with fault-bypass to ensure connection even if one module in the chain fails.

FLEXIBLE AND SPACESAVING APPLICATIONS

I/O HIGH DENSITY

ModBUS RTU / TCP-IP
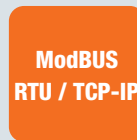
DOUBLE PROTOCOL

CONFIGURATION VIA WEB SERVER

EMBEDDED NETWORKING FUNCTIONS

DAISY CHAIN CONNECTIONS

MODBUS PASS-THROUGH

RETENTIVE COUNTERS 6kHz @32bits

TOP SELLING PRODUCTS

R-32DIDO

16-CH digital inputs / 8-CH digital relay outputs Modbus RTU / TCP-IP module

R-16DI-8DO

16-CH digital inputs / 8-CH digital relay outputs Modbus RTU / TCP-IP module

R-8AI-8DIDO

8-CH analog inputs / 8-CH digital inputs / outputs Modbus RTU / TCP-IP module
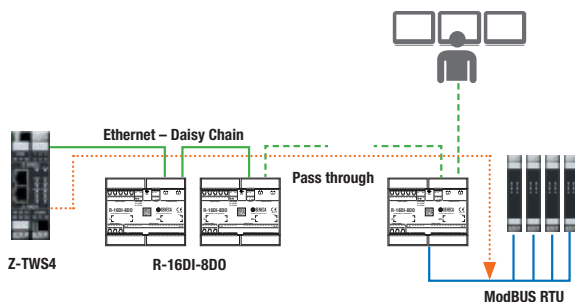
R-SG

Strain gauge Modbus TCP-IP / Modbus RTU converter module

APPLICATION EXAMPLES

ETHERNET DAISY CHAIN, MODBUS PASS-THROUGH

Ethernet – Daisy Chain

Pass through

Z-TWS4

R-16DI-8DO

ModBUS RTU

FAULT BY-PASS

Ethernet – Daisy Chain
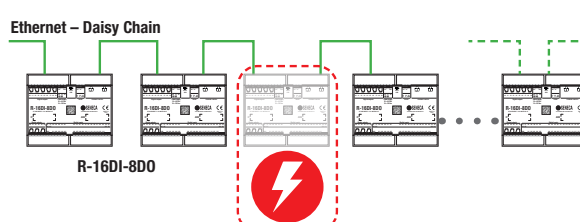
R-16DI-8DO

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION
R-8RTD-8DIDO	8-CH RTD inputs Modbus TCP-IP / Modbus RTU module
R-8AI-8DIDO	8-CH analog inputs / 8-CH digital inputs / outputs Modbus TCP-IP / Modbus RTU module
R-16DI-8DO	16-CH digital inputs / 8-CH digital relay outputs Modbus TCP-IP / Modbus RTU module
R-32DIDO	32-CH digital inputs / outputs Modbus TCP-IP / Modbus RTU
R-SG	Strain gauge Modbus TCP-IP / Modbus RTU converter module
R-KEY-LT	Compact industrial ModBUS gateway

Additional order codes and information

R-Line I/O modules are designed for flexible wiring needs, small installation spaces, high I/O density applications with integrated Profinet IO communication. Configuration is provided via CODESYS softPLC software and Siemens TiA Portal/Step7 design environment. R Series modules can be daisy chained to ensure Ethernet connectivity even if one module in the chain fails. R Series modules support Profinet IO Class 1 (RT), version in which the different devices are not synchronized, each with its own cycle time.

FLEXIBLE AND SPACESAVING APPLICATIONS

I/O HIGH DENSITY

PROFINET IO REAL TIME CLASS

SETTINGS VIA STEP7/TIA PORTAL

EMBEDDED NETWORKING FUNCTIONS

DAISY CHAIN CONNECTIONS

PROGRAMMING VIA CODESYS

Tbus=1ms

SHORT SCAN TIME

TOP SELLING PRODUCTS

R-32DIDO-P

32-CH digital inputs / outputs Profinet IO

R-16DI-8DO-P

16-CH digital inputs / 8-CH digital relay outputs Profinet IO module

R-8AI-8DIDO-P

8-CH analog inputs / 8-CH digital inputs / outputs Profinet IO module

R-SG-P

Strain gauge Profinet IO converter module

APPLICATION EXAMPLES

EXAMPLE OF STAR TOPOLOGY (WITH SWITCH)

EXAMPLE OF DAISY CHAIN TOPOLOGY WITH FAULT-BY-PASS

Profinet   Daisy Chain

R-16DI-8DO-P
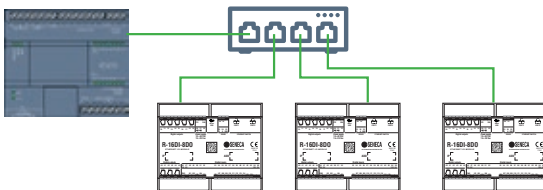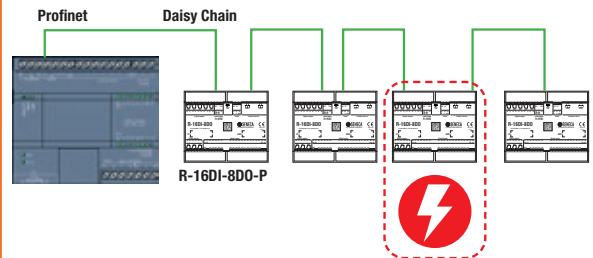
MAIN PRODUCT CODES

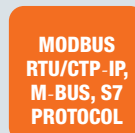| ORDER CODE	DESCRIPTION
R-8RTD-8DIDO-P	8-CH RTD inputs Profinet IO module
R-8AI-8DIDO-P	8-CHanalog inputs / 8-CH digital inputs / outputs Profinet IO module
R-16DI-8DO-P	16-CH digital inputs / 8 digital relay outputs Profinet IO module
R-32DIDO-P	32-CH digital inputs / outputs Profinet IO
R-SG-P	Strain gauge Profinet IO converter module
R-KEY-LT-P	Compact Industrial Gateway Profinet IO <-> ModBUS RTU / TCP-IP

Additional order codes and information

SENECA's multi-function controllers (Z-TWS11, ZTWS4, Z-PASS2-S, S6001-RTU) are modular / all-in-one devices with high connectivity modular / all-in-one devices. They combine PLC tasks based on the Straton IEC 61131-3, softLPLC platform with web server functionality, with web server, datalogger, remote control, remote maintenance and energy management functions (in accordance with IEC 60870-101/104, IEC 61850). The controllers can be used with different architectures and configurations depending on the complexity of the system and the hardware requirements.

| MULTIPURPOSE CONTROLLERS | SOFT PLC IEC 61131-3 | MODBUS RTU/CTP-IP, M-BUS, S7 PROTOCOL / FIELDBUS SUPPORT | ENERGY PROTOCOLS |
| UNIVERSAL APPLICATION AREAS | DATALOGGER FUNCTION | IT PROTOCOLS | OPC UA STANDARD |

TOP SELLING PRODUCTS

Z-TWS11

IEC 61131 basic controller, built-in IO, Straton

Z-TWS4

IEC 61131 multifunction controller, buit-in I/O, Straton
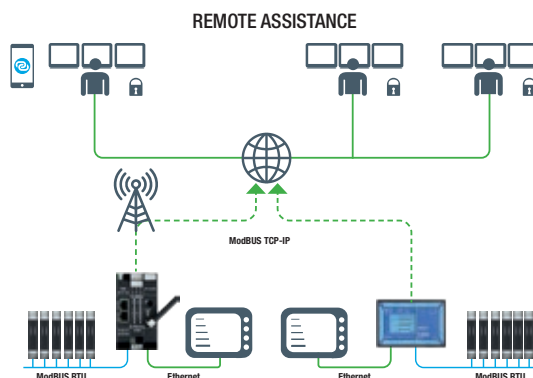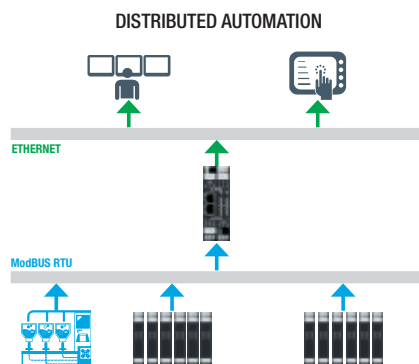
Z-PASS2-S

Remote Controller, VPN, serial device server, GPS and I/O integrated

S6001-RTU

Remote Control Unit with built-in IO and 3G+/4G modem

APPLICATION EXAMPLES

DISTRIBUTED AUTOMATION

ETHERNET

ModBUS RTU

REMOTE ASSISTANCE

ModBUS TCP-IP

ModBUS RTU   Ethernet   Ethernet   ModBUS RTU

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION
Z-TWS11	IEC 61131 basic controller, built-in IO, Straton
Z-TWS4-S-IO	IEC 61131 multifunction controller, buit-in I/O, Straton
Z-TWS4-E-IO	IEC 61131 Energy controller energy, built-in I/O, Straton OEM
S6001-RTU	Remote Control Unit with built-in IO and 3G+ modem
S6001-RTU-4GWW	Remote Control Unit with built-in IO and 4G WW LTE modem
S6001-RTU-E	Remote Control Unit with built-in IO, 3G+ modem, energy
S6001-RTU-E-4GWW	Remote Control Unit with built-in IO, 4G WW LTE, Energy protocols
Z-PASS2-S-4GWW	Remote Controller 4G worldwide, VPN, serial device server, GPS and I/O integrated
Z-PASS2-S-E-4GWW	Remote Controller Energy 4G worldwide, VPN, serial device server, GPS and I/O integrated

Additional order codes and information

S6001-PC

S6001 Pump Controller is a controller for pumping units and pressurization systems managing from 2 to 6 pumps (with Z-D-IO expansion I/O modules), supporting three different operating modes: flow rate adjustment, level dependent control and pressure dependent control.

3G+/4G LTE

STRATON

VPN

PUMPING / PRESSURE BOOSTING SYSTEM

Z-FLOWCOMPUTER

Z-FLOWCOMPUTER is a flow computer for gas, steam and water application. The unit is equipped with nr. 4 PNP / NPN digital inputs, nr. 2 voltage / current analog inputs, nr. 1 universal analog input, nr. 2 relay digital outputs and nr. 1 analog voltage / current output.

MODBUS RTU, MODBUS TCP-IP

COMMUNICATION PROTOCOLS

4,3"
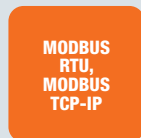
HMI TFT TOUCHSCREEN

I/O

BUILT-IN I/O

WATER / STEAM / FLOW COMPENSATION

TOP SELLING PRODUCTS

S6001-PC

Advanced Pump Controller with 7" HMI , 3G+ modem

S6001-PC-4GWW

Advanced Pump Controller with 7" HMI, 4G/LTE modem

TOP SELLING PRODUCTS

Z-FLOWCOMPUTER

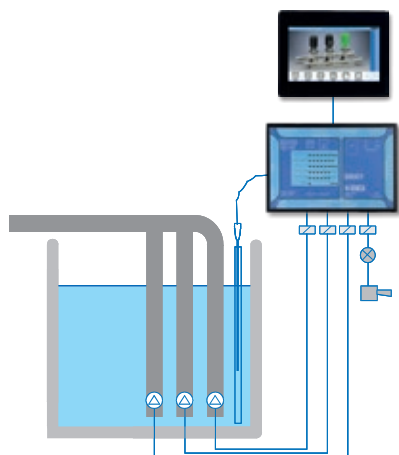Universal water / steam flow computer with 4,3" HMI

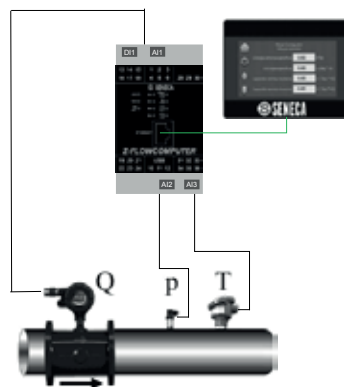### Z-FLOWCOMPUTER-B

Universal water / steam flow computer

APPLICATION EXAMPLE

PUMP AND LEVEL CONTROL

APPLICATION EXAMPLE

MASS AND STEAM CALCULATION

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION
S6001-PC	Advanced Pump Controller with 7" HMI
S6001-PC-4GWW	Advanced Pump Controller 4G WW LTE with 7" HMI

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION
Z-FLOWCOMPUTER	Universal energy & flow computer with 4,3" HMI
Z-FLOWCOMPUTER-B	Universal energy & flow computer

Additional order codes and information

S401-L is the first indicator with OLED display (Organic Light Emitting Diode) display on the industrial market.

This display technology This display technology is based on a series of layers of organic material that conduct current only in one direction, behaving similarly to a diode. Unlike traditional LCD and LED displays, OLED displays do not require additional additional components to be illuminated, but produce their own light. All this translates into higher brightness, greater definition and reduced footprint.

DISPLAY UP TO 30 VALUES

R/W/MATH MASTER FUNCTIONS

HIGH BRIGHTNESS 70cd/m²

COMPACT SIZE 96X48X40 mm

AUTOMATIC SCROLLING

SMART CABLING

FAST PROGRAMMING

ALARM MANAGEMENT
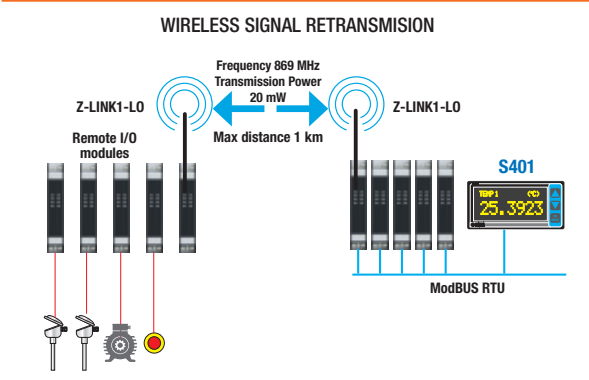
PRODUCT VIEWS

S401-L
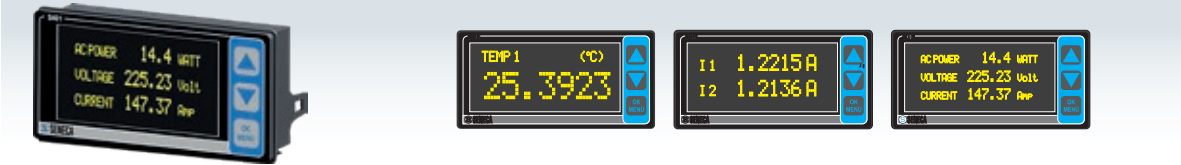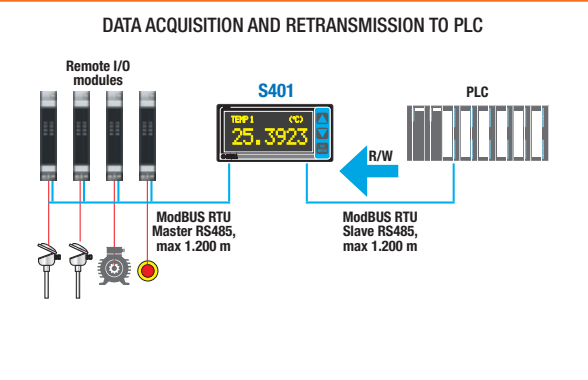
APPLICATION EXAMPLES
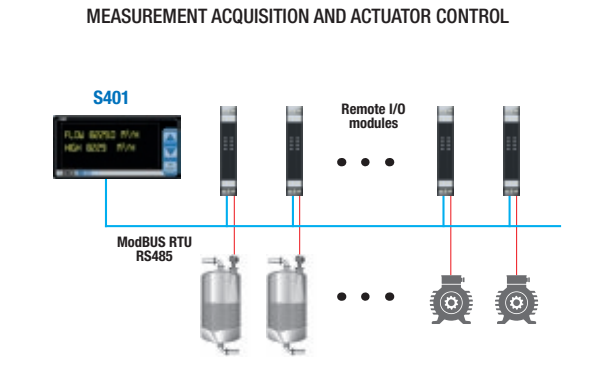
WIRELESS SIGNAL RETRANSMISION

Frequency 869 MHz
Transmission Power 20 mW
Max distance 1 km

Z-LINK1-LO

Z-LINK1-LO

Remote I/O modules

S401

ModBUS RTU

DATA ACQUISITION AND RETRANSMISSION TO PLC

Remote I/O modules

S401

PLC

R/W

ModBUS RTU Master RS485, max 1.200 m

ModBUS RTU Slave RS485, max 1.200 m
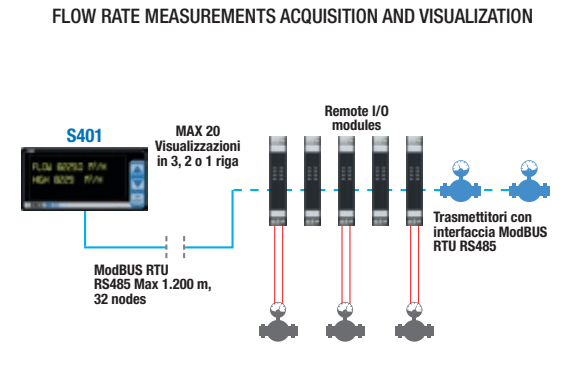
MEASUREMENT ACQUISITION AND ACTUATOR CONTROL

S401

Remote I/O modules

ModBUS RTU RS485

FLOW RATE MEASUREMENTS ACQUISITION AND VISUALIZATION

S401

MAX 20 Visualizzazioni in 3, 2 o 1 riga

Remote I/O modules

Trasmettitori con interfaccia ModBUS RTU RS485

ModBUS RTU RS485 Max 1.200 m, 32 nodes

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION
S401-L	ModBUS RTU indicator with OLED 2,7" display

Additional order codes and information

VISUAL touchscreen Operator Panels are suitable to satisfy a wide range of applications from small automation to control of complex industrial processes. With 4,3", 7", 9,7", 10,1", 15" and widescreen format display they allow the visualization of more information than a traditional display, while ensuring external compact dimension. HMI VISUAL screens can be freely horizontally or vertically oriented, depending on the needs of the application. TFT displays support up to 16 million colors with high resolution and LED backlighting.

LED
TFT 16M COLORS

CPU
HIGH PERFORMANCE PROCESSOR

FLASH MEMORY UP TO 512MB

Modbus
MODBUS

CE/UL APPROVALS

NEMA4/IP65 /IP66

EASY PROGRAMMING TOOLKIT

RESISTIVE TOUCHSCREEN
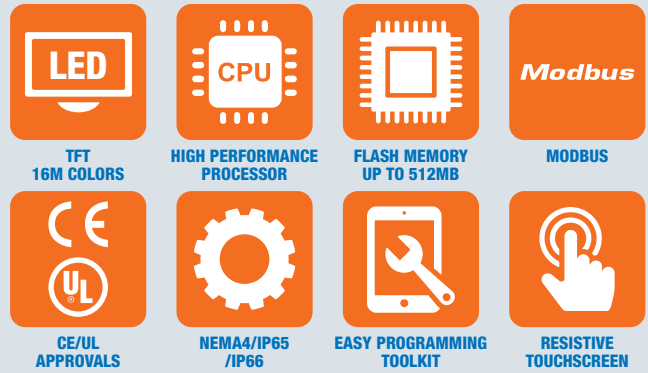
TOP SELLING PRODUCTS

VISUAL2E

7" touch screen operator panel, Ethernet

VISUAL4

7" touch screen operator panel, 800x480, ARM 600 MHz

VISUAL10

9,7" HMI widescreen colors, Ethernet interface

VISUAL12

15" HMI widescreen colors, Ethernet interface, aluminum case

APPLICATION EXAMPLES

DISTRIBUITED SERIAL NETWORK

VISUAL

RS232/RS485 ModBUS RTU　　RS232/RS485 ModBUS RTU

I/O　　　I/O

REMOTE CONTROL

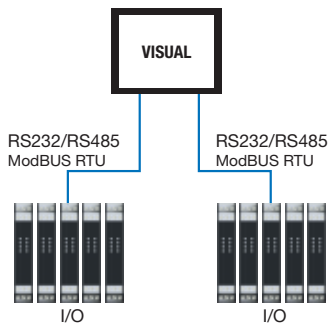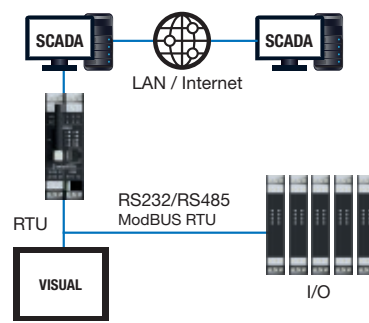SCADA　LAN / Internet　SCADA

RTU

RS232/RS485 ModBUS RTU

VISUAL　　　I/O

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
EB PRO	HMI configuration software VISUAL	VISUAL5-PC	7"HMI widescreen 64k colors, Ethernet, S6001-PC spare version
VISUAL1	4,3" touch screen operator panel, 480x272, RISC 400 MHz	VISUAL5-WB	7"HMI widescreen 64k colors, Ethernet, HMI / Web Server ver.
VISUAL1E	4,3" HMI widescreen colors, Ethernet interface	VISUAL6	7" HMI widescreen colors, double Ethernet interface
VISUAL2	7" touch screen operator panel, 800x480, RISC 400 MHz	VISUAL7N	10,1"HMI touchscreen 10,1" widescreen colors, Ethernet interface
VISUAL2E	7" touch screen operator panel, Ethernet	VISUAL8	10,1" HD HMI widescreen colors, Ethernet interface
VISUAL3	4,3" touch screen operator panel, 480x272, ARM 600 MHz	VISUAL9	10,1" HD HMI widescreen colors, Ethernet interface, WiFi
VISUAL3-FLOW	4,3" touch screen operator panel, 480x272, ARM 600 MHz, spare parts Flow Computer	VISUAL10	9,7" HMI widescreen colors, Ethernet interface
VISUAL4	7" touch screen operator panel, 800x480, ARM 600 MHz	VISUAL11	9,7" HMI widescreen colors, double Ethernet interface
VISUAL4T	7" HMI widescreen colors, Ethernet interface, aluminum case	VISUAL12	15" HMI widescreen colors, Ethernet interface, aluminum case

Additional order codes and information

SURPRISE Smart Display is a latest generation 7" touch operator terminal with powerful 800 MHz ARM microprocessor, dual Fast Ethernet port, 802.11 b/g/n Wi-Fi module, interfaces and sniffer function for serial lines. It is a multipurpose device with IIoT gateway, datalogger, Wi-Fi router, microcontroller with integrated I/O, remote assistance unit and remote control on LET'S platform. Surprise Smart Display is not only a touchscren HMI, but a multifunction device that integrates IIoT gateway, Wi-Fi router, remote assistance module, datalogger, microcontroller, serial sniffer and I/O Also SoftPLC IEC 61131-3 Straton versions are available.

CLOUD SUPPORT

LAN / WAN DUAL ETHERNET

BULT-IN LOGIC UNIT

STRATON VERSIONS AVAILABLE

WI-FI

OPC UA

MQTT
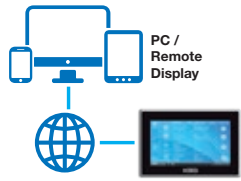
ADVANCED ROUTING

VISUALIZATION MODE

DISPLAY STANDARD WIDGET BASED 7"
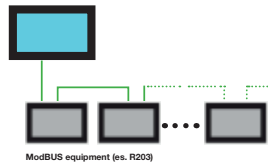
REMOTE DISPLAY

PC / Remote Display

SSD locale

DISPLAY ON DISPLAY

ModBUS equipment (es. R203)

CONFIGURATION MODE

BASIC (FROM DISPLAY)
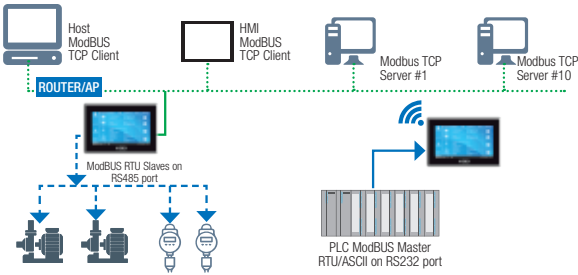
ADVANCED (FROM WEB SERVER)
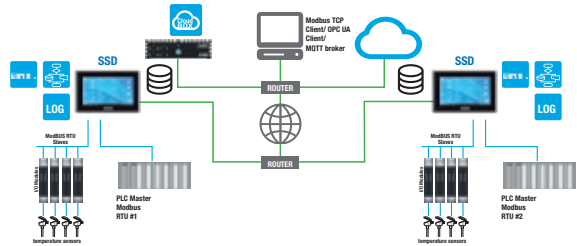
APPLICATION EXAMPLES

MODBUS GATEWAY - ETHERNET TO SERIAL

Host ModBUS TCP Client

ROUTER/AP

HMI ModBUS TCP Client

Modbus TCP Server #1

Modbus TCP Server #10

ModBUS RTU Slaves on RS485 port

PLC ModBUS Master RTU/ASCII on RS232 port

IoT/ CLOUD GATEWAY

Modbus TCP Client/ OPC UA Client/ MQTT broker

SSD

ROUTER

SSD

LOG

ROUTER

LOG

ModBUS RTU Slaves

temperature sensors

PLC Master Modbus RTU #1

ModBUS RTU Slaves

temperature sensors

PLC Master Modbus RTU #2

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
SSD-0-0-0-0	Advanced touchscreen HMI with integrated I/O	SSD-UPG-L	SSD - Upgrade "logic" functions
SSD-0-L-0-0	Advanced touchscreen HMI with integrated logic and I/O	SSD-UPG-V	SSD - Upgrade "VPN" functions
SSD-0-0-V-0	Advanced touchscreen HMI with integrated VPN and I/O	SSD-UPG-I	SSD - Upgrade "IIoT/MQTT/Cloud" functions
SSD-0-0-0-I	Advanced touchscreen HMI with integrated IIoT and I/O	SSD-UPG-L-V	SSD - Upgrade "logic" and "VPN" functions
SSD-0-L-V-0	Advanced touchscreen HMI with integrated logic, VPN and I/O	SSD-UPG-L-I	SSD - Upgrade "logic" and "IIoT/MQTT/Cloud" functions
SSD-0-L-0-I	Advanced touchscreen HMI with integrated IIoT, logic and I/O	SSD-UPG-V-I	SSD - Upgrade functions "VPN" and "IIoT/MQTT/Cloud".
SSD-0-0-V-I	Advanced touchscreen HMI with integrated IIoT, VPN and I/O	SSD-UPG-L-V-I	SSD - Upgrade functions "logic, "VPN" and "IIoT/MQTT/Cloud
SSD-0-L-V-I	Advanced touchscreen HMI with integrated IIoT, logic, VPN and I/O	SSD-S-0-0-I	SoftPLC+Advanced HMI with built-in IIoT and I/O

Additional order codes and information

Data Recorder is an open, scalable and inexpensive Windows PC-based software recorder, ideal for professionals, maintenance engineers, students, researchers, designers and technical department managers working in the test, measurement and simulation sessions, in test benches, in electronics laboratories and for teaching, in test rooms, climatic chambers, engine rooms, industrial ovens, environmental measures, energy and plant monitoring.

Physical data acquisition takes place through distributed SENECA I/O modules and in general from any standard ModBUS RTU slave device.

REAL-TIME VISUALIZATION

HISTORICAL DATA VISUALIZATION

RECORDING SCHEDULING

MATH FUNCTIONS

ALARM FUNCTIONS

REPORTS

TEMPERATURE SENSORS CALIBRATION

MULTICLIENT OPTIONAL PACKAGE

ACQUISITION, RECORDING, DISPLAYING

RS-232

Modbus over RS485

Modbus TCP/IP

Temperature sensors (RTD, TC, PTC, NTC...)

Process sensors (pressure, flow, level...)

Mechanical and kinematic measurements (speed, force, acceleration, weight...)

Pulse or digital sensors (limit switch, photocell)

Power measurement analyzers, meters, recorders
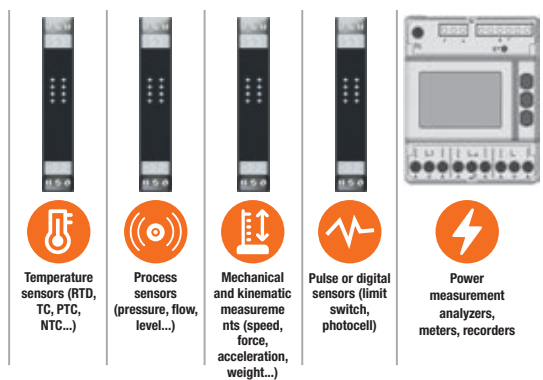
APPLICATION EXAMPLES

MONITORING WATER QUALITY PARAMETERS

Remote IO modules SENECA Z-PC Series

ModBUS RTU / TCP-IP
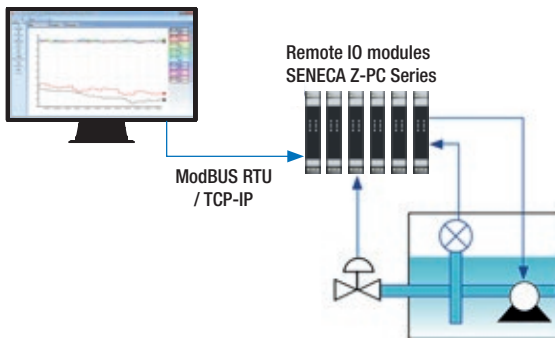
TESTS, TRIALS AND DATA ACQUISITION FOR ELECTRIC MOTORS

ModBUS RTU / TCP-IP

Remote IO modules SENECA Z-PC Series
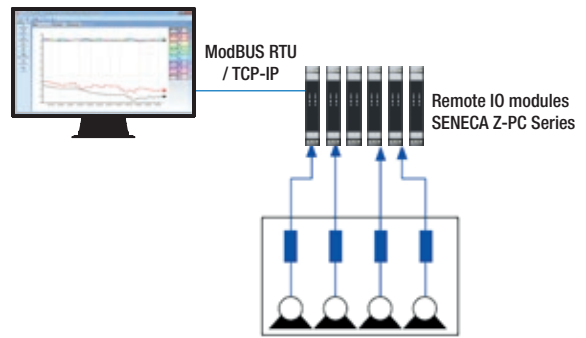
MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
DR-02	2-CH DAQ Software	DR-04-PLUS	4-CH Data Recoder+ multi-client
DR-04	4-CH DAQ Software	DR-08-PLUS	8-CH Data Recoder+ multi-client
DR-08	8-CH DAQ Software	DR-16-PLUS	16-CH Data Recoder+multi-client
DR-16	16-CH DAQ Software	DR-32-PLUS	32-CH Data Recoder+multi-client
DR-32	32-CH DAQ Software	DR-64-PLUS	64-CH Data Recoder+multi-client
DR-64	64-CH DAQ Software	DR-UN-PLUS	Unlimited-CH Data Recoder+multi-client
DR-UN	Unlimited-CH DAQ Software	DR-UPGRADE	Data Recorder license upgrade service

Additional order codes and information

SENECA PACKAGE

SENECA Package suite includes the IEC 61131-3 configuration environment, Z-NET4, with which integrated applications are installed for the complete management of an automation project. Also available are data export interfaces to the programming environment Straton and OPC programming environment.

Z-NET4
System configurator: project, CPU, I/O, network communication, variables

DATA RECORDER
Data acquisition and registration software

STRATON
Interface of editing, reading and export configurations for IEC 61131-3 Straton environment

WEB FACTOR
Tool for creation and management of monitoring Web-HMI

TREND VIEWER
Software for visualization and historical analysis of data

OPC
Interface of variables editing and export in OPC environment

Z-PC-DIN - COMMUNICATION BUS REAR SUPPORT / POWER SUPPLY FOR Z-PC SERIES MODULES

	DESCRIPTION	SLOT	STEP	TERMINAL POWER SUPPLY/BUS	HOT SWAPPING	DIN GUIDE ASSEMBLY
	Z-PC-DINAL1-35 DIN guide rapid assembly support head +1 slot P=35mm	1	35 mm	Yes	Yes	Yes
	Z-PC-DINAL2-17.5 DIN guide rapid assembly support head +2 slot P=17,5mm	2	17,5 mm	Yes	Yes	Yes
	Z-PC DINAL2-52.5 DIN guide rapid assembly support head +1 slot 52,5 mm + 1slot 17,5 mm	2	52,5 mm	Yes	Yes	Yes
	Z-PC-DIN1-35 DIN guide rapid assembly support 1 slot P=35mm	1	35 mm	-	Yes	Yes
	Z-PC-DIN2-17.5 DIN guide rapid assembly support 1 slot P=17,5mm	2	17,5 mm	-	Yes	Yes
	Z-PC-DIN4-35 DIN guide rapid assembly support 4 slot P=35mm	4	35 mm	-	Yes	Yes
	Z-PC-DIN8-17.5 DIN guide rapid assembly support 8 slot P=17,5mm	8	17,5 mm	-	Yes	Yes

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
OPC-DA-SERVER	OPC Server I/O unlimited tags	**STRATON-IDEUN**	Straton development env. unlimited tags, USB activ. key
OPC-UA-SERVER	OPC Server I/O unlimited tags	**STRATON-SNMP**	SNMP agent driver Straton extension
STRATON-870-850	IEC 60870-5-101/104 Master / Slave + IEC 61850 Client / Server lic.	**Z-PC-DIN1-35**	DIN rail bus system 1 slot 35 mm
STRATON-870M	IEC 60870-5-101/104 Master activation license	**Z-PC-DIN2-17.5**	DIN rail bus system 2 slots 17.5 mm
STRATON-870S	IEC 60870-5-101/104 Slave activation license	**Z-PC-DIN4-35**	DIN rail bus system 4 slot 35 mm
STRATON-870S-850	IEC 60870-5-101/104 Slave license+IEC 61850 Client/Server	**Z-PC-DIN8-17.5**	DIN rail bus system 8 slot 17.5 mm
STRATON-D-USB	Straton activation key for IEC 61131 controllers	**Z-PC-DINAL1-35**	DIN rail bus system head terminal + 1 slot 35 mm
STRATON-FULL01	IEC 60870-5-101/104 Master / Slave + IEC 61850 Client / Server lic. + SNMP	**Z-PC-DINAL2-17.5**	DIN rail bus system head terminal + 2 slots 17.5 mm
STRATON-IDE256	Straton development env. 256 tags, USB activation key	**Z-PC-DINAL2-52.5**	DIN rail bus system head terminal + 2 slots 52.5 mm
STRATON-IDE512	Straton development env. 512 tags, USB activation key	**Z-SUPPLY**	Single-phase switching power supply 24V @ 1.5A

Additional order codes and information

2

INDUSTRIAL COMMUNICATION AND REMOTE CONTROL

REMOTE ALARM UNITS

SENECA remote alarm and datalogging devices are designed to remotely manage, monitor and implement small automations for houses, buildings, plants, production machines through simple commands sent with SMS messages or via app. With any mobile device or smartphone you can control the switching on and off of a technical system, activate a contact, receive an anomaly or alarm signal. These professional and universal devices are easily programmable and are based on a GSM / GPRS module that acts as a phone communicator enabling intelligent way calls, commands, address books and data storage.
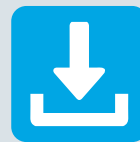
REMOTE CONTROL OF UNATTENDED SITES

FLEXBILE SETTINGS

AUTOMATIC SENDING COMMANDS, DATA, ALARMS

BUILT-IN MODEM AND I/O

REAL-TIME ALARM MANAGEMENT

ON-OFF TIME BASED CONTROLS

HVAC / TEMPERATURE CONTROL

RECHARGEABLE LI-ON BATTERY

TOP SELLING PRODUCTS

B-ALARM

Remote alarm unit, 1DI/DO, basic functions

MY2B

GSM/GPRS remote alarm and datalogger unit, BASIC version

MY2S

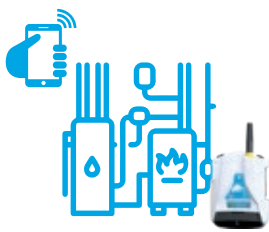GSM/GPRS remote alarm and datalogger unit, SECURITY AUDIO version

MYALARM3 CLOUD

App/cloud based monitoring and remote alarm unit

APPLICATION EXAMPLES
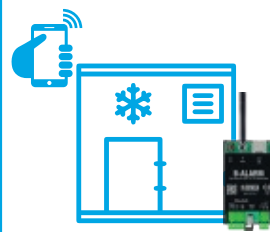
| AUTOMATIC BARRIERS CONTROL | BOILER AND HVAC CONTROL | WATER CONSUMPTION AND LOSSES CONTROL | COLD ROOMS MONITORING |

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
B-ALARM	Remote alarm Unit, 1DI / 1DO, basic functions	MY2G-R-0-M-B	MyALARM2 - gps version, relay, clamps, blue color
EASY LOG VIEWER	DAQ software for MY2, Z-GPRS2, Z-PC	MY2G-R-0-M-G	MyALARM2 - gps version, relay, clamps, grey color
EASY MYALARM2	MYALARM2 configurator	MY2S-0-0-M-B	MYALARM2 - security, no relay, clamps, blue color
MY2B-0-0-M-B	MyALARM2 - basic version, no relay, clamps, blue color	MY2S-0-0-M-G	MYALARM2 - security, no relay, clamps, grey color
MY2B-0-0-M-G	MyALARM2 - basic version, no relay, clamps, grey color	MY2S-R-0-M-B	MYALARM2 - security, relay, clamps, blue color
MY2-KITIP66	IP66 ABS kit enclosure for field application	MY2S-R-0-M-G	MYALARM2 - security, relay, clamps, grey color
MY2B-R-0-M-B	MYALARM2 - basic version, relay, clamps, blue color	MY3CLOUD-R-0-0-G	MyaAlarm3, Cloud support, relay, grey color
MY2B-R-0-M-G	MyALARM2 - basic version, relay, clamps, grey color	MY3CLOUD-R-0-G-G	MyaAlarm3, Cloud support, relay, GPS, gray color
MY2G-0-0-M-B	MyALARM2 - gps version, no relay, clamps, blue color	NTC-150	External NTC probe, 1,5 m, for MyALARM2
MY2G-0-0-M-G	MyALARM2 - gps version, no relay, clamps, grey color		

Additional order codes and information

MYALARM SEAL, Z-GPRS3, Z-LOGGER3, Z-LTE advanced dataloggers represent a solution able to respond to the growing needs of data collection, re-al-time analysis and integration with IT systems in plant automation and monitoring. Designed to per-form remote alarm, telemetry and datalogging func-tions, these devices are available with integrated UPS, integrated I/O channels, dedicated programming and visualization software, serial and Ethernet communi-cation support, MQTT protocol and in most models 2G/3G+/4G modem with GNSS/GPS/GLONASS re-ceiver.

SYNCHROUNOUS / ASYNCHRONOUS

DATA REDUNDANCY

ALARM MANAGEMENT VIA SMS / DTMF

SENDING EMAIL FTP FILE

BLOCK-BASED PROGRAMMING

IoT PROTOCOLS

BUILT-IN I/O

SERIAL / ETHERNET COMMUNICATION PORTS

TOP SELLING PRODUCTS

MYALARM SEAL

Remote datalogger, SEAL programming, control logic

Z-LOGGER3

Advanced datalogger, alarm module, web server with built-in IO

Z-GPRS3

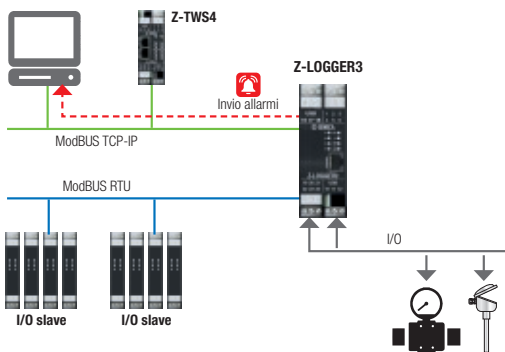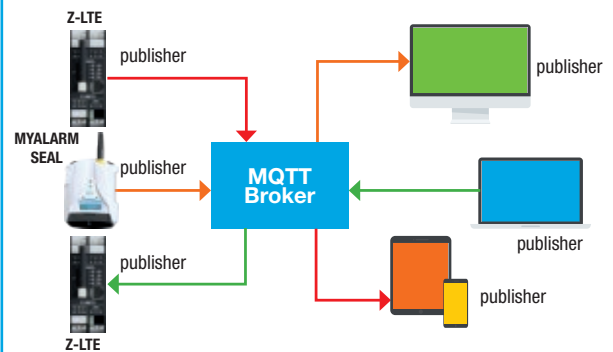Advanced GSM/GPRS datalogger, built-in IO, voice alarm

Z-LTE

4G worldwide datalogger with built-in I/O, remote control functions and voice commands

APPLICATION EXAMPLES

DATA ACQUISITION AND RETRANSMISSION

Z-TWS4

Z-LOGGER3

Invio allarmi

ModBUS TCP-IP

ModBUS RTU

I/O

I/O slave   I/O slave

MQTT ARCHITECTURE

Z-LTE

publisher

MYALARM SEAL

publisher

publisher

Z-LTE

MQTT Broker

publisher

publisher

publisher

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
LOG FACTORY	Visualization and log data tool	MY-SEAL-R-0-0-G	Remote datalogger with SEAL control logic, relay board, grey color
MY-SEAL-0-0-0-B	Remote datalogger with SEAL control logic, blue color	MY-SEAL-0-W-0-G	Remote datalogger with SEAL control logic, radio module, grey color
MY-SEAL-R-0-0-B	Remote datalogger with SEAL control logic, relay board, blue color	MY-SEAL-0-0-G-G	Remote datalogger with SEAL control logic, GPS receiver, grey color
MY-SEAL-0-W-0-B	Remote datalogger with SEAL control logic, radio module, blue color	MY-SEAL-R-W-0-G	Remote datalogger with SEAL control logic, relay board, radio module, grey color
MY-SEAL-0-0-G-B	Remote datalogger with SEAL control logic, GPS receiver, blue color	MY-SEAL-R-0-G-G	Remote datalogger with SEAL control logic, relay board, GPS receiver, grey color
MY-SEAL-R-W-0-B	Remote datalogger with SEAL control logic, relay board, radio module, blue color	MY-SEAL-0-W-G-G	Remote datalogger with SEAL control logic, radio module, GPS receiver, grey color
MY-SEAL-R-0-G-B	Remote datalogger with SEAL control logic, relay board, GPS receiver, blue color	MY-SEAL-R-W-G-G	Remote datalogger with SEAL control logic, relay board, radio module, GPS receiver, grey color
MY-SEAL-0-W-G-B	Remote datalogger with SEAL control logic, radio module, GPS receiver, blue color	Z-GPRS3	Advanced GSM/GPRS datalogger, built-in IO, voice alarm
MY-SEAL-R-W-G-B	Remote datalogger with SEAL control logic, relay board, radio module, GPS receiver, blue color	Z-LOGGER3	Advanced datalogger, alarm module, web server with built-in IO
MY-SEAL-0-0-0-G	Remote datalogger with SEAL control logic, grey color	Z-LTE-WW	4G worldwide datalogger with built-in I/O, remote control functions and voice commands

Additional order codes and information

SENECA remote control devices are a perfect combination of the world of remote control and automation. The RTU range includes solutions for small installations, all-in-one solutions that combine I/O, control logic and communication system, equipment for special applications (unmanned sites, pumping stations, energy management).

The use of compatible platforms and of the most common technological standards offers to the user the possibility to improve the efficiency and the quality of the investments in his applications.

WIDE RTU RANGE

H24 REMOTE CONTROL

ADVANCE ALARM

REDUCED OPERATING COSTS

ENERGY MONTORING

DATA STORAGE

OPENNESS TO SCADA / OPC

COMMANDS AND NOTIFICATIONS VIA EMAIL/SMS / APP

TOP SELLING PRODUCTS

MY2B
GSM/GPRS remote alarm and datalogger unit, BASIC version

Z-LTE
4G worldwide datalogger with built-in I/O, remote control functions and voice commands

Z-PASS2-S
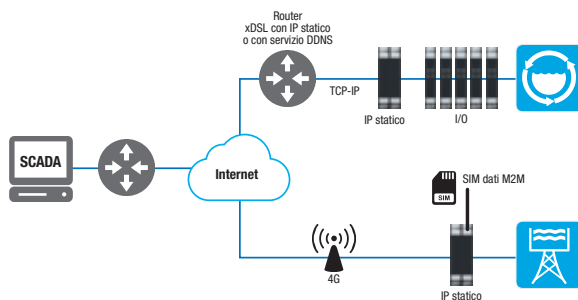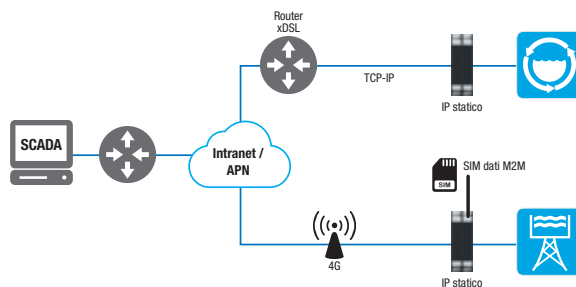Remote Controller 4G worldwide, VPN, serial device server, GPS and built-in I/O

S6001-RTU
Remote Control Unit with built-in IO and 3G+/4G modem

APPLICATION EXAMPLES

**WEB-BASED REMOTE CONTROL**

INTRANET / APN REMOTE CONTROL

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
BATTHP	Micro-RTU Lithium batteries, 14,4V, 18,5 Ah	S6001-RTU	Remote Control Unit with built-in IO and 3G+ modem
BATT-S	Single battery pack 3 cell 11,1 V - 14,5 Ah	S6001-RTU-4GWW	Remote Control Unit with built-in IO and 4G WW LTE modem
BATT-2S	Double battery pack 3 cell 11,1 V - 14,5 Ah	Z-LTE-WW	4G worldwide datalogger with built-in I/O, remote control functions and voice commands
BOX-RTU-IP65	IP65 junction box with fixing support	S-DIN M-RTU	DIN rail guide support
EASY RTU LP	RTU-LP devices software configurator	Z-PASS2-S4GEUUPG	3G Modem upgrade and replacement → 4GLTE/EMEA c/o laboratory (Z-PASS2-S)
RTU-LP-ST	Low power RTU, FTP version, 4DI, 2AI, 2DO	Z-PASS2-S4GWWUPG	Upgrade and replacement of 3G Modem → 4GLTE/WW c/o laboratory (Z-PASS2-S)
RTU-LP-ST1	Low power RTU, FTP version, 4DI, 2AI, 2DO, single battery pack		
RTU-LP-ST2	Low power RTU, FTP version, 4DI, 2AI, 2DO, double battery pack		

Additional order codes and information

SENECA Gateways connect new and legacy systems and enable secure, uninterrupted data flow between secure, uninterrupted data flow between peripheral devices and centralized servers. Gateways establish two-way communication between the field and the supervisor, as well as offering processing and data storage capabilities to provide services with secure VPN connections and to manage field devices in real time. SENECA's new range of industrial routers / gateways includes devices that can extend networks and allow process data to pass between different levels of the network.
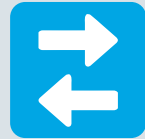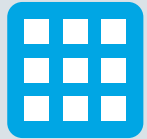
ETHERNET / SERIAL CONVERTER

PROTOCOL CONVERTER

SERIAL DEVICE SERVER

SHARED MEMORY GATEWAY

SERIAL SNIFFER

FIELDBUS SUPPORT

WI-FI STATION / ACCESS POINT

UL APPROVAL

TOP SELLING PRODUCTS

Z-KEY

Industrial Gateway - Serial Device Server

R-KEY-LT

1-port ModBUS industrial gateway / serial device server

Z-KEY-P

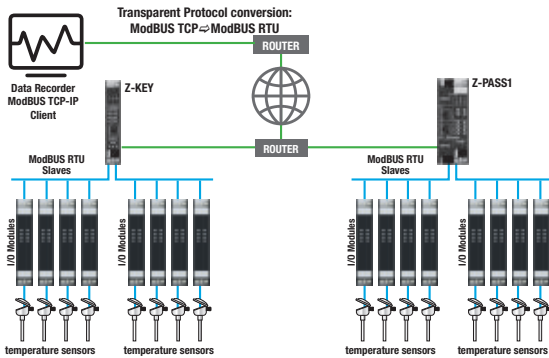Gateway - ModBUS RTU / TCP-IP ↔ Profinet IO protocol converter
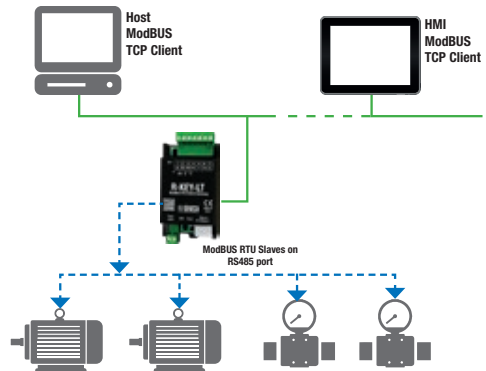
Z-KEY-MBUS

ModBUS RTU / TCP-IP ↔ MBUS gateway

APPLICATION EXAMPLES

MODBUS GATEWAY - ETHERNET TO SERIAL

Transparent Protocol conversion: ModBUS TCP ⇌ ModBUS RTU

Data Recorder ModBUS TCP-IP Client

ROUTER

ROUTER

Z-KEY

Z-PASS1

ModBUS RTU Slaves

ModBUS RTU Slaves

I/O Modules

temperature sensors

temperature sensors

temperature sensors

temperature sensors

MODBUS GATEWAY - ETHERNET TO SERIAL

Host ModBUS TCP Client

HMI ModBUS TCP Client

ModBUS RTU Slaves on RS485 port

MAIN PRODUCT CODES

| ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
R-KEY-LT	Compact industrial ModBUS gateway	Z-KEY-0	Industrial Gateway - Serial Device Server
R-KEY-MBUS	Compact industrial M-BUS gateway	Z-KEY-2ETH	Industrial Gateway - Serial Device Server, 2xEthernet
R-KEY-LT-P	Compact Industrial Gateway Profinet IO <-> ModBUS RTU / TCP-IP	Z-KEY-2ETH-P	Industrial Gateway - Serial Device Server, 2xProfinet IO
SDD	Discovery Device, IP scanner for Z-KEY, Z-PASS1/2	Z-KEY-ETH-IP	Industrial Gateway - Serial Device Server, Ethernet/IP
SESC	Ethernet to Serial Connection tool for Z-KEY, Z-PASS1/2	Z-KEY-MBUS	ModBUS RTU / TCP-IP M-BUS gateway
TEMP-TAG-Z-KEY	Excel template for Z-KEY tags (gateway mode)	Z-KEY-P	Gateway - ModBUS RTU / TCP-IP Profinet IO protocol converter
TEMP-WEB-Z-KEY	Web page template for Z-KEY	Z-KEY-WIFI	2-port ModBUS RTU industrial gateway / serial device server with Wi-Fi access

**Additional order codes and information**

SENECA IoT Advanced Gateways establish two-way communication between the field and supervision, as well as offering diagnostic, processing and data storage capabilities to provide services with secure VPN connections and to manage devices in the field in real time. Z-PASS1 and Z-PASS2 are multifunction devices, able allow the transfer of process data between IT and OT communication. Applications therefore range from M2M/IoT communications to remote maintenance, from network integration to protocol conversion to integration with Cloud platforms and services, in most industrial sectors.
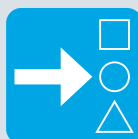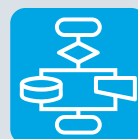
MULTIFUNCTION DEVICES
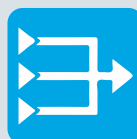
NAT1:1 & ADVANCED ROUTING
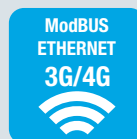
ModBUS ETHERNET 3G/4G — EXTENDED CONNECTIVITY

BUILT-IN LOGIC FUNCTIONS

MQTT SUPPORT

OPC UA SUPPORT

ON PREMISE CLOUD SUPPORT

LET'S VPN CONNECTIVITY SOLUTIONS — VPN REMOTE ACCESS
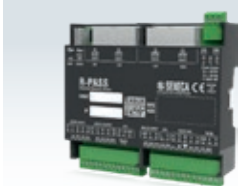
TOP SELLING PRODUCTS

R-PASS-0

IIoT VPN compact gateway / router

Z-PASS1

VPN Industrial Gateway - Serial Device Server, built-in I/O

Z-PASS2

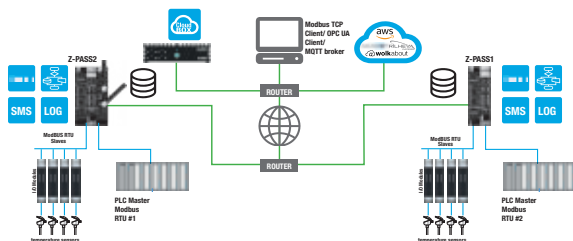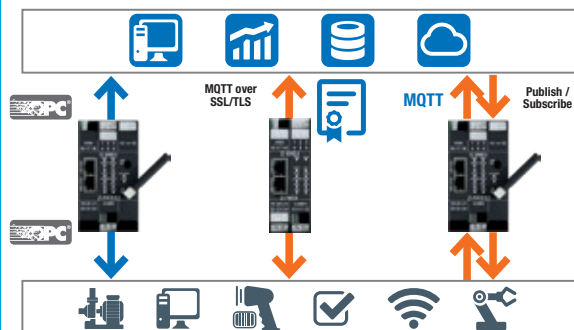VPN Industrial Gateway, Serial Device Server, Router 4G/LTE WW, GPS, built-in I/O

SSD

Multifunction IIoT HMI Gateway

APPLICATION EXAMPLES

CLOUD DATALOGGER

IOT CONNECTIONS

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
SSD-0-0-0-0	Advanced touchscreen HMI with integrated I/O	Z-PASS1-IO	Industrial Gateway - Serial Device Server, built-in I/O
SSD-0-0-0-I	Advanced touchscreen HMI with integrated IIoT and I/O	Z-PASS2-4GWW	Gateway / Router 4G worldwide, VPN, serial device server, GPS e I/O integrati
SSD-0-0-V-0	Advanced touchscreen HMI with integrated VPN and I/O	Z-PASS2-4GEU-UPG	3G Modem upgrade and replacement → 4GLTE/EMEA c/o laboratory
SSD-0-0-V-I	Advanced touchscreen HMI with integrated IIoT, VPN and I/O	Z-PASS2-4GWW-UPG	Upgrade and replacement of 3G Modem → 4GLTE/WW c/o laboratory
R-PASS-0-2-0	IIoT Edge Gateway with 2 Ethernet Ports	Z-PASS2-S-4GWW	Remote Controller 4G worldwide, VPN, serial device server, GPS and I/O integrated
R-PASS-0-4-0	IIoT Edge Gateway with 4 Ethernet ports	Z-PASS2-S4GEUUPG	3G Modem upgrade and replacement → 4GLTE/EMEA c/o laboratory (Z-PASS2-S)
R-PASS-W-2-0	IIoT Edge Gateway with Wi-Fi and 2 Ethernet ports	Z-PASS2-S4GWWUPG	Upgrade and replacement of 3G Modem → 4GLTE/WW c/o laboratory (Z-PASS2-S)
R-PASS-W-4-0	IoT Edge Gateway with Wi-Fi and 4 Ethernet ports		

Additional order codes and information

LET'S is SENECA's VPN - IoT platform that reduces maintenance costs for automation applications and management of machines and plants, offering an integrated connectivity service on 3 levels: remote access to data, programmable control, network monitoring. Based on the Server VPN BOX module, LET'S allows "Always ON" connections (Remote Control / Single LAN mode) for plant supervision or "ON Demand" connections (Teleservice / Poin-to-Point mode) to third party machines and devices and for maintenance or data collection services.
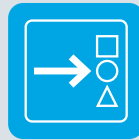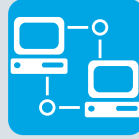
MULTIFUNCTION DEVICES

BUILT-IN I/O

PLC INTEGRATION S7 PROTOCOL

BUILT-IN CONTROL LOGIC

VPN SINGLE LAN / P2P

SERVER IN HOUISE

OPENVPN SUPPORT

VPN CLIENT APP MOBILE

TOP SELLING PRODUCTS

VPN BOX

VPN Server for Point-to-Point / Single LAN connections

Z-PASS1

Industrial Gateway - Serial Device Server, built-in I/O

Z-PASS2

Gateway / Router 4G, VPN, serial device server, GPS, built-in I/O
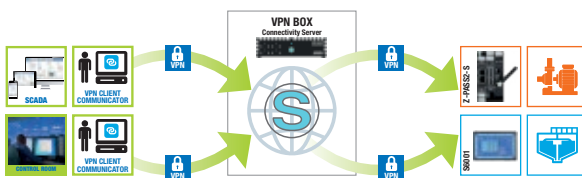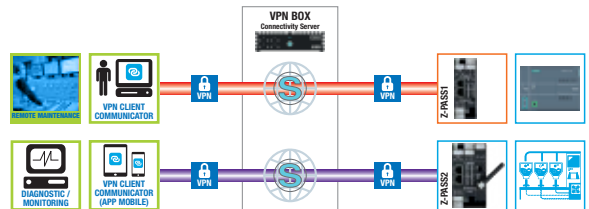
Z-PASS2-S

Remote Controller 4G worldwide, VPN, serial device server, GPS and buil-in I/O

APPLICATION EXAMPLES

"ALWAYS ON" CONNECTION

"ON DEMAND" CONNECTION

MAIN PRODUCT CODES

| ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
SSD-0-0-0-0	Advanced touchscreen HMI with integrated I/O	Z-PASS2-S-4GWW	Integrated 4G worldwide Remote Controller, VPN, serial device server, GPS and I/O
SSD-0-0-0-I	Advanced touchscreen HMI with integrated IIoT and I/O	VPN-BOX-1	PC Box - Server VPN per connessioni Poin-To_Point / Single LAN
SSD-S-0-0-0	SoftPLC+Advanced touchscreen HMI with integrated I/O	VPN-BOX-1-VM	Macchina Virtuale VPN-BOX-1
SSD-S-0-0-I	SoftPLC+Advanced touchscreen HMI with integrated IIoT and I/O	PN-BOX-2	PC Box - Server VPN per connessioni simultenee e bassa latenza Poin-To_Point / Single LAN
R-PASS-0-2-0	IIoT Edge Gateway with 2 Ethernet Ports	VPN-BOX-2-VM	Macchina Virtuale VPN-BOX-2
R-PASS-0-2-E	IIoT Edge Controller Straton with Energy protocols and 2 Ethernet ports	S6001-RTU-4GWW	All-in-one RTU with built-in I/O, 4G WW LTE modem and Straton programming system
R-PASS-0-2-S	IIoT Edge Controller Straton with 2 Ethernet ports	S6001-RTU-E-4GWW	All-in-one RTU with built-in I/O, 4G WW LTE modem and Straton programming system, Energy protocols
R-PASS-0-4-0	IIoT Edge Gateway with 4 Ethernet ports	Z-PASS2-S-E-4GWW	Energy Remote Controller 4G worldwide, VPN, serial device server, GPS and integrated I/O
Z-PASS1-IO	VPN Industrial Gateway - Serial Device Server, built-in 1DI, 2DO, 1DI/DO	Z-TWS4-S-IO	Multifunction controller IEC 61131, built-in I/O, Straton workbench, OEM version
Z-PASS2-4GWW	Gateway / Router 4G worldwide, VPN, serial device server, built-in GPS and I/O	Z-TWS4-E-IO	Multifunction controller IEC 61131, built-in I/O, Straton workbench, OEM version, energy protocols

Additional order codes and information

Cloud BOX is the Cloud - IoT "on premise" solution to centralize data, manage remote connections, create customizable multi-user supervision pages. Available in physical and virtual version, Cloud BOX provides several widgets (input status, charts, bars, etc.), components that represent the status of the connected devices. Starting from these widgets it is possible to create responsive web pages (for PC, tablet, smartphone) of dashboard type (e.g. historical data, commands, event management, trend management) or synoptic supervision pages.
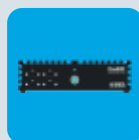
HARDWARE

VIRTUAL MACHINE
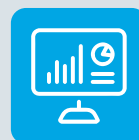
SUPERVISION

TAG MANAGEMENT

DATA STORAGE

HISTORICAL DATA/ ALARMS

SENDING COMMANDS

EXPORT AND DATA RECOVERY

## CLOUD BOX - INDUSTRIAL IOT BOX WITH SUPERVISORY WEB APPLIANCE

WHAT CLOUD BOX IS

Cloud BOX

IoT - Cloud solution for data centralization, remote connections management, multi-user custom supervision pages editing.

- Sending commands HOW IT WORKS to dataloggers, RTUs and communication devices
- Incoming data storage from fiaeld devices into a centralized database
- Access to Cloud BOX through custom web pages
- Available in built-in version or Virtual Machine / VmWare with third parties server

HOW IT WORKS

Cloud BOX
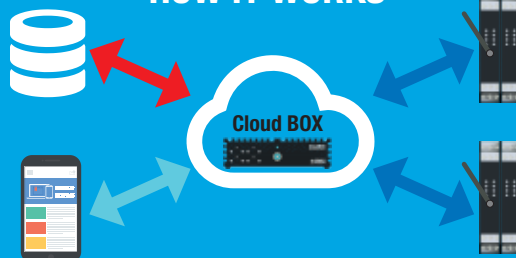
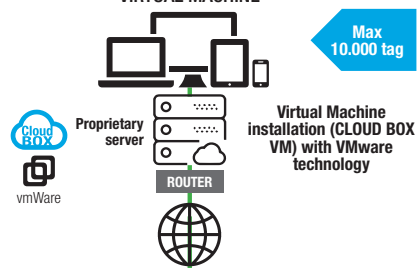## APPLICATION EXAMPLES

BUILT-IN SYSTEM

Max 5.000 tag

Cloud BOX

ROUTER
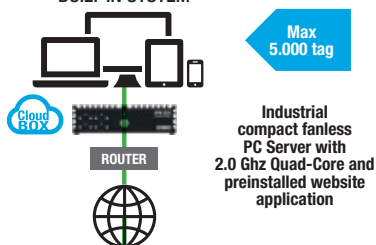
Industrial compact fanless PC Server with 2.0 Ghz Quad-Core and preinstalled website application

Supported devices: Z-GPRS3, Z-UMTS, Z-LOGGER3, Z-PASS1, Z-PASS2, MYALARM SEAL

VIRTUAL MACHINE

Max 10.000 tag

Cloud BOX

vmWare

Proprietary server

ROUTER

Virtual Machine installation (CLOUD BOX VM) with VMware technology

Supported devices: Z-GPRS3, Z-UMTS, Z-LOGGER3, Z-PASS1, Z-PASS2, MYALARM SEAL

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION
CLOUD BOX	Micro Scada / Industrial IoT Box
CLOUD BOX VM-D	Virtual Server for data acquisition from SeAL RTU, up to 1 demo device
CLOUD BOX VM-1K	Virtual Server license for data acquisition from SeAL RTU, up to 1.000 tags
CLOUD BOX VM-5K	Virtual Server license for data acquisition from SeAL RTU, up to 5.000 tags
CLOUD BOX VM-10K	Virtual Server license for data acquisition from SeAL RTU, up to 10.000 tags
CLOUD BOX VM-UP1	Virtual Server license upgrade for data acquisition from 1.000 to 5.000 tags
CLOUD BOX VM-UP2	Virtual Server license upgrade for data acquisition from 5.000 to 10.000 tags
CLOUD BOX VM-UP3	Virtual Server license upgrade for data acquisition from 1.000 to 10.000 tags

Additional order codes and information

Serial transmission is a mode of communication between digital devices in which information is communicated one after the other and reaches the receiver sequentially in the same order in which the sender transmitted it. Serial mode is one of the most popular in the computer field because it requires fewer wires, thus reducing costs.

It is also more tolerant of interference and transmission errors. SENECA instrumentation allows the management of RS232, TTL, RS485, USB interfaces to and from PC and control and acquisition systems.
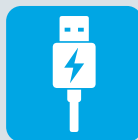
EASY WIRING

FLEXIBLE DISTANCE
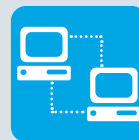
SYNCHROUNOUS / ASYNCHRONOUS
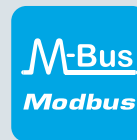
FIELDBUS SUPPORT

FAST CONFIGURATION

PORTABLE VERSIONS

ADAPTABLE ARCHITECTURES

EXISTING DEVICES/ NETWORKS INTEGRATION

TOP SELLING PRODUCTS

K107USB

USB <-> RS485 converter / Isolator

S117P1

RS232/USB, TTL/USB, RS485/USB serial converter

Z-MBUS

M-BUS <-> RS232-RS485 adapter

Z-4TC-D

Thermocouples A/D converter

APPLICATION EXAMPLES

CONNECTION OF SEVERAL RS485 SERIAL LINES (MODBUS) WITH ELECTRICAL ISOLATION

Clock (DO PLC)
Strobe (DI PLC)
Data (DI PLC)

Sensor

Z-4AI-D

PLC
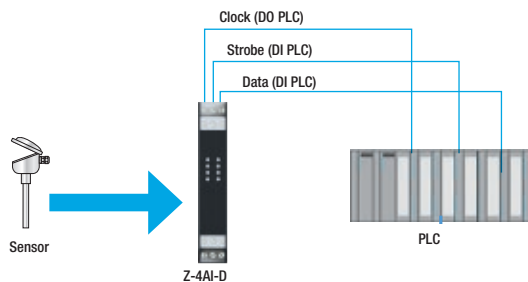
MULTIPLE CONNECTION AND DATA TRANSMISSION WITH USB/RS485 ELECTRICAL ISOLATION

K107USB

PLC

HMI

USB   RS485

Remote I/O
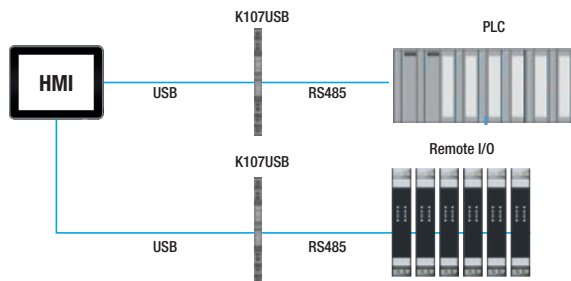
K107USB

USB   RS485

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION
EASY-USB	USB - UART TTL converter
S107P	RS232 - RS485/422 serial converter, portable version
S107USB	RS485/USB serial converter, portable version
S117P1	RS232/USB, TTL/USB, RS485/USB serial converter
Z107	DIN rail RS232 - RS485/422 serial converter
Z-MBUS	M-BUS ↔ RS232-RS485 adapter

Additional order codes and information

SENECA S232, S485, SETH and SCAN fiber optic converters give the possibility to extend over fiber optics any type of network / bus (LAN / Ethernet, CAN or serial) at the same time.

They also ensure high levels of security and reliability. The modules make it possible to use both mono-modal and multi-modal fiber, ensuring a solid communication, reliable and very high speed communication.

The application of fiber optics ranges from industrial environments to civil environments, energy production plants and telecommunications and control systems.

HIGH SPEED COMMUNICATION

DATA / POWER LINES NOT SEPARATED

ELECTRIC DISCHARGE PROTECTION

EASY DIAGNOSTIC

REAL-TIME DATA TRANSMISSION

REALIABLE MEDIUM

HIGH COVERAGE DISTANCES

NOISE IMMUNITY

TOP SELLING PRODUCTS

S232-FO

RS232 - Fiber Converter single mode / multi mode single / double loop

S485-FO

RS485 - Fiber Converter single mode / multi mode single / double loop

SETH-FO

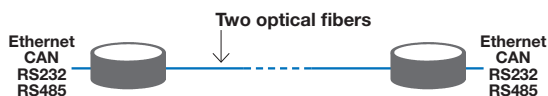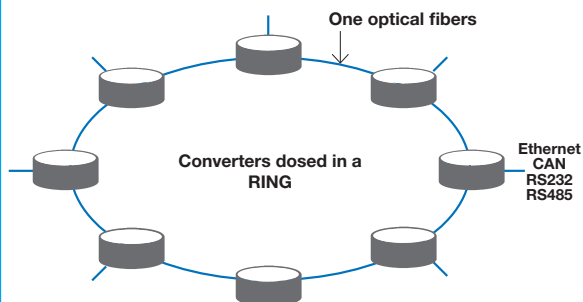Ethernet - Fiber Converter single mode / multi mode single / double loop

SCAN-FO

CAN - Fiber Converter single mode / multi mode single / double loop

APPLICATION EXAMPLES

POINT TO POINT (LINKED DIRECTLY)

Two optical fibers

Ethernet
CAN
RS232
RS485

Ethernet
CAN
RS232
RS485

RING (SINGLE LOOP)

One optical fibers

Converters dosed in a RING

Ethernet
CAN
RS232
RS485

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
FO TEST	Fiber optics automatic test software	SCAN-FO-MONO-SL	CAN - single mode fiber, single loop converter
S232-FO-MONO-SL	RS232 - single mode fiber, single loop converter	SCAN-FO-MONO-DL	CAN - single mode fiber, double loop converter
S232-FO-MONO-DL	RS232 - single mode fiber, double loop converter	SCAN-FO-MULTI-SL	CAN - multimode fiber, single loop converter
S232-FO-MULTI-SL	RS232 - multi mode fiber, single loop converter	SCAN-FO-MULTI-DL	CAN - multimode fiber, double loop converter
S232-FO-MULTI-DL	RS232 - multi mode fiber, double loop converter	SETH-FO-MONO-SL	Ethernet - single mode fiber, single loop converter
S485-FO-MONO-DL	RS485 single mode fiber, double loop converter	SETH-FO-MONO-DL	Ethernet - single mode fiber, dobule loop converter
S485-FO-MULTI-DL	Multidrop fiber optic - RS485 double loop converter	SETH-FO-MULTI-SL	Ethernet - multimode fiber, single loop converter
S485-FO-MONO-SL	RS485 - single mode fiber, single loop converter	SETH-FO-MULTI-DL	Ethernet - multimode fiber, double loop converter
S485-FO-MULTI-SL	Multidrop fiber optic - RS485 single loop converter		

Additional order codes and information

Strong experience in interface technology, SENECA's proposal of radio modules and radio modems is one of the key elements of automation and communication systems, particularly in the transport of signals from a few meters to tens of kilometers.

The use of UHF / VHF / LoRa technologies allows you to reach distances of several kilometers with maximum reliability.

It also allows you to perform functions of remote control, remote interrogation and diagnostics of devices in the field through connections point-to-point, multipoint, broadcasting, signal repetition.

- **NBFM / GFSK MODULATION**
- **RS232 / RS485 INTERFACE**
- **Vac7dc WIDE RANGE**
- **BUILT-IN I/O**
- **TRANSMISSION POWER 25..500mW**
- **ModBUS / LoRa TECHNOLOGIES**
- **OPERATING BANDWIDTH 169 / 869 MHz**
- **OUTDOOR VERSIONS**

TOP SELLING PRODUCTS

Z-AIR1
Simplex/half duplex radiomodem, 868 - 870 MHz

Z-LINK1-LO
Radiomodem 869 MHz with LoRa technology

RM169-1
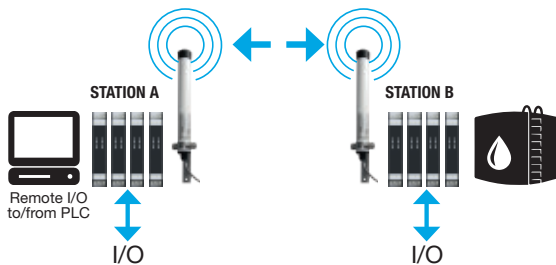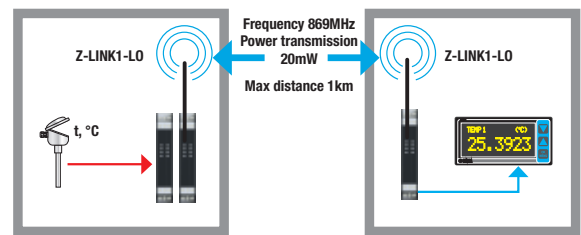169MHz Radiomodem RS232/RS485 interface, RED directive

RTURADIO
169MHz Radiomodem with built-in I/O, RS485

APPLICATION EXAMPLES

POINT-TO-POINT DATA TRANSMISSION (E.G. I/O REPETITION)

STATION A — STATION B

Remote I/O to/from PLC

I/O   I/O

SHORT RANGE SIGNAL REPETITION

Z-LINK1-LO

Frequency 869MHz
Power transmission 20mW
Max distance 1km

Z-LINK1-LO

t, °C

TEMP 1
25.3923

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
A-169DV12	169MHz vert.Dip. lambda/2 ant, BNC M, 5mt,low loss cable	RTURADIO-169	Radiomodem 169MHZ, 4DI, 2DO, 2AO, 2AI, RS485
A-169DV14	169MHz vert.Dip. lambda/4 ant, BNC M, L=450 mm	RTURADIO-169DV14	Radiomodem 169MHZ, 4DI, 2DO, 2AO, 2AI, RS485, vertical
A-169DV16	169MHz vert.Dip. lambda/4 ant, BNC M	RTURADIO-169DV12	Radiomodem 169MHZ, 4DI, 2DO, 2AO, 2AI, RS485, dipole
A-169YAGI	169MHz 3 elem. Yagi Ant., BNC M, 10 mt, low loss cable	RTURADIO-169YAGI	Radiomodem169MHZ, 4DI, 2DO, 2AO, 2AI, RS485, yagi
RADIO SETUP	Configuration software Z-AIR-1, RM169-1, RTURADIO 169	Z-AIR-1	Radiomodem 868MHz with omnidir. antenna, RED compl. 5 mt cable
RM169-1	169MHZ Radiomodem, 1DI,1DO,1RS485, BNC-F connector, RED directive	Z-AIR-1-10	Radiomodem 868MHz with omnidir. antenna, RED compl. 10 mt cable
RM169-1-169DV12	169MHZ Radiomodem, 1DI,1DO,1RS485, vertical dipole antenna, RED directive	Z-LINK1-LO	Adattatpre M-BUS ↔ RS232-RS485
RM169-1-169YAGI	169MHZ Radiomodem, 1DI,1DO,1RS485, 3 elements Yagi antenna, RED directive	Z-LINK1-NM	869 MHz radiomodem with RS232/RS485 interface
RM169-1-169DV14	169MHZ Radiomodem, 1DI,1DO,1RS485, vertical stilo antenna, RED directive		

Additional order codes and information

RADIO MEASUREMENT SYSTEMS

R-GWR is an interface and measurement system for industrial, civil or environmental variables. In fact, the device creates a network of remote sensors connected with LoRa radio technology (863-865 MHz) and accessible via ModBUS RTU/TCP-IP protocol. R-GWR operates as a radio hub capable of managing up to 32 sensors, each capable of acquiring 1) a temperature signal/ humidity integrated, 2) a generic digital input / analog (0-30 Vdc) terminal or alternatively a counter @16bit with maximum frequency 1Hz.

ENVIRONMENTAL MEASUREMENTS

BATTERY POWERED SENSORS

UP TO 32 LORA NODES / SENSORS

MODBUS

ETHERNET

EXT RADIO ANTENNA

BUILDING MONITORING

LOW COST INSTALLATION

TOP SELLING PRODUCTS

R-GWR

Gateway / Radio Hub for wireless sensors

R-GWR-S

Home automation sensor with digital / analog input and antiflooding
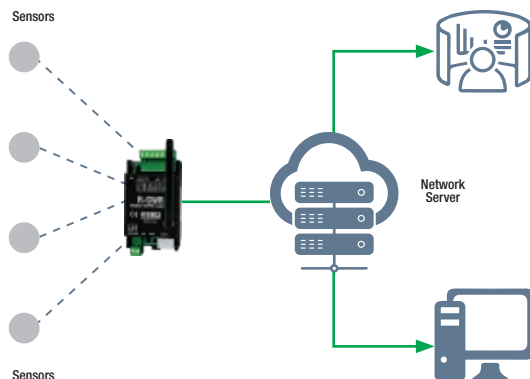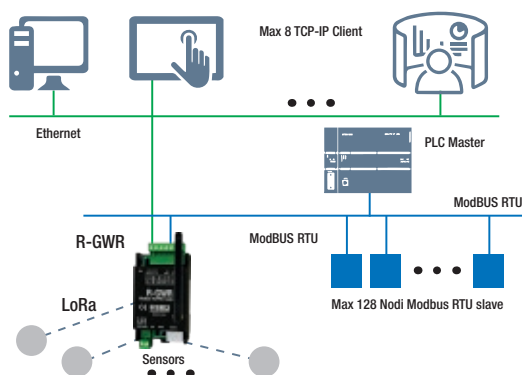
R-GWR-IP

Industrial sensor with digital / analog input

R-BT1

Single battery pack

APPLICATION EXAMPLES

Max 8 TCP-IP Client

Ethernet

PLC Master

ModBUS RTU

R-GWR

ModBUS RTU

Max 128 Nodi Modbus RTU slave

LoRa

Sensors

Sensors

Network Server

Sensors

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION
R-BT1	Single battery pack
R-BT2	Double battery pack 3.6V
R-GWR	ModBUS gateway for wireless sensors
R-GWR-IP-1	LoRa industrial sensor with analog/digital input
R-GWR-IP-2	Sensore industriale LoRa con ingresso analogico/digitale, batteria doppia
R-GWR-S-1	LoRa home automation sensor with analog/digital input and anti flooding
R-GWR-AF	Anti-Flooding Sensor

Additional order codes and information

3

POWER MONITORING AND ELECTRICAL MEASUREMENT

S203 Power Meters are specifically designed to detect the features of power supply in networks and in single-phase or three-phase users. They allow energy and power analysis and therefore the control of power quality. At the same time in many versions are also used to continuously record the trend of the available alternating variables. The measurement and event reporting functions provide a basis of useful information for controlling the right operation of a machine, maximizing energy efficiency.

600 Vac
VOLTAGE INPUT

100 mA 5 Arms 4.000 A
CURRENT INPUT

EMBEDDED COUNTER METER

Modbus
MODBUS COMMUNICATION

SOFTWARE / APP PROGRAMMING

LCD DISPLAY

MULTIPLE OPTION CONNECTIONS

4.000 Vac
MAX ISOLATION

TOP SELLING PRODUCTS

S203T

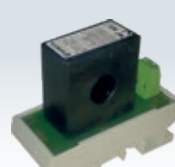AC triple phase network analyzer, 100 mA input

S203TA-D

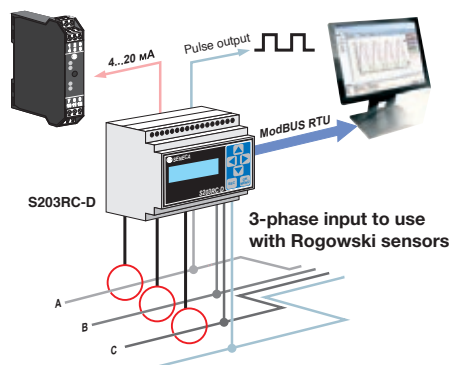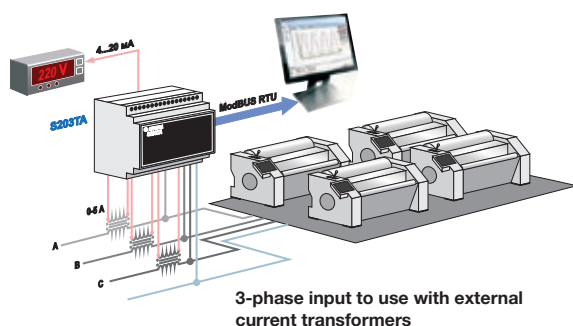AC three phase network analyzer with energy meter

S203RC-D

Three-phase Network Analyzer for Rogowski's sensor

TA100

CT for S203T, 100A/100mA, 0,1% of accuracy

APPLICATION EXAMPLES

3-phase input to use with external current transformers

3-phase input to use with Rogowski sensors

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
RC-V250-100	Rogowski coil, 100 mv/kA output, 50-60 Hz, 65 mm	S203TA AC	three phase network analyzer up to 5 Arms input
RC-V400-050	Rogowski coil, 50 mv/kA output, 50-60 Hz, 115 mm	S203TA-D AC	three phase network analyzer with energy meter
RC-V400-100	Rogowski coil, 100 mv/kA output, 50-60 Hz, 115 mm	TA100 CT	for S203T, 100A/100mA, 0,1% of accuracy
RC-V500-100	Rogowski coil, 100 mv/kA output, 50-60 Hz, 147 mm	TA15 CT	for S203T, 15A/100mA , 0,1% of accuracy
S203RC-D	Three-phase Network Analyzer for Rogowski's sensor	TA25	Current transf. for S203T, 25A/100mA, 0,1% of accuracy
S203T AC	triple phase network analyzer, 100 mA input		

Additional order codes and information

R203 three-phase power meter family accepts current measurement inputs for CTs with current/voltage output, TVs and Rogowski sensors with single-phase, three-phase, 3/4 wire supporting ModBUS RTU, ModBUS TCP-IP protocols, Peer-To-Peer. R203 has 2 Ethernet ports that can also be used for daisy chain connections with automatic bypass protection. R203 offers also the measurement and recording of harmonics in voltage / current up to 55th order with THD (total harmonic distortion) calculation. distortion).

UNIVERSAL ANALOG INPUT

HARMONICS UP TO 55TH ORDER WITH THD

HIGH ACCURACY

SMART PROGRAMMING

ENERGY COUNTER

EMBEDDED DATALOGGER

DUAL ETHERNET / DAISY CHAIN

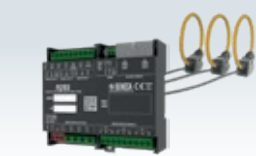**FAULT-BY PASS / MODBUS PASSTHROUGH**

TOP SELLING PRODUCTS

R203
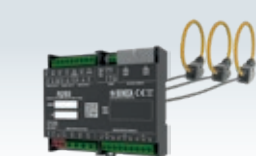Three-phase power meter with Ethernet port and universal inputs

R203-ROG-025
Power meter Kit, 2xETH, univ. Input, 3xROG L25 Ø12, 100mV/1KA 3mt

R203-ROG-040
Power meter Kit, 2xETH, univ. Input, 3xROG L40 Ø12, 100mV/1KA 3mt

R203TA-50
Power meter kit, 2xETH, univ. input, 3xTA 50/5A, cl.0,5/1, D23mm
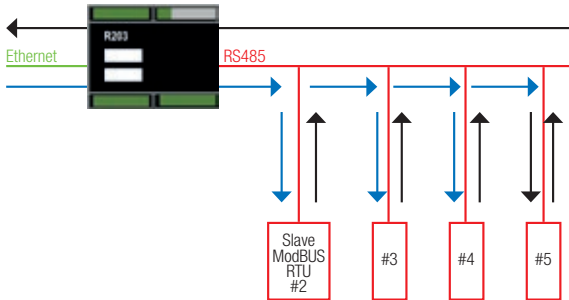
APPLICATION EXAMPLES

CONNESSIONE DAISY CHAIN

Ethernet Switch

Ethernet ModBUS TCP-IP

MODBUS PASS THROUGH

Ethernet   RS485

Slave ModBUS RTU #2   #3   #4   #5

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
R203	3-phase power meter with dual Ethernet port and universal inputs	R203-1-ROG-060	3-phase power meter Kit, 1xETH, univ. Input, 3xROG L60 Ø12, 100mV/1KA 3mt
R203-ROG-025	3-phase power meter kit, 2xETH, univ. input, 3xROG L25 Ø12, 100mV/1KA-50Hz, 3mt	R203-1-ROG-090	3-phase power meter Kit, 1xETH, univ. Input, 3xROG L90 Ø12, 100mV/1KA 3mt
R203-ROG-040	3-phase power meter meter kit, 2xETH, univ. input, 3xROG L40 Ø12, 100mV/1KA-50Hz, 3mt	R203-1-TA50	3-phase power meter kit, 1xETH, univ. input, 3xTA 50/5A, cl.0,5/1, D23mm
R203-ROG-060	3-phase power meter meter kit, 2xETH, univ. input, 3xROG Coils L60 Ø12, 100mV/1KA-50Hz, 3mt	R203-2	3-phase power meter with dual Ethernet port and universal inputs
R203-ROG-090	3-phase power meter kit, 2xETH, universal input, 3xROG L90 Ø12, 100mV/1KA-50Hz, 3mt	R203-2-ROG-025	3-phase power meter Kit, 2xETH, univ. Input, 3xROG L25 Ø12, 100mV/1KA 3mt
R203-TA50	3-phase power meter kit, 2xETH, univ. input, 3xTA 50/5A, cl.0,5/1, D23mm	R203-2-ROG-040	3-phase power meter Kit, 2xETH, univ. Input, 3xROG L40 Ø12, 100mV/1KA 3mt
R203-1	3-phase power meter with single Ethernet port and universal inputs	R203-2-ROG-060	3-phase power meter Kit, 2xETH, univ. Input, 3xROG L60 Ø12, 100mV/1KA 3mt
R203-1-ROG-025	3-phase power meter Kit, 1xETH, univ. Input, 3xROG L25 Ø12, 100mV/1KA 3mt	R203-2-ROG-090	3-phase power meterKit, 2xETH, univ. Input, 3xROG L90 Ø12, 100mV/1KA 3mt
R203-1-ROG-040	3-phase power meter Kit, 1xETH, univ. Input, 3xROG L40 Ø12, 100mV/1KA 3mt	R203-2-TA50	3-phase power meter kit, 2xETH, univ. input, 3xTA 50/5A, cl.0,5/1, D23mm

Additional order codes and information

T203PM is a series of single-phase AC/DC TRMS power meter, ModBUS interface, analog and digital output, inputs with 3 current measurement ranges: 100, 300 or 600 Aac/dc depending on the version (T203PM100-MU, T203PM300-MU, T203PM600-MU) and for voltage 290 Vac. 1000 Vdc. The instruments carry out the direct measurement of current and energy without using external CTs. T203PMs measure voltage values, AC/DC current, active/reactive/apparent power, power factor, frequency, voltage, current, current, reactive apparent power, power factor, frequency, harmonic distortion (THD).

DIRECT MEASUREMENT

ANALOG VOLTAGE OUTPUT

HARMONIC ANALYSIS

DIGITAL OUTPUT

MODBUS RTU INTERFACE

MICRO USB PORT

SETTINGS VIA EASY SETUP 2

EMBEDDED ENERGY METER

TOP SELLING PRODUCTS

T203PM100-MU

Single-phase AC/DC TRMS power meter, inputs up to 100 Vac/dc, ModBUS, analog and digital output

T203PM300-MU

Single-phase AC/DC TRMS power meter, inputs up to 300 Vac/dc, ModBUS, analog and digital output

T203PM600-MU

Single-phase AC/DC TRMS power meter, inputs up to 600 Vac/dc, ModBUS, analog and digital output

TYPICAL APPLICATION

AVAILABLE MEASURES VIA SERIAL

MAIN PRODUCT CODES

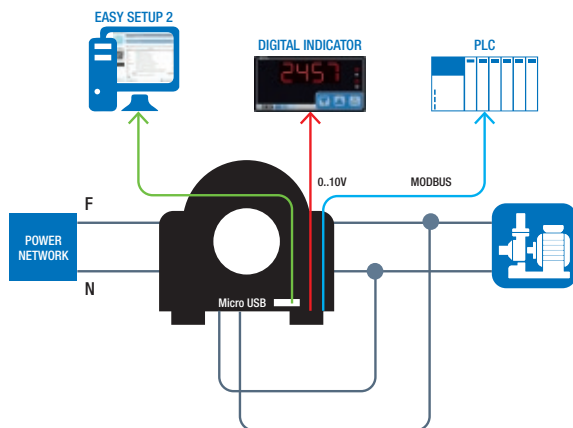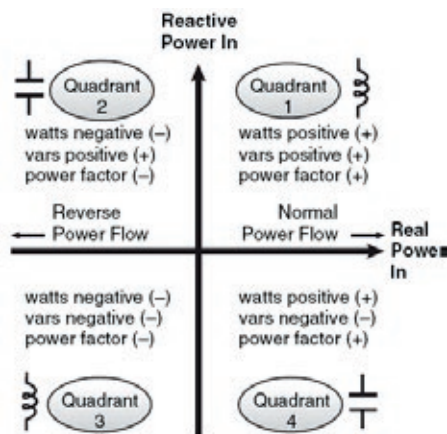| ORDER CODE	DESCRIPTION
T203PM100-MU	Single-phase power meter AC/DC TRMS, inputs up to 100 Vac/dc, ModBUS, analog and digital output
T203PM300-MU	Single-phase AC/DC TRMS power meter, inputs up to 300 Vac/dc, ModBUS, analog and digital output
T203PM600-MU	Single-phase AC/DC TRMS power meter, inputs up to 600 Vac/dc, ModBUS, analog and digital output
CU-A-MICROB	Micro USB-A USB-B cable 5 P

Additional order codes and information

The multifunctional network analyzers Series S604 and S711 are innovative instruments for for measuring and storing electrical parameters. They are particularly suitable when you need a device for the analysis and control of consumption control, with an excellent price/performance ratio. At versions with Rogowski current transducers, they offer extreme ease of connection and can be used in applications with high currents, linear measurements, retrofitting, audits, etc. The instruments can communicate via the RS485 serial port with ModBUS RTU/ ASCII protocol or LAN port.

SINGLE PHASE / THREE PHASE INSERTION

DATA STORAGE

I/O
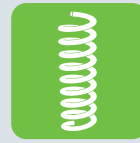**BUILT-IN DIGITAL I/Os**

SMART PROGRAMMING

MODBUS / ETHERNET COMMUNICATION

EMBEDDED ENERGY COUNTERS

THD / HARMONICS (UP to 15^)

CT / ROGOWSKI / DIRECT CURRENT

TOP SELLING PRODUCTS

S604B

Three phase power meter, BASIC, Modbus,1MB

S604E
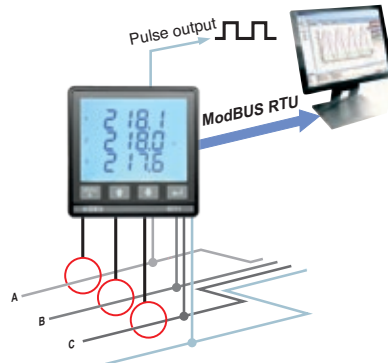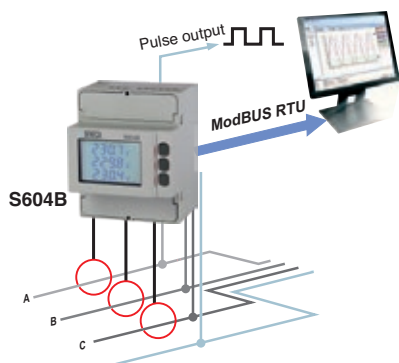
Power Meter, Energy PLUS, 8MB log. Harm.

S604E-ROG

Kit Energy PLUS RS485 Modbus+3 Rog. RC150

S711B

Three-phase network analyzer LCD 96x96 BASIC version

APPLICATION EXAMPLES

Pulse output

ModBUS RTU

S604B

A
B
C

Pulse output

ModBUS RTU

A
B
C

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
S604B-6-MOD	Three phase power meter, BASIC, for CT/5A, Modbus,1MB	S711B6MOD	LCD 96x96 BASIC Power Meter, TA1/5A, Modbus, I/O
S604B-6-ETH	Three-phase power meter, BASIC, CT/5A, Ethernet, 1MB log	S711E6MOD	LCD 96x96 Energy PLUS Power Meter, TA1/5A, Modbus
S604B-80-MOD	Three phase power meter, BASIC, 80A, Modbus,1MB log	S711E6MODAO	LCD 96x96 Energy PLUS Power Meter, TA1/5A, Modbus, AO
S604E-6-MOD	Power Meter, Energy PLUS x TA1/5A-RS485 Modbus, 8MB log. Harm.	S711E6ETH	LCD 96x96 Energy PLUS Power Meter, TA1/5A-Eth.,1DI 2DO
S604E-6-ETH	Power Meter Energy PLUS x TA1/5A-Ethernet,8MB log. Harmonics	S711EROGMOD30	LCD 96x96 Energy PLUS Kit, Modbus,N.3 RC150 (30cm)
S604E-80-ETH	Power Meter Energy PLUS 80A-Ethernet,8MB log. Harmonics	S711EROGMOD45	LCD 96x96 Energy PLUS Kit, Modbus,N.3 RC150 (45cm)
S604E-80-MOD	Power Meter, Energy PLUS 80A-RS485 Modbus,8MB log. harmonics	S711EROGMOD70	LCD 96x96 Energy PLUS Kit, Modbus,N.3 RC150 (70cm)
S604E-ROG-MOD-30	Kit Energy PLUS RS485 Modbus+3 Rog. RC150 L= 30cm int.9,5cm	S711EROGETH30	LCD 96x96 Energy PLUS Kit , Ethernet, N.3 RC150 (30cm)
S604E-ROG-MOD-45	Kit Energy PLUS RS485 +3 Rog. RC150 L= 45cm int.14cm	S711EROGETH45	LCD 96x96 Energy PLUS Kit , Ethernet, N.3 RC150 (45cm)
S604E-ROG-MOD-70	Kit Energy PLUS RS485 Modbus+3 Rog. RC150 L= 70cm int.22cm	S711EROGETH70	LCD 96x96 Energy PLUS Kit, Ethernet, N.3 RC150 (70cm)

Additional order codes and information

Suitable for measuring currents from mA to hundreds of kA, RC150 and RC190 Rogowski coils ensure high linearity, wide dynamic range and are very useful with large or irregularly shaped conductors. The light weight and flexibility make them optimal even in locations with reduced access. The transducers pose no danger to open secondaries and cannot can be damaged by large overloads. The absence of a magnetic core gives this range a response in very wide frequency range. All this makes them particularly suitable for the measurement of harmonic content or transients. The bayonet closure ensures linear detection at any distance between the conductor and transducer, even those not perpendicular to each other.

FULL SHIELDING

NON-INTRUSIVE MEASURING

OVERLOAD TOLERANCE

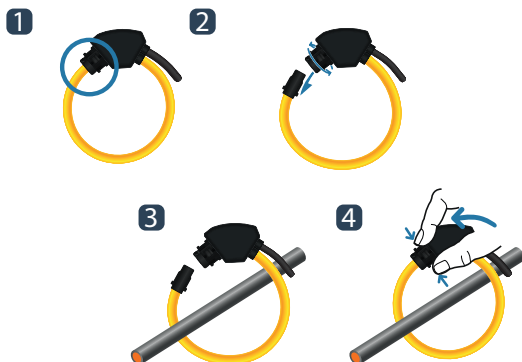**LIGHTWEIGHT AND HANGABLE**

mA/kA MEASURING

HIGH LINEARITY

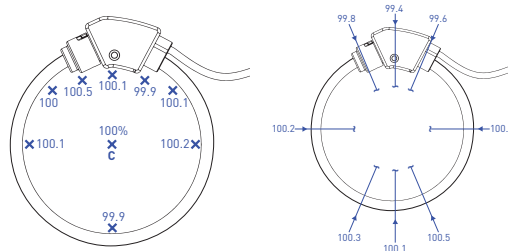**BIG CONDUCTORS**

LIMITED ACCESS

INSTALLATION

DIMENSION

3000...15000 mm

80...950 mm

250...3000 mm

8,3 mm

Technical data, diagrams and drawings in this catalog are indicative only and not binding

ACCURACY RANGE

C (center based conductor)

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
RC150-025-100-3M	Rogowski Coil L=25cm Øint.8cm,100mV/1KA-50Hz,cable L=3mt.	RC150-090-100-5M	Rogowski Coil L=90cm Øint.28cm,100mV/1KA-50Hz,cable L=5mt.
RC150-025-100-5M	Rogowski Coil L=25cm Øint.8cm,100mV/1KA-50Hz,cable L=5mt.	RC150-090-100-10	Rogowski Coil L=90cm Øint.28cm,100mV/1KA-50Hz,cable L=10mt.
RC150-025-100-10	Rogowski Coil L=25cm Øint.8cm,100mV/1KA-50Hz,cable L=10mt.	RC150-120-100-3M	Rogowski Coil L=120cm Øint.38cm,100mV/1KA-50Hz,cable L=3mt.
RC150-035-100-3M	Rogowski Coil L=35cm Øint.11cm,100mV/1KA-50Hz,cable L=3mt.	RC150-180-100-3M	Rogowski Coil L=180cm Øint.57cm,100mV/1KA-50Hz,cable L=3mt.
RC150-040-100-3M	Rogowski Coil L=40cm Øint.12cm,100mV/1KA-50Hz,cable L=3mt.	RC150-RIC-KIT30	Rogowski Coil Kit Spare Parts RC150 L= 30cm
RC150-040-100-5M	Rogowski Coil L=40cm Øint.11cm,100mV/1KA-50Hz,cable L=5mt.	RC150-RIC-KIT45	Rogowski Coil Kit Spare Parts RC150 L= 45cm
RC150-040-100-10	Rogowski Coil L=40cm Øint.11cm,100mV/1KA-50Hz,cable L=10mt.	RC150-RIC-KIT70	Rogowski Coil Kit Spare Parts RC150 L= 70cm
RC150-060-100-3M	Rogowski Coil L=60cm Øint.19cm,100mV/1KA-50Hz,cable L=3mt.	RC190-030-333-3M	Rogowski sensor L-coil=30cm, Øint. 9cm, 333mV/1KA-50Hz, L-cable=3mt
RC150-060-100-5M	Rogowski Coil L=60cm Øint.19cm,100mV/1KA-50Hz,cable L=5mt.	RC190-035-333-3M	Rogowski sensor L-coil=35cm, Øint. 9cm, 333mV/1KA-50Hz, L-cable=3mt
RC150-060-100-10	Rogowski Coil L=60cm Øint.19cm,100mV/1KA-50Hz,cable L=10mt.	RC190-060-333-3M	Rogowski sensor L-coil=60cm, Øint. 9cm, 333mV/1KA-50Hz, L-cable=3mt
RC150-090-100-3M	Rogowski Coil L=90cm Øint.28cm,100mV/1KA-50Hz,cable L=3mt.	RC190-090-333-3M	Rogowski sensor L-coil=90cm, Øint. 9cm, 333mV/1KA-50Hz, L-cable=3mt

Additional order codes and information

S500 Series DIN format energy meters are used for energy measurement in industrial and civil environments. They are available with integrated, remote and MID certified communication. Totals and instantaneous powers are shown on the LCD display.

For remote management are available the tools ENERGY MODBUS PACK for meters with ModBUS interface and ENERGY M-BUS PACK for meters with M-BUS interface as well as the Web Server for versions with Ethernet interface. S500 meters are manufactured in full compliance with EN 50470-1.

M-BUS COMMUNICATION

MID CERTIFICATION

S0 OUTPUT / TARIFF INPUT

MULTI-PROTOCOL SUPPORT

CLASS B / CLASS 2 ACCURACY

MULTIPLE TYPES OF CONNECTION

SW / WEB SERVER / FRONT KEYS

POWER CONSUMPTION MONITORING

TOP SELLING PRODUCTS

S501-40

40A single phase energy counter 2 wires 1 DIN

S501-40
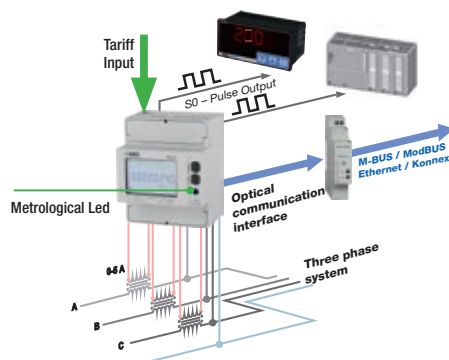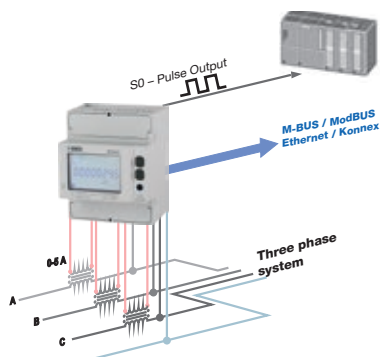
80A single phase energy counter 2 wires 2 DIN

S504C

6A 3-phase energy counter 4 wires 4 DIN

S504C

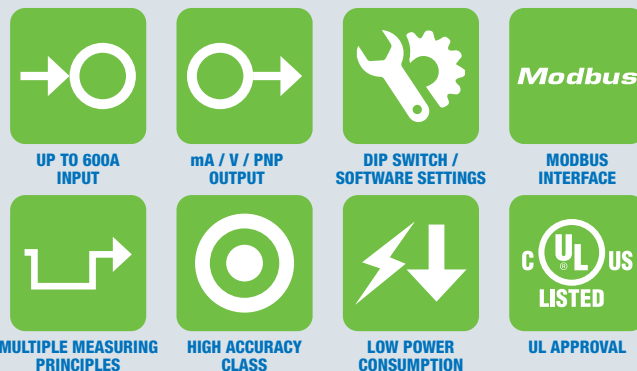6/80A three phase energy counter 3/4 wires 4 DIN

APPLICATION EXAMPLES

MAIN PRODUCT CODES

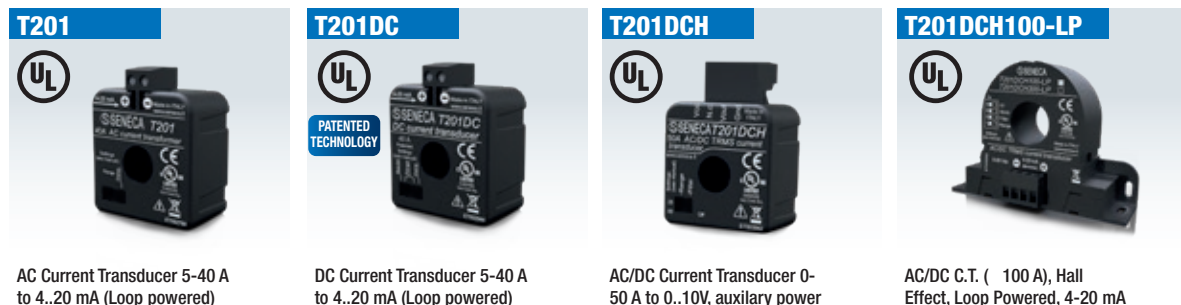| ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
S500-MOD	RS485 Modbus RTU optical interface module	S504C-6-MOD-MID	6A 3-phase energy counter 4 wires 4 DIN, Modbus, MID
S501-40-0	40A single phase energy counter 2 wires 1 DIN	S504C-6-MBU-MID	6A 3-phase energy counter 4 wires 4 DIN, M-BUS, MID
S501-40-0-MID	40A single phase energy counter 2 wires 1 DIN, MID certified	S504C-6-ETH-MID	6A 3-phase energy counter 4 wires 4 DIN, Ethernet, MID
S501-40-MOD-MID	40A single phase energy counter 2 wires 1 DIN, RS485 Modbus MID	S504C-80-MOD-MID	80A 3-phase energy counter 4 wires 4 DIN, Modbus, MID
S501-40-MBU-MID	40A single phase energy counter 2 wires 1 DIN, RS485 M-Bus, MID	S504C-80-MBU-MID	80A 3-phase energy counter 4 wires 4 DIN, M-BUS, MID
S502-80-MOD	80A single phase energy counter 2 wires 2 DIN, RS485 Modbus	S504C-80-ETH-MID	80A 3-phase energy counter 4 wires 4 DIN, Ethernet, MID
S502-80-MBU	80A single phase energy counter 2 wires 2 DIN, M-BUS	S534-6-MID	6A three phase energy counter 3/4 wires 4 DIN, MID
S502-80-ETH	80A single phase energy counter 2 wires 2 DIN, Ethernet	S534-80-MID	80A three phase energy counter 3/4 wires 4 DIN, MID
S502-80-MID	80A Single Phase Energy Counter, 2 wires, 1 DIN, MID		

Additional order codes and information

The T201 Series AC/DC Current Transducers are devices capable of converting the measured current value (up to 600 A) into a standardized industrial 4..20 mA or 0..10 V signal. Most models of the T201 Series are UL certified and feature low power consumption, convenient DIP-switch-settable measurement scales and high accuracy guaranteed by the absence of thermal drift. 15 models are available with different measuring principles: rectified average, magnetic balance (with patented technology), Hall Effect or TRMS with bipolar input range.
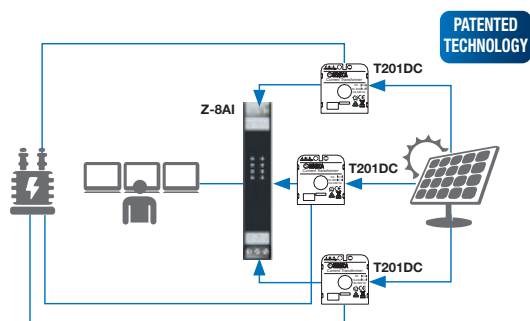

UP TO 600A INPUT

mA / V / PNP OUTPUT

DIP SWITCH / SOFTWARE SETTINGS

MODBUS INTERFACE

MULTIPLE MEASURING PRINCIPLES

HIGH ACCURACY CLASS

LOW POWER CONSUMPTION

UL APPROVAL

TOP SELLING PRODUCTS

T201
AC Current Transducer 5-40 A to 4..20 mA (Loop powered)

T201DC
PATENTED TECHNOLOGY
DC Current Transducer 5-40 A to 4..20 mA (Loop powered)

T201DCH
AC/DC Current Transducer 0-50 A to 0..10V, auxilary power

T201DCH100-LP
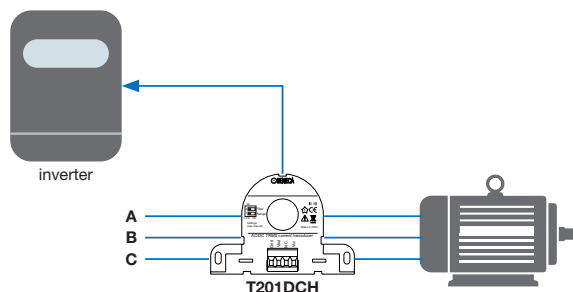AC/DC C.T. (100 A), Hall Effect, Loop Powered, 4-20 mA

APPLICATION EXAMPLES

DIRECT CURRENT TRANSDUCTION WITH 4-20 mA DIRECT OUTPUT

TRANSDUCTION OUTPUT CURRENT FROM ELECTRIC MOTOR IN 0-10V SIGNAL

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
A-DIN-T201	DIN rail plastic clip for T201 Series	T201DCH300-LP	AC/DC C.T. (300 A), Hall Effect, Loop Powered, 4-20 mA
T201	AC Current Transf. 5-40 A to 4..20 mA (Loop powered);	T201DCH50-M	AC/DC C.T. (50 A), Hall Effect, Loop Powered, 0-10V, Modbus
T201DC DC	Current Transf. 5-40 A to 4..20 mA (Loop powered);	T201DCH100-M	AC/DC C.T. (100 A), Hall Effect, Loop Powered, 0-10V, Modbus
T201DC100	DC Current Transf 0-100A to to 4..20 mA (Loop powered);	T201DCH300-M	AC/DC C.T. (300 A), Hall Effect, loop Powered, 0-10V, Modbus
T201DCH	AC/DC Current Transf. 0-50 A to 0..10V, Auxilary Power	T201DCH50-MU	AC/DC C.T. (50 A), TRMS, 0..10V, Pnp alarm, Modbus, USB
T201DCH100	AC/DC CT with Hall effect INP 0-100Aac/dc OUT 0-10Vdc	T201DCH100-MU	AC/DC C.T. (100 A), TRMS 0..10V, Pnp alarm, Modbus, USB
T201DCH300	AC/DC CT with Hall effect INP 0-300Aac/dc OUT 0-10Vdc	T201DCH300-MU	AC/DC C.T. (300 A), TRMS 0..10V, Pnp alarm, Modbus, USB
T201DCH50-LP	AC/DC C.T. (50 A), Hall Effect, Loop Powered, 4-20 mA	T201DCH600-MU	AC/DC C.T. (600 A), TRMS 0..10V, Pnp alarm, Modbus, USB
T201DCH100-LP	AC/DC C.T. (100 A), Hall Effect, Loop Powered, 4-20 mA		

Additional order codes and information

The converter modules for electrical measurements measure voltage and current values (alternating and / or continuous) converting them into a signal normalized in current or in voltage at the output terminals, proportional to the input value. The scaling parameters of the inputs and outputs are selectable via software or DIP switches. The modules ensure a high accuracy class (0.1 to 0.5%) and a very high multiple ways galvanic isolation, up to 4,000 Vac. In addition to power or error signalling, MdBUS modules equipped offer RS485 LED indication on the front panel.

WIDE MEASURING RANGE

EASY CONNECTIONS

FLEXIBLE SETTINGS

FULL POWER SUPPLY OPTIONS

COMPACT SIZE

INTERNATIONAL APPROVALS

HIGH LEVEL ISOLATION

FIELDBUS INTERFACE

Modbus

TOP SELLING PRODUCTS

Z201

Alternate current converter
10..40 Vdc; 19..28 Vac

Z202-LP

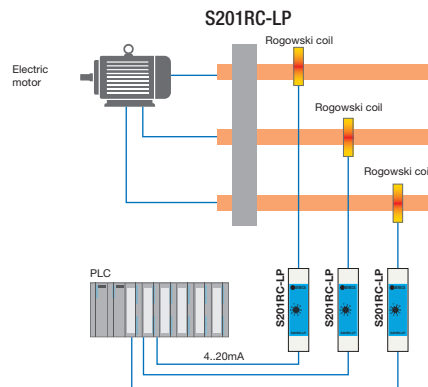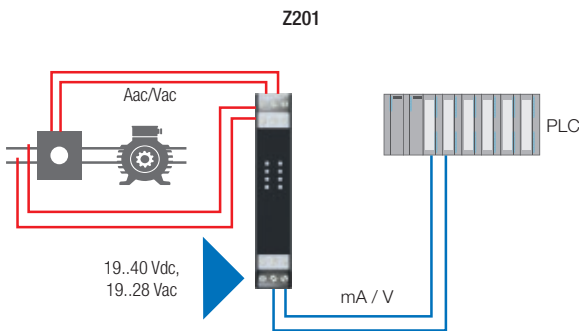Alternate voltage converter
loop powered

Z203-2

Single Phase
Power Meter

S201RC-LP

Loop-powered converter for
Rogowski sensors

APPLICATION EXAMPLES

Z201

Aac/Vac

PLC

19..40 Vdc,
19..28 Vac

mA / V

S201RC-LP

Electric motor

Rogowski coil

Rogowski coil

Rogowski coil

PLC

S201RC-LP

S201RC-LP

S201RC-LP

4..20mA

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION
S201RC-LP	Loop powered current converter for Rogowski Coils
Z201	AC Current to DC I/V Conv.19..40Vdc - 19..28 Vac
Z201-H	AC Current to DC I/V Isolator/Conv.85..265Vac/dc
Z202	AC Voltage(500 A);to DC I/V Conv.19..40 Vdc-19..28 Vac
Z202-H	AC Voltage(500 A);to DC I/V Isolator/Conv.85..265Vac/dc
Z202-LP	500 VAC- 540 VDC to 4..20 mA Converter, loop pow.
Z203-2	AC single phase advanced network analyzer, Micro USB port
Z204-1	AC/DC high voltage converter, analog out, ModBUS RTU

Additional order codes and information

For Energy Management applications SENECA offers different types of controllers, Z-TWS4-E, Z-PASS2-SE, S6001-RTU-E with the support of IEC 60870-101/104 and IEC 61850 communication protocols. These units can be used as redundant controllers for plant automation, energy management, management of renewable energy systems (biomass, photovoltaic, wind, etc.), development of smart grids, etc.. They are also configurable as web servers and TCP-IP nodes and can be integrated with SCADA, EMS and Web supervision platforms.

ENERGY MANAGEMENT APPLICATIONS

SOFT PLC IEC 61131-3

VPN SUPPORT

MODBUS RTU / TCPIP SUPPORT

IEC 60870-101-104 SLAVE

IEC 61850 CLIENT / SERVER

SUBSTATION CONTROLS

SCADA INTEGRATION

TOP SELLING PRODUCTS

Z-TWS4-E

Energy controller, built-in I/O, Straton

Z-PASS2-S-E

Energy Remote Controller 4G, VPN, GPS, built-in I/O, Straton

S6001-RTU-E

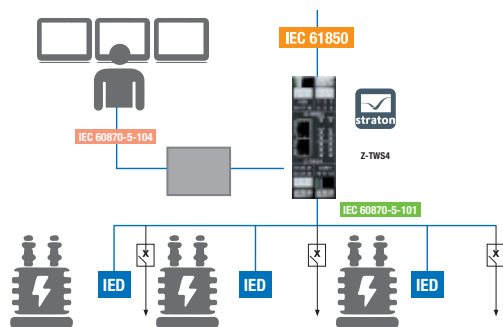Energy Remote Control Unit, built-in IO, 4G, Straton
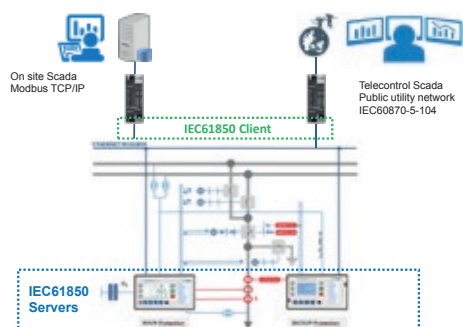
R-PASS-W-4-E

Multifunction Controller / Gateway, WiFi, 4 LAN ports, Straton, energy protocols

APPLICATION EXAMPLES

REMOTE CONTROL OF ELECTRICAL SUBSTATIONS

IEC 61850

IEC 60870-5-104

straton

Z-TWS4

IEC 60870-5-101

IED   IED   IED

ENERGY MANAGEMENT SMART GATEWAY

On site Scada Modbus TCP/IP

Telecontrol Scada Public utility network IEC60870-5-104

IEC61850 Client

IEC61850 Servers

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
EASY CEI	MYALARM2 CEI software manager	Z-PASS2SE4GEUUPG	3G Modem upgrade and replacement → 4GLTE/EMEA c/o laboratory (Z-PASS2-S-E)
MY2CEI-016-0-220	MY2-CEI, built-in antenna, 220 Vac - 12 Vdc	Z-PASS2SE4GWWUPG	Upgrade and replacement of 3G Modem → 4GLTE/WW c/o laboratory (Z-PASS2-S-E)
MY2CEI-016-0-24	MY2-CEI, built-in antenna, 24 Vac - 12 Vdc	Z-TWS4-E-IO	IEC 61131 Energy controller energy, built-in I/O, Straton OEM
MY2CEI-016-A-220	MY2-CEI, A-GSM, 220 Vac - 12 Vdc	R-PASS-0-2-E	Multifunction Controller / Gateway, 2 LAN ports, Straton, energy protocols
MY2CEI-016-A-24	MY2-CEI, A-GSM, 24 Vac - 12 Vdc	R-PASS-0-4-E	Multifunction Controller / Gateway, 4 LAN ports, Straton, energy protocols
S6001-RTU-E	Remote Control Unit with built-in IO, 3G+ modem, energy	R-PASS-W-2-E	Multifunction Controller / Gateway, WiFi, 2 LAN ports, Straton, energy protocols
S6001-RTU-E-4GWW	Remote Control Unit with built-in IO, 4G WW LTE, Energy protocols	R-PASS-W-4-E	Multifunction Controller / Gateway, WiFi, 4 LAN ports, Straton, energy protocols
Z-PASS2-S-E-4GWW	Remote Controller Energy 4G worldwide, VPN, serial device server, GPS and I/O integrated		

Additional order codes and information

4

MEASUREMENT AND CONTROL PANEL INSTRUMENTATION

Z Line modules are reliable signal conditioners that are geared toward ease of use and installation.

Most models features are characterized by 3-way galvanic isolation equal to 1.5 kVac, reduced overall dimensions (standard width 17.5 mm), installation on DIN 42677, extended temperature range, high accuracy, possibility to power the sensors connected to them. Z Line is the ideal solution for analog, electrical, from temperature sensors, load cells, serial, digital, impulsive signal conditioning.

UNIVERSAL POWER SUPPLY

POWER TRANSDUCER

LOW POWER CONSUMPTION
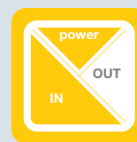
MULTIWAYS ISOLATION @1,5 KVAC

HIGH LEVEL ACCURACY

UNIVERSAL I/O STANDARD SIGNALS

INDUSTRIAL RELIABILITY

INTERNATIONAL CERTIFICATIONS

TOP SELLING PRODUCTS

Z170REG-1

DC duplicator / isolator prog. Via MicroUSB/App

Z109S

DC current isolator

Z109REG2-1

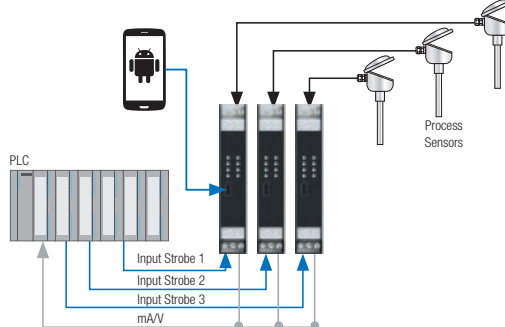High performanceuniversal converter, prog. via MicroUSB/App

Z111

Frequency to DC isolator / converter

APPLICATION EXAMPLES

ISOLATION AND CONVERSION WITH ALARM THRESHOLD ON ANALOG INPUT AND OUTPUT RETRANSMISSION ON INDICATOR

Level sensor

Light column

Digital Indicator

Relay SPDT output

4..20 mA / 0..10 V
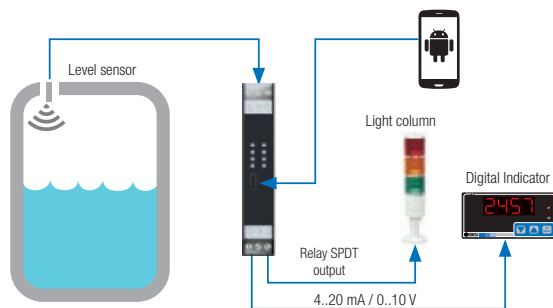
ISOLATION AND ANALOG CONVERSION WITH FUNCTION OF MULTIPLEXER ON RETRANSMITTED OUTPUT

Process Sensors

PLC

Input Strobe 1
Input Strobe 2
Input Strobe 3
mA/V

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
Z102	Potentiometer to DC Current/Voltage isolator/converter	Z109UI2-1	DC current / voltage converter, prog. via Micro USB/App
Z104	DC V/I to frequency isolator / converter	Z110D	DC current isolator (self-powered) double channel
Z109PT2-1	RTD to DC V/I isolator converter, prog. via MicroUSB/App	Z110S	DC current isolator (self-powered) single channel
Z109REG	Analog universal converter with galvanic isolation	Z111	Frequency to DC isolator / converter
Z109REG-BP	Universal converter with bipolar mA / V output	Z112A	On/Off sensors digital amplifier, single channel
Z109REG2-1	High perf.universal converter, prog. via MicroUSB/App	Z112D	On/Off sensors amplifier, double channel
Z109REG2-H	High performance universal converter, 85-265 Vac/dc	Z113-1	Double threshold with universal analog input
Z109S	DC current isolator for 0/4..20mA loops	Z113S	DC current / voltage single alarm trip module
Z109S-DI	DC wide range current isolator for 0/4..20mA loops	Z170REG-1	DC duplicator / isolator prog. Via MicroUSB/App
Z109TC2-1	TC to DC isolator / converter, prog. via MicroUSB/App	Z190	DC Current/Voltage Adder/subtracter

Additional order codes and information

SENECA K Line converter modules are characterized by isolation 1.5 kVac 3-way digital technology, accuracy class 0.1%, power supply range from 19.2 to 30 Vdc, compact size (102.5x93.1x6.2 mm), low power consumption, Mtbf over 500.000 hours. The configuration of the signals is immediate by DIP switch or software. The power supply technique is standard (on the spring clamp) or with distributed system, based on expandable connector (K-BUS) that can be snapped onto the 35 mm DIN rails according to EN 60715.

>500.000 h — HIGH RELIABILITY
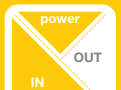
-20..+65°C — WIDE RANGE OPERATING TEMPERATURE

<25mA — LOW POWER CONSUMPTION

power OUT IN — MULTIWAYS ISOLATION @1,5 KVAC

6,2 mm — COMPACT DIMENSION

0,1% — HIGH ACCURACY CLASS

ON OFF — FLEXIBLE SETTINGS VIA DIP SWITCHES

EASY SETUP — PROGRAMMING VIA PC

TOP SELLING PRODUCTS

K109S

DC Current/Voltage to DC Current/Voltage Converter

K109UI

DC Current/Volt. to DC Current/Volt. Isolator/Converter

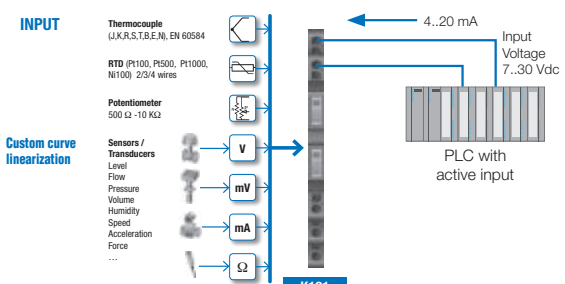**K109PT**

PT100 to DC Current/Voltage Isolator/Converter

K121

Ex Zone 2

Universal isolator converter loop powered

APPLICATION EXAMPLES

CONVERSION AND TRANSMISSION TO THE PLC OF A UNIVERSAL ANALOGUE SIGNAL

INPUT

Thermocouple (J,K,R,S,T,B,E,N), EN 60584

RTD (Pt100, Pt500, Pt1000, Ni100) 2/3/4 wires

Potentiometer 500 Ω -10 KΩ

Custom curve linearization

Sensors / Transducers
Level
Flow
Pressure
Volume
Humidity
Speed
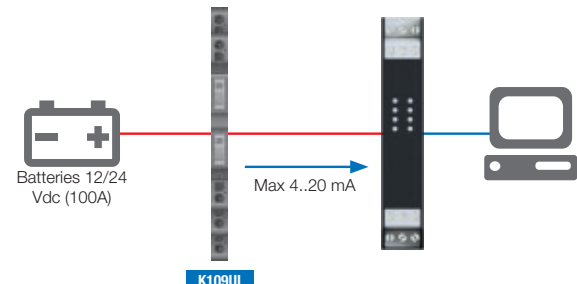Acceleration
Force
...

V
mV
mA
Ω

4..20 mA

Input Voltage 7..30 Vdc

PLC with active input

K121

MONITORING OF THE BATTERY CHARGE VOLTAGE

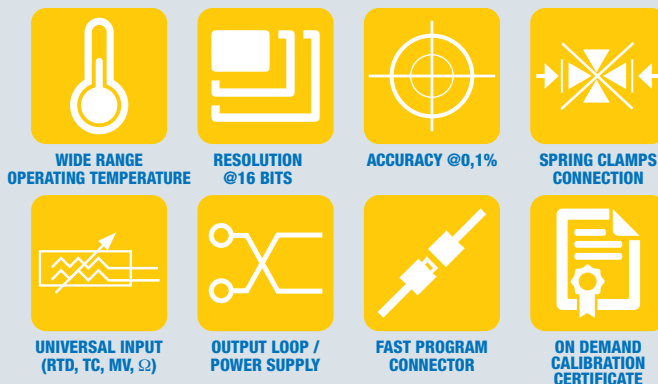Batteries 12/24 Vdc (100A)

Max 4..20 mA

K109UI

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
K107A	RS485 <-> RS485 serial amplifier/Isolator	K111-C	Isolated dual output frequency trip amplifier - config.
K107B	RS232 <-> RS485 serial converter/Isolator	K111D	2-CH frequency divider-repeater with 2 isolated outputs
K107USB	USB <-> RS485 converter / Isolator	K111D-C	2-CH frequency divider-repeater with 2 isolated outputs, config.
K109LV	mV to DC Current/Voltage Isolator/Converter	K112	Universal digital Coupler/Isolator
K109PT	PT100 to DC Current/Voltage Isolator/Converter	K120RTD	Pt100, Ni100 loop powered converter
K109PT1000	PT1000 to DC Current/Voltage Isolator/Converter	K120RTD-C	Pt100, Ni100 loop powered converter, config.
K109PT-HPC	PT100 to DC Current/Volt. Isol/Conv. High prec.	K121	Universal isolator converter loop powered
K109S	DC Current/Voltage to DC Current/Voltage Converter	K121-C	Universal isolator converter loop powered - config.
K109TC	TC to DC Current/Volt. Isolator/Converter-with alarm	K-BUS	Expandable power supply connector
K109UI	DC Current/Volt. to DC Current/Volt. Isolator/Converter	K-SUPPLY	Redundant power supply module for K-Line modules
K111	Isolated dual output frequency trip amplifier		

Additional order codes and information

The high-accuracy head-mounted temperature transmitters, T120 and T121, are designed for universal use in machines, plants, installations and the process industry. They convert input signals and transmit them back into a normalized current signal current through a 4-20 milliAmpere loop. Input signals can come from 2-, 3-, 4-wire RTD sensors such as Pt100 (EN 60751) and Ni100 (DIN 43760). T121 model also acquires Cu50, Cu100, Ni121 and Ni1000 RTDs and signals from thermocouples type J, K, R, S, T, B, E, N, L (EN 60584), voltage and resistance.

WIDE RANGE OPERATING TEMPERATURE

RESOLUTION @16 BITS

ACCURACY @0,1%

SPRING CLAMPS CONNECTION

UNIVERSAL INPUT (RTD, TC, MV, Ω)

OUTPUT LOOP / POWER SUPPLY

FAST PROGRAM CONNECTOR

ON DEMAND CALIBRATION CERTIFICATE

TOP SELLING PRODUCTS

T120

Pt100/Ni100 to 4-20mA out (non-isolated)

T121

Universal Input to 4-20mA out (Isolated)

PT100-100-MA
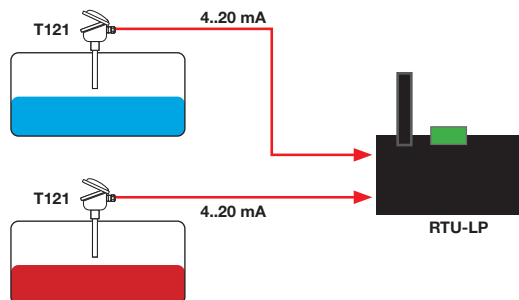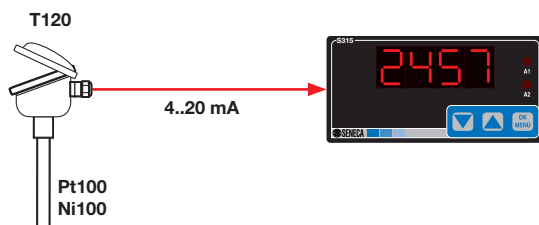
Pt100 std length 100 mm, 4-20 mA output

PT100-50

Pt100 std length 50 mm

APPLICATION EXAMPLES

T120

4..20 mA

Pt100 Ni100

T121

4..20 mA

T121

4..20 mA

RTU-LP

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
PT100-100	Pt100 std length 100 mm	PT100-50	Pt100 std length 50 mm
PT100-100-MA	Pt100 std length 100 mm, 4-20 mA output	PT100-50-MA	Pt100 std length 50 mm, 4-20 mA output
PT100-150	Pt100 std length 150 mm	PT100-A	Atmosphere PT100
PT100-150-MA	Pt100 std length 150 mm, 4-20 mA output	PT100-A-MA	Atmosphere PT100, 4-20 mA output
PT100-200	Pt100 std length 200 mm	PT100-SOLAR	Single element 3 wires Pt100 for photovoltaic modules
PT100-200-MA	Pt100 std length 200 mm, 4-20 mA output	PT100-SOLAR-MA	Single element Pt100 for PV modules, out 4-20 mA
PT100-250	Pt100 std length 250 mm	T120	Pt100/Ni100 to 4-20mA out (non-Isolated)
PT100-250-MA	Pt100 std length 250 mm, 4-20 mA output	T120-C	Pt100/Ni100 to 4-20mA out (non-Isolated), configured
PT100-300	Pt100 std length 300 mm	T121	Universal Input to 4-20mA out (Isolated)
PT100-300-MA	Pt100 std length 300 mm, 4-20 mA output	T121-C	Universal Input to 4-20mA out (Isolated), configured

Additional order codes and information

SENECA S400 surge protectors are designed to protect electrical systems and equipment against transient and impulsive overvoltages caused by atmospheric phenomena and electrical switching. The S400 range includes: type 2 and 3 surge arresters for industrial power systems; protection for control and systems used in binary and analog circuits, such as pulse, 0..10 Vdc signals and 0/4..20 mA current loops; surge protections for computer and communication networks (token ring, ISDN, DS1, Ethernet, Power over Ethernet, RS232/422/485 etc.)

MULTIPLE FIELD APPLICATIONS

DIFFERENT DESIGNES

HIGH SECURITY INTERRUPTION LEVEL

FRONT STATUS SIGNALLING

COST SAVING
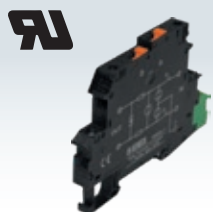
REMOTE SIGNALLLING

EASY CONNECTION

VOLTAGE SUPPRESSION

TOP SELLING PRODUCTS

S400CL-1

Analog and Digital Signals Surge Protection with knife disconnector

S400HV-2

Type 2 230 Vac Surge Protection at 3 conductors (L, N, PE)

K400CL

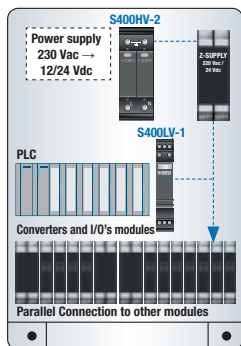Analog and Digital Signals Surge Protection, 6,2 slim

S400NET-1

Ethernet, serial, fieldbus networks Surge Protections, 5 wires

APPLICATION EXAMPLES

PROTECTION AND ISOLATION FOR POWER SUPPLY TYPE 2 AND 3

Power supply 230 Vac → 12/24 Vdc

S400HV-2

Z-SUPPLY 220 Vac / 24 Vdc

S400LV-1

PLC

Converters and I/O's modules

Parallel Connection to other modules

Automation Panels, Marshalling Panels, Panel of PLC & DCS command and machines control, Distribution Panels, Electrical Panels Power Center, MCC Panels

PROTECTION OF A PULSE MEASUREMENT DEVICE (REED, NAMUR, PNP, NPN, HALL EFFECT, ETC)
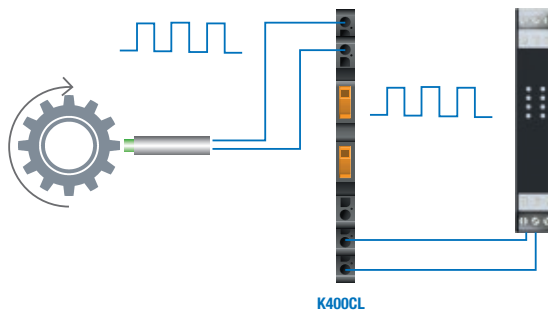
K400CL

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
K400CL	Analog and Digital Signals Surge Protection, 6,2 slim	S400CL-1	Analog and Digital Signals SPD with knife disconnector
K400CL-10	K400CL-1 10 pieces kit	S400CL-1-15	S400CL-1 10 pieces kit
S400HV-2	Type 2 230 Vac SPD at 3 conductors (L, N, PE)	S400CL-1-P5	S400CL-1 closing side (5 pieces)
S400HV-2-RIC-SL	S400HV2 plug spare 1L-NPE, no FM contact	S400NET-1	Ethernet, serial, fieldbus networks SPD, 5 wires
S400HV-2-RIC-SN	S400HV2 plug spare N/PE	S400NET1-RIC	S400NET-1 plug spare
S400LV-1	Type 3 24 Vac/dc SPD with FM contact at 3 conductors	S400ETH-DSK	Ethernet Networks SPD, Class.D/Cat.5 (100 Mbps)/5e
S400LV-1-RIC-SL	S400LV-1 plug spare, with contact FM		

Additional order codes and information

DIGITAL INDICATORS - S LINE

S-Line is a high performance compact/modular indicators / totalizers family. This series offers display choice with 4, 6, 8, 4+7 digits in multiple visualization mode (real-time, integrated, totalized measured values). S-Line indicators support universal input (analog, digital, by sensor) and re-transmitted output mA, V standard.
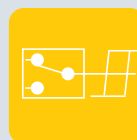
Concerning power supply they ensure an extended range of options: 80-265 Vac; 10-40 Vdc / 19-28 Vac; loop powered. Accuracy class reach 0,1% with 14-16 bit A/D conversion.
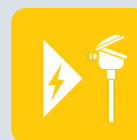
UNIVERSAL INPUT

RE-TRANSMITTED OUTPUT

ALARM (RELAY) ENABLING

POWER TRANSDUCERS

TOTALIZER

SIGNAL GENERATOR

BATCH COUNTER

MULTIWAYS ISOLATION @1,5 KVAC

TOP SELLING PRODUCTS

S311AK

4-digit display indicator with mA/V analog input

S312A

4-digit display indicator with universal analog input, nr.4 relay output, Modbus interface

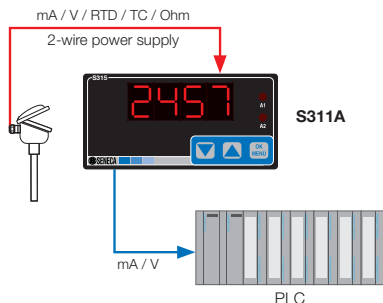**S315**

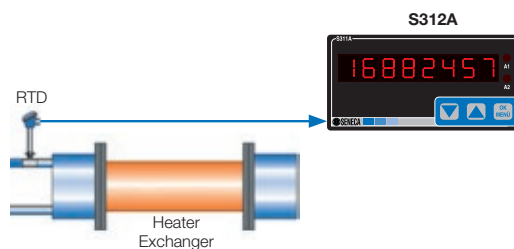4-digit display loop powered indicator, 4-20 mA input

S311A-4

4-digit display indicator - totalizer with universal analog input

APPLICATION EXAMPLES

ANALOG SIGNAL VISUALIZATION AND PLC RE-TRANSMISSION

mA / V / RTD / TC / Ohm
2-wire power supply

S311A

mA / V

PLC

CONSUMPTION METERING

S312A

RTD

Heater Exchanger

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
S311A-11-H	11 digit indicator, universal analog input, 80-265 Vac	S311A-6-H-0	6 digit indicator, universal AI, 80-265 Vac, opt. board
S311A-11-H-0	11 digit indicator, univ. AI, 80-265 Vac, opt. board	S311A-6-L	6 digit indicator, universal AI, 10-40 Vdc/19-28 Vac
S311A-11-L	11 digit analog input indicator, 10-40 Vdc/19-28 Vac	S311A-6-L-0	6 digit indicator, 10-40 Vdc / 19-28 Vac, opt. board
S311A-11-L-0	11-digit input indicator, 10-40Vdc/19-28Vac, opt. board	S311A-8-H	8-digit indicator, universal analog input, 80-265 Vac
S311A-4-H	4 digit indicator, universal analog input, 80-265 Vac	S311A-8-H-0	8-digit indicator, universal AI, 80-265 Vac, opt. board
S311A-4-H-0	4 digit indicator, 80-265 Vac, opt. board	S311A-8-L	8-digit indicator, universal AI 0-40 Vdc/19-28 Vac
S311A-4-L	4 digit indicator, universal AI, 10-40Vdc/19-28 Vac	S311A-8-L-0	8-digit indicator, 10-40 Vdc/19-28 Vac, opt. board
S311A-4-L-0	4-digit indicator, 10-40 Vdc/19-28 Vac, opt. Board	S311D-8-L-0	8-digit dig. input ind., 10-40Vdc/19-28Vac, opt. board
S311A-6-H	6 digit indicator, universal analog input, 80-265 Vac	S311G-4-L	4-digit universal input indicator/signal generator, 10-40 Vdc, 19-28 Vac

Additional order codes and information

SENECA S20N1 and S21N1 batch controllers are cost-effective, simple and safe solutions for process automation. Equipped with polycarbonate front membrane from 72x144 mm with 2 Numeric 5-digit LED high brightness displays, 7 status indicators LED and 6 programming buttons, S20N1 and S21N1 get digital signals from free contact, Reed, NPN, NAMUR, Hall effect and photoelectric sensors. The units are designed to control the measuring probes and activate valves or motors so to manage metering, batch& blending, filling and regeneration processes for fluids, in automatic, time-based and accurated way.
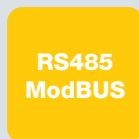
BATCH MODES

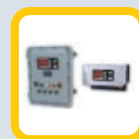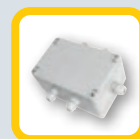**FLEXIBLE RECIPES**

PULSE INPUT

SPDT RELAY

RS485 ModBUS

SERIAL INTERFACE

IMPACT PRINTER

EX / IP65 VERSIONS

SELF-POWERED INPUT ADAPTER BOARD

TOP SELLING PRODUCTS

S20N1

Basic batch controller

S21N1

Advanced batch contoller
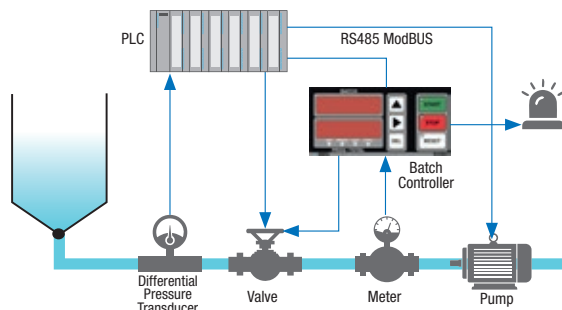
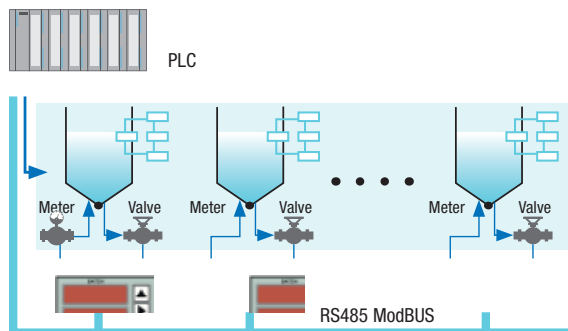**S20N1IP65**

Basic batch controller in IP65 case

S20N\EX

Basic batch controller in Eexd case

APPLICATION EXAMPLES

BATCH PROCESS CONTROL WITH PLC

PLC

RS485 ModBUS

Batch Controller

Differential Pressure Transducer

Valve

Meter

Pump

MULTIPLE RECIPES FROM REMOTE COMMAND (PLC) OR LOCAL (AUTO-MAN STATION)

PLC

Meter — Valve — Meter — Valve — Meter — Valve

RS485 ModBUS

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION	ORDER CODE	DESCRIPTION
FH190-24	Impact printer, 9-40 Vdc, for S20N1 e S21N1	S20N1IP65-23-ST	Batch controller in IP65 case, 24 Vac/dc
S20ADP	Input adapter board self-powered for S20N1, S21N1, S30	S20N1-KIT-1-ST	S20N1 / S21N1 remote board, 115 / 230 Vac
S20ADP-CM	Self-powered input adapter board for S20N1, S21N1, S30	S20N1-KIT-23-ST	S20N1 / S21N1 remote board, 24 Vac/dc
S20ADP-IP65	IP65 self-powered input adapter board	S21N1-1-ST	Batch controller with advanced functions, 115 / 230 Vac
S20N1-1-ST	Batch controller, 115 / 230 Vac	S21N1-23-ST	Batch controller with advanced functions, 24 Vac / dc
S20N1-23-ST	Batch controller, 24 Vac / dc	S21N1EX-1-ST	Batch controller EExd, advanced functions, 115/230 Vac
S20N1EX-1-ST	Batch controller in EExd case, 115 / 230 Vac	S21N1EX-23-ST	Batch controller Eexd, advanced functions, 24 Vac/dc
S20N1EX-23-ST	Batch controller in EExd case, 24 Vac/dc	S21N1IP65-1-ST	Batch controller IP65, advanced functions, 115/230 Vac
S20N1IP65-1-ST	Batch controller in IP65 case, 115 / 230 Vac	S21N1IP65-23-ST	Batch controller IP65, advanced functions, 24 Vac/dc

Additional order codes and information

MSC

MSC (Multifunction Smart Calibrator) is a flexible device for maintenance and testing of sensors and process meters. With best-inclass accuracy at 0.05% for each type of input / output, MSC offers measurement, generation and simulation of analog and digital signals, temperature sensors and load cells.

SIGNAL MEASUREMENT

SIGNAL GENERATOR SIMULATOR

RAMP FUNCTION

DATALOGGER

Test-4

Test-4 is a reliable support for calibration sessions, laboratory tests and of analog measurements simulation controlled by industrial devices (controllers, DAQ systems etc.). With a total accuracy better than 0.1%, and a whole resolution of 1 µA / 1 mV, Test-4 achieve accurate calibration results.

RAMP GENERATOR

INPUT / OUTPUT mA /V

LOW CONSUMPTION DISPLAY
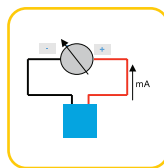
MULTIFUNCTION ENCODER BUTTON

PACKAGE CONTENT

MSC

1) Transport case
2) MSC calibrator (battery included)
3) Power plug
4) USB charging / data cable
5) User manuals
6) Seneca calibration report
7) Test cable, 4 mm plug

PACKAGE CONTENT

TEST-4

Alimentatore

Puntali

2 batterie NiMh di tipo AA da 2650 mAh

Trasport bag

RoHS COMPLIANT CE

APPLICATION / USE

Control Panels

Sensors / Instrumentation

Laboratories

Production

Test

PC Windows

Mobile Devices

LabVIEW Libraries

CONNECTIONS

SIGNAL GENERATION

Active Current
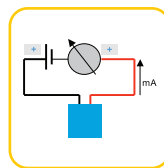
Passive Current
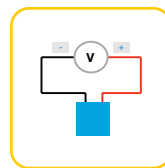
Voltage

SIGNAL MEASUREMENT
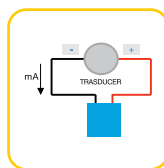
Active Current
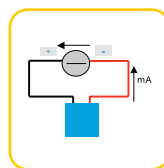
Passive Current
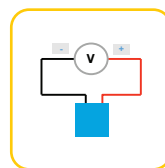
Voltage

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION
MSC	Multifunction bluetooth calibrator
MSC-POWER	MSC Power Supply
MSC-T	MSC Calibration Report
MSC TOOL	MSC data export and firmware update

MAIN PRODUCT CODES

ORDER CODE	DESCRIPTION
TEST-4-C	TEST-4 transport and protection case
TEST-4-PWR	Test-4 power supply
TEST-4-PK	Precision kit for Test-4
TEST-4-R	Precision test leads for Test-4
TEST-4-T	ISO 9001 calibration certificate for Test-4
TEST-4	V/I handheld multimeter with ramps simulation
USB-ISO	USB galvanic isolator

Additional order codes and information

VIDEO CORPORATE

You Tube

Frame the qr code and find out about Seneca world

WEBSITE

Visit our website and you will discover a world
of efficient product and solutions for automation
www.seneca.it

SENECA

CONTACT AND INFORMATION

Address
Headquarter: Via Austria 26 - 35127 Padova (I)
Tel. +39 049 8705 359 (408)
Fax +39 049 8706287

Web
Website: www.seneca.it
Documentation: www.seneca.it/cataloghi-flyers/
Tech Suppport: www.seneca.it/supporto-e-assistenza/
E-commerce: www.seneca.it/vetrina/

E-mail
General information: info@seneca.it
Sales Office: sales@seneca.it
Quality Assurance: qualita@seneca.it
Product technical support: support@seneca.it

Follow us on social network