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Remote I/O System

Cost-effective & easy to manage

Z-PC LINE

Modbus

SENECA

Z-PC LINE

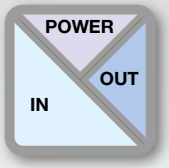
Remote I/O System, open, modular, multiple-field applications

Z-PC LINE MODBUS

Z-PC Modbus is a modular system able to manage from simple to complex applications (up to thousands I/O's) Z-PC includes the a various I/O's with: digital input, high-speed counters, digital outputs and relay/mosfet, analog input (mA, V Ohm, mV), strain gauges, RTDs, thermocouples.
It also guarantees the highest concentration data.
For example, up to 24 digital or 8 analog signals. The backplane (bus & power wiring) for DIN rail is modular and available with 1, 2, 4, 8 slots. The modules are Hot-swapping, without power failure and communication.

ISOLATION

Z-PC Modules have a 3-way electrical 1.5 KVac isolation among power supply // input //output, .
This will avoid potential differences arising from long reference cables and common points. Electrical isolation also protects against damage caused by overvoltages and inductive and capacitive interferences.



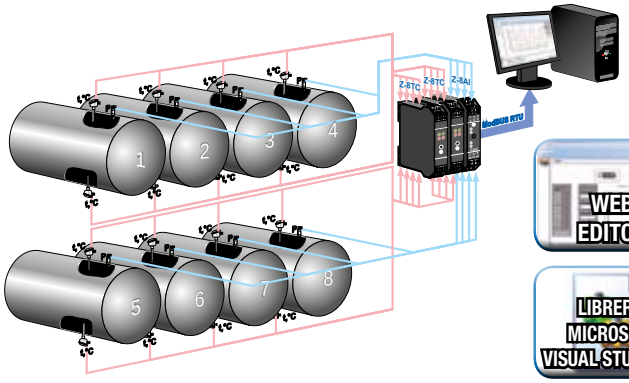
MODBUS RTU PROTOCOL

Modbus RTU protcol is one of the most popular industry standard.
The simplicity of installation, configuration and integration, combined the excellent performance make it the most popular fieldbus in world.
The open specs do not require hardware constraints. Physical access is based on a half duplex serial transmission. The electrical interface allows point to point or multipoint connections. The RS485 serial interface, which is the physical support for the Modbus communication, is based on a communication line balanced differential characteristic impedance of 120 ohms.
The maximum length of the connection depends on the baud rate, electrical noise from environment, the type and quality of cable. It is usually guaranteed to work up to 1.2 km, without using the repeaters.

STANDARD & APPROVALS

CANopen Modbus ISaGRAF OPC

DATA ACQUISITION



DATA RECORDER

WEB EDITOR

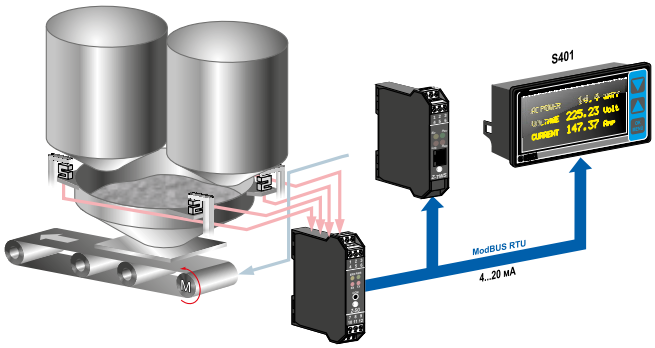
DRIVER NI LABVIEW™

LIBRERIE MICROSOFT VISUAL STUDIO™

OPC®

It is a perfect solution for laboratory applications, end of line test, process measurement.
Z-PC offers simple tools suitable for data acquisition, recording and displaying data in combination with I/O modules: Data Recorder from 6 to 64 channels data exchange via OPC, LabVIEW ™ drivers and Visual Studio ™ specifically designed for Z-PC I/O modules.

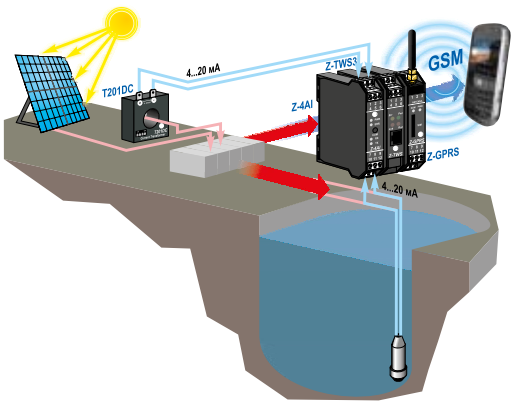
AUTOMATION and softPLC



ISaGRAF

The IEC 61131 integrated soflogic and the distributed system features provides a maximum flexibility to implement logics of control, alarm management, datalogging.

REMOTE CONTROL



GSM

VPN

GPRS

IEC 60870

Remote control with Z-PC means having an integrated system based on a broad spectrum of RTUs (all-in-one, battery powered, small systems and cathodic protection), standard protocol and libraries of specific functions dedicated to the remote control applications.

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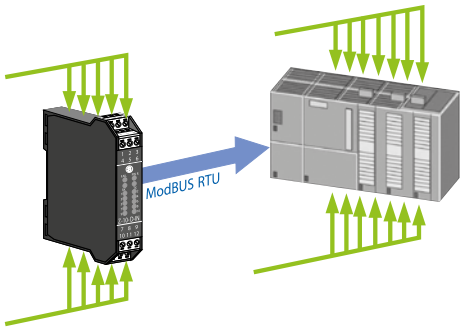
APPLICATIONS

The flexibility and modularity of the Z-PC line makes it a distributed system for multi-field applications:
data acquisition, building automation, monitoring, remote control of energy consumption, production control, marine automation, commissioning and laboratory testing, environmental, water, etc..

Hardware

DIGITAL I/O's



Reed, PNP, NPN, Proximity, Contact

Counting, 32 bit – 10 KHz

Relays SPST

Mosfet

Built-in control

Modbus CANopen

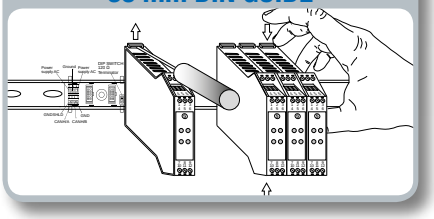
CONTROL UNITS

- PLC
- RTU
- Web Server
- Datalogger
- Gateway Ethernet

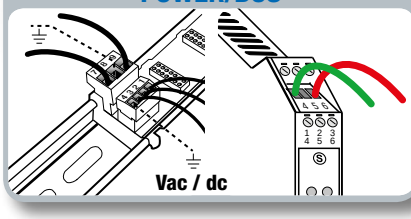
Z-TWS-3
Z-TWS-64
Z-LWS

RS232	RS485	TP-WIRE
MODBUS/ CANOPEN	ETHERNET 10/100 Base T	CPU 32/64 BIT
FLASH MEMORY 16/128 MB	RAM 8/64 MB	IEC 61131

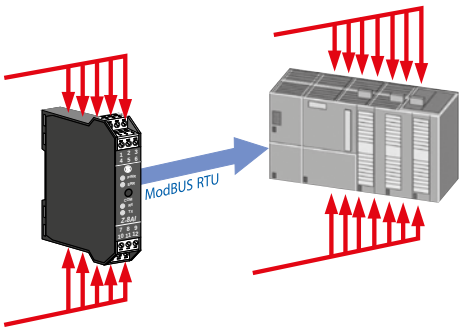
INSTALLATION/REMOVAL FROM 35 mm DIN GUIDE

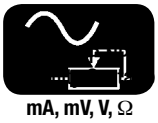


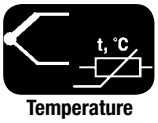
CONNECTIONS OFR POWER/BUS



ANALOG I/O's

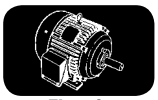


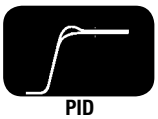

mA, mV, V, Ω



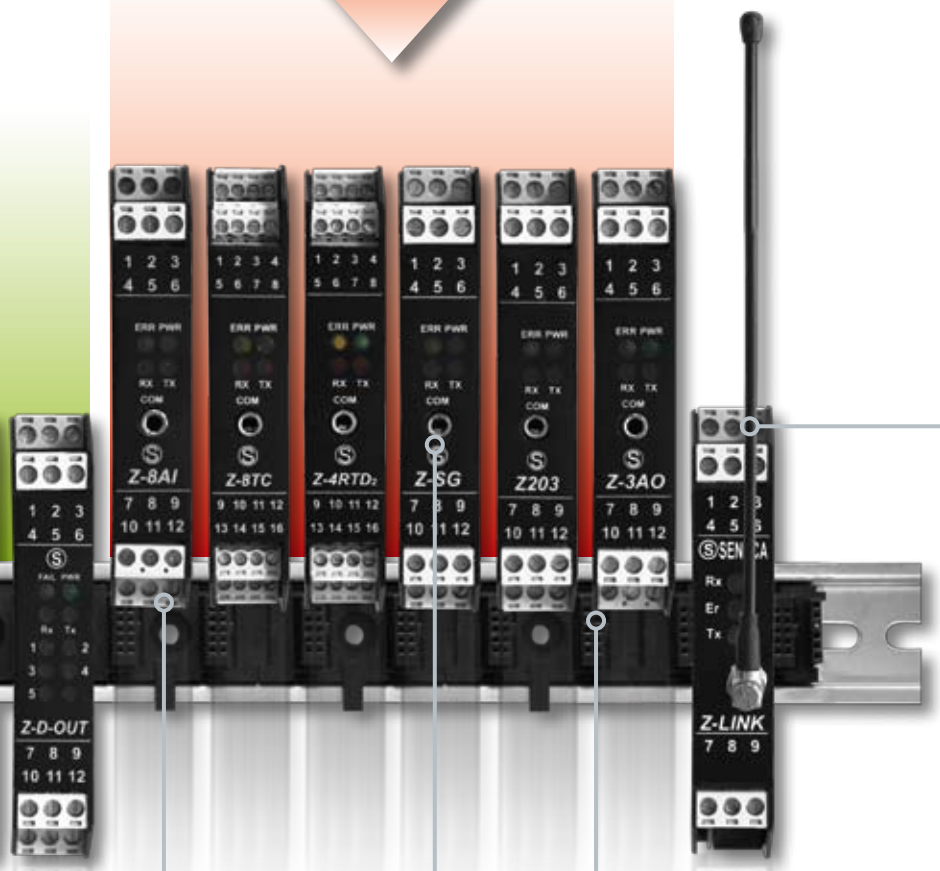
Temperature


Strain gauge


Electric parameters

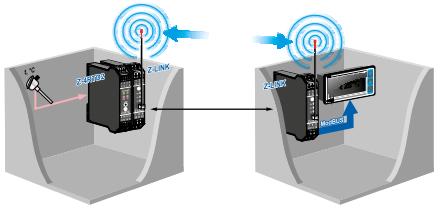

PID regulation

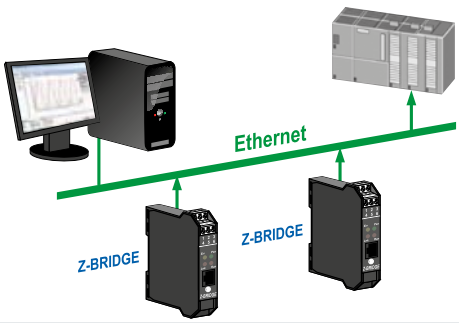

Resolution up to 16 bit

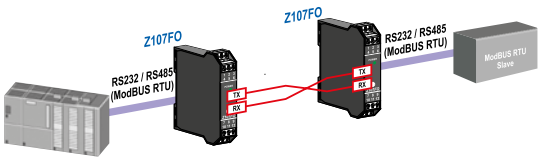


COMMUNICATION INTERFACES

Z-PC line provides a wide range of radio transmission modules for cable replacement, serial communication interface (USB, RS232, RS485), optical, fieldbus (Modbus, CANopen, Profibus), Ethernet (TCP / IP).

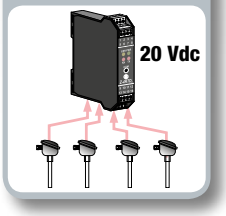




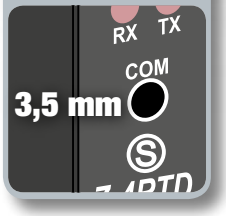


CANopen | Modbus | Ethernet TCP-IP | RS232 / RS485
USB | Profibus | Radio UHF | Optical fiber

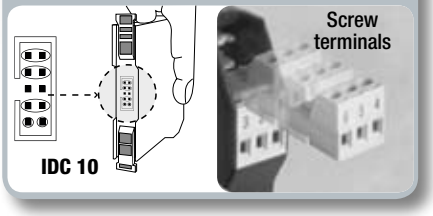
POWER FOR SENSORS



RS232 INTERFACE



RS485 INTERFACE



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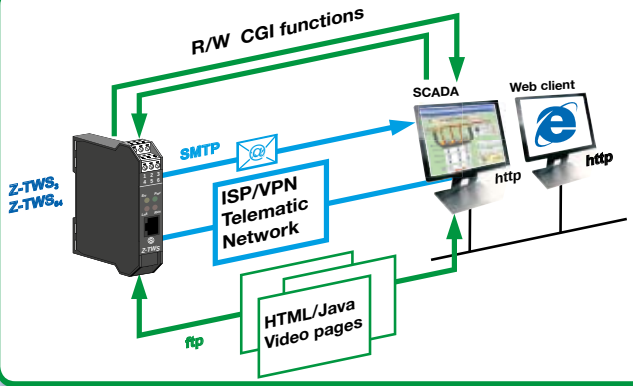
Z-PC LINE

Configuration & communication

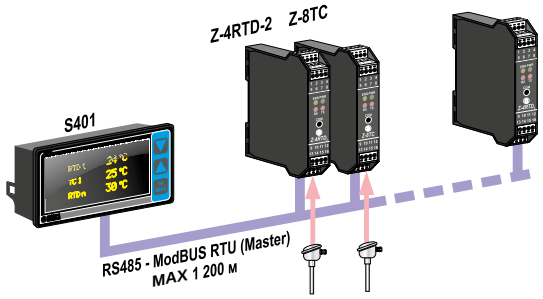
SUPERVISION AND REMOTE ACCESS



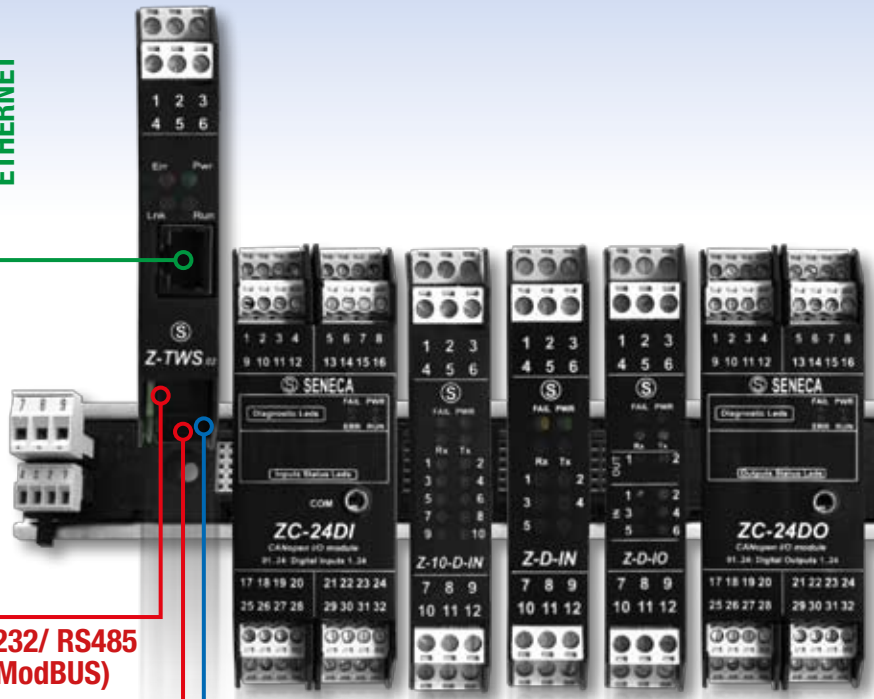
CGI | SCADA | PPP | HTTP | HTML | SMTP | FTP | MODBUS TCP-IP | IEC 60870 | Java

ETHERNET

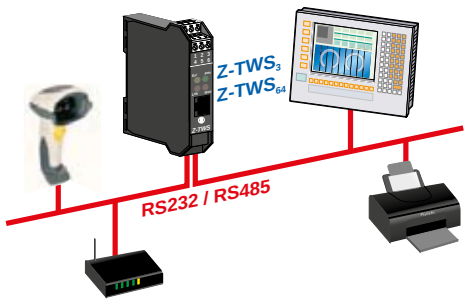
MODBUS DISPLAYING



RS232/ RS485 (ModBUS)



REMOTE AND SERIAL DEVICES



CONFIGURATION

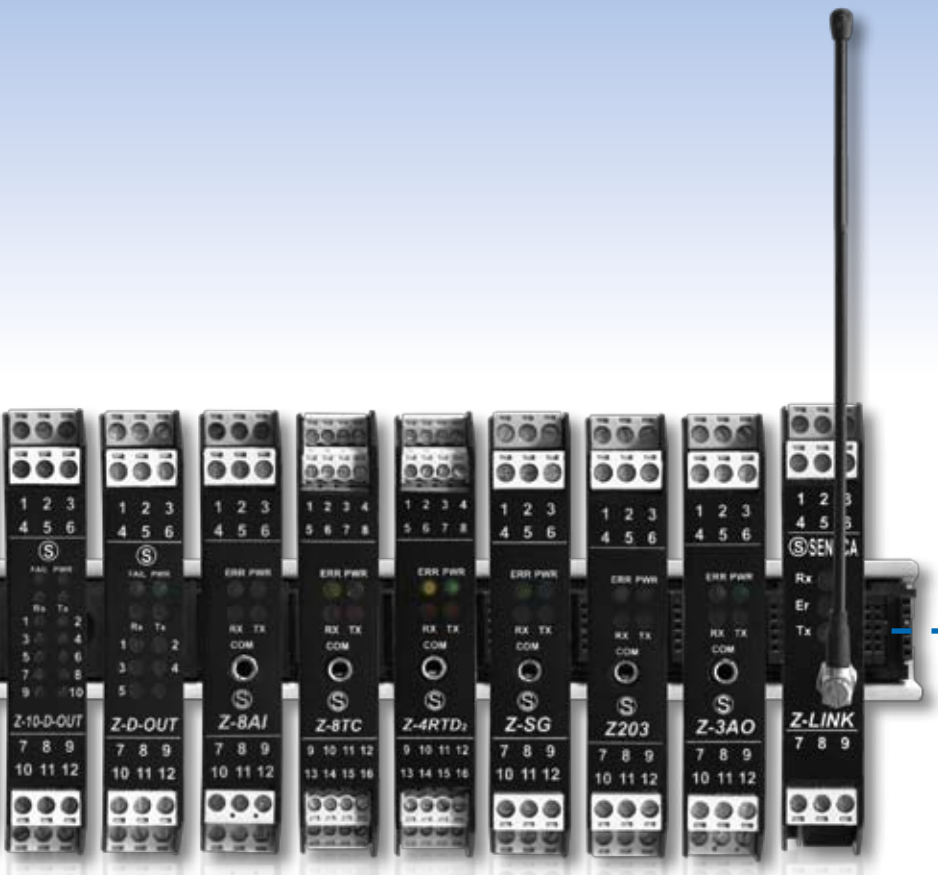
1 Simple configuration for end user

2 Configuration dedicated to system integrators

Z-NET[3] is an IEC 61131configuration software for OEMs, system integrators and expert users. Enables the creation and export data to PLC and SCADA, the communication parameters settings, complete configuration of CPU modules and single I/O devices. Z-NET[3] integrates also specific libraries for automation.

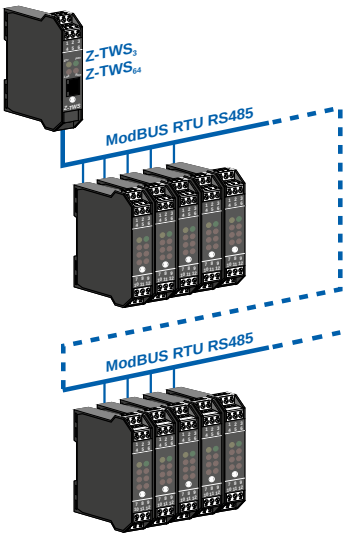
3 Basic configuration through Dip Switch

Address and baud rate settings available on each module

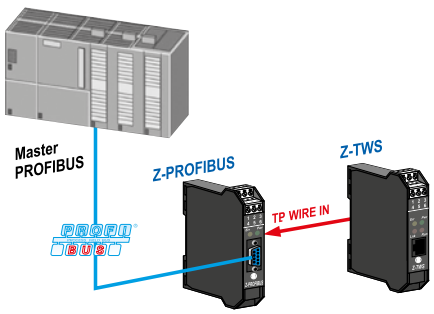


Modbus CANopen PROFIBUS

DISTRIBUTED SYSTEMS



CONNECTIONS WITH PLCS THROUGH FIELDBUS



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Configuration of I/O devices for end users

I can visualize 16 channels in a time less than 1 minute

EASY PC

EASY PC is a family of user friendly software packages that allows real time testing of configuration, quick configuration copy on other devices, the web updating for the latest version.

1 MODULES CONFIGURATION

2 AUTOMATIC SOFTWARE UPDATE

5 IDENTIFICATION OF CONNECTION TYPE

USB

6 MODBUS PARAMETERS CONFIGURATION

Modbus

3 DOWNLOADTHE SAME CONFIGURATION ON MORE DEVICES

4 REAL TIME TESTING

7 CONFIGURATION OF INPUT CHANNELS

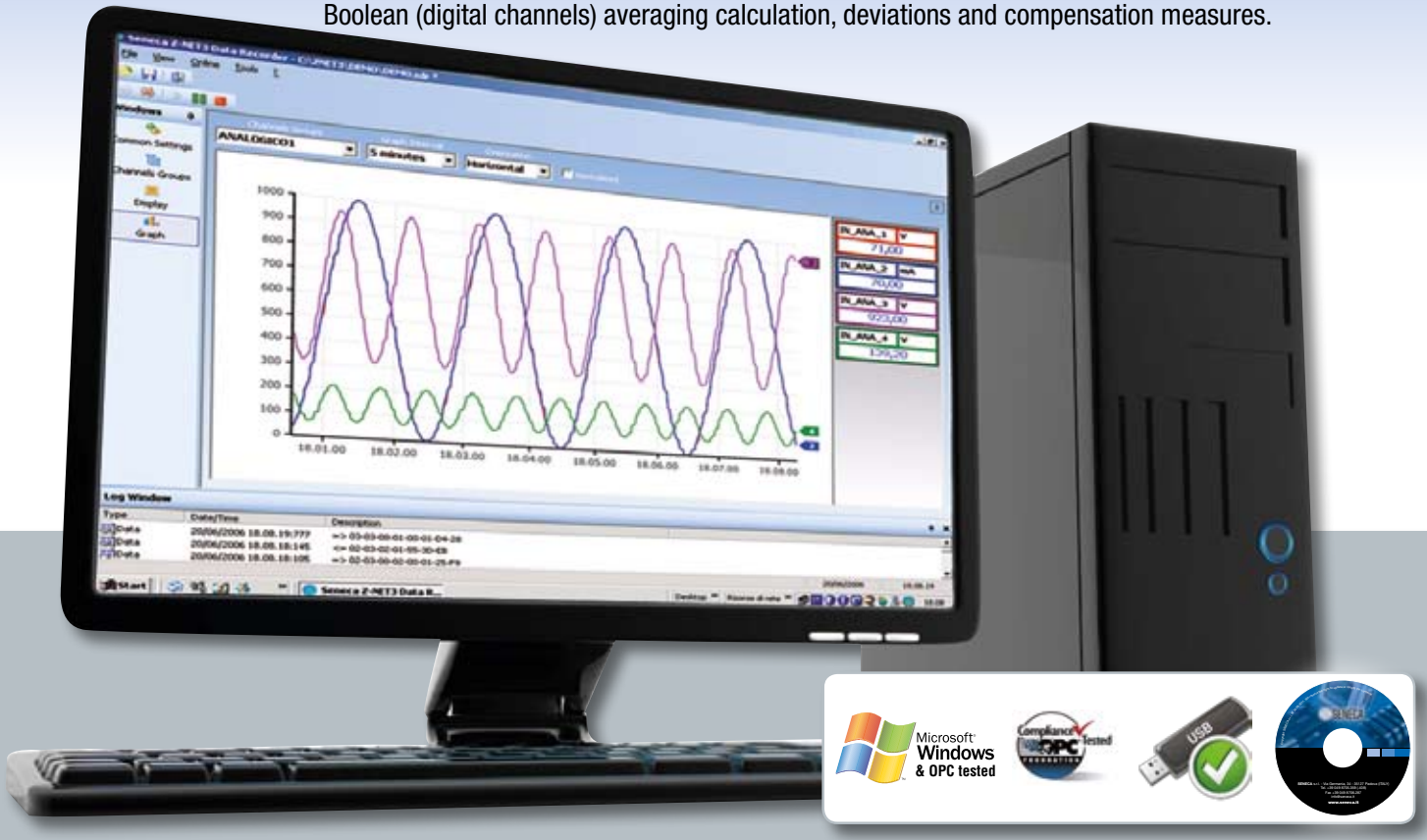
8 SENSOR CALIBRATION

Z-PC LINE

Data acquisition & recording software

DATA RECORDER

Data Recorder is an open software, scalable and cost-effective Windows PC-based, suitable for, laboratories, testing rooms, process measures monitoring.
The acquisition of physical data is made by Z-PC I/O devices (with or without CPU), and in general with any standard MODBUS RTU slave device. The communication between PC hardware and can be either serial (RTU RS232/RS485/ModBUS) or Ethernet / Modbus TCP on wired or wireless system.
USB LICENZE KEY that can manage from 2 to 64 channels (analog, digital, impulsive or calculated). The graphical representation is available on display (digit) or nibs. The real-time displaying offers multiple selection: groups of channels, range of representation, view type. Also the historical data (input and alarms) with a special visualization tool. Other available packages: alarm management (with enabling of digital outputs), report management (with trigger events) and math tool with algebraic functions, linear, trigonometric, Boolean (digital channels) averaging calculation, deviations and compensation measures.



OTHER DATA ACQUISITION TOOL

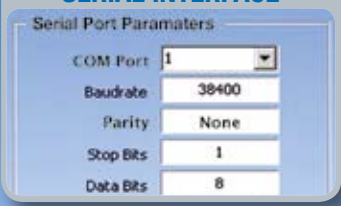
SENECA provides a collection of driver **LabVIEW™** complete of application examples. The VIs (Virtual Instruments) allow the use of Z-PC I/O modules connected with PC (over RS485 or Ethernet).
Compatibility with LabVIEW versions 7.1 and next. Available also drivers for **Visual Studio™** development environment.

HANDY KIT FOR DATA READING

SENECA

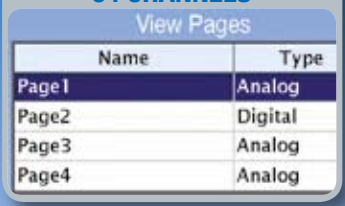
FULLY INTEGRATION WITH Z-NET AND Z-NET I/O

RS232/RS485 MODBUS SERIAL INTERFACE

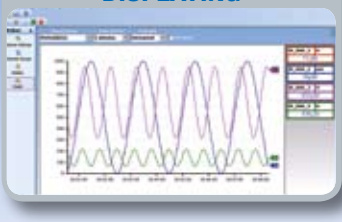


ETHERNET, MODBUS TCP, WIRELESS CONNECTION

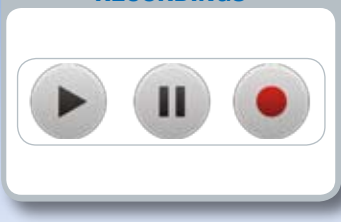
MAX 64 CHANNELS



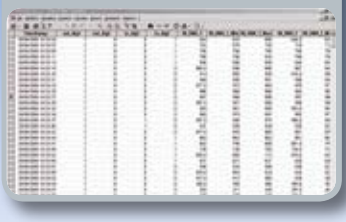
DISPLAY (DIGIT) OR NIBS DISPLAYING



SCHEDULING RECORDINGS

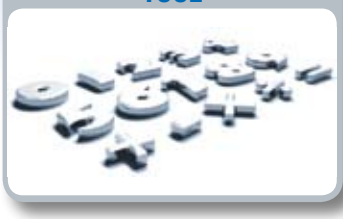


DATABASE

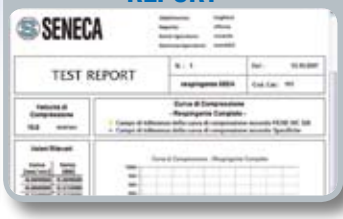


TREND VIEWER FOR HISTORICAL VISUALIZATION

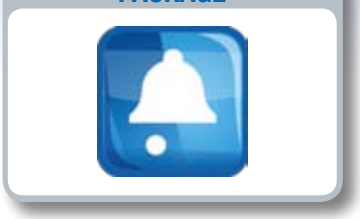
MATH TOOL



CUSTOMIZED REPORT

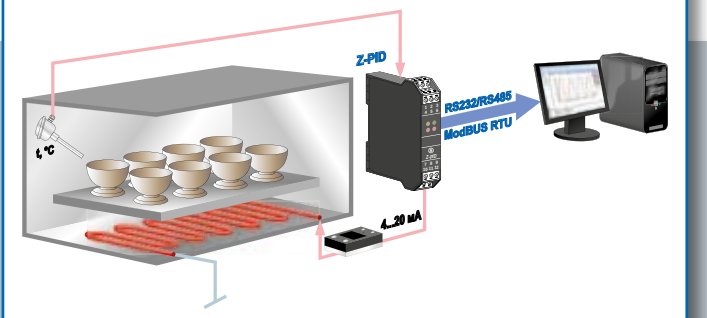


ALARM PACKAGE

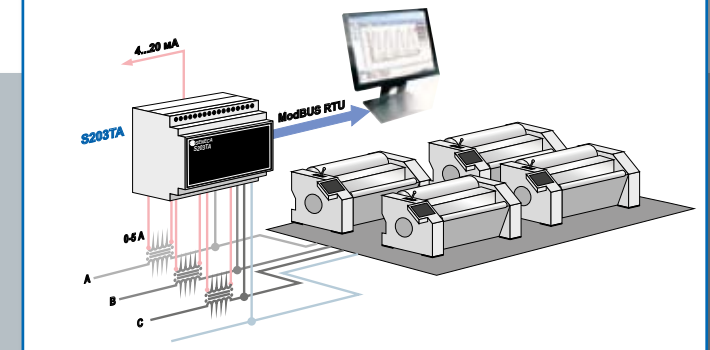


MULTI-CLIENT PACKAGE

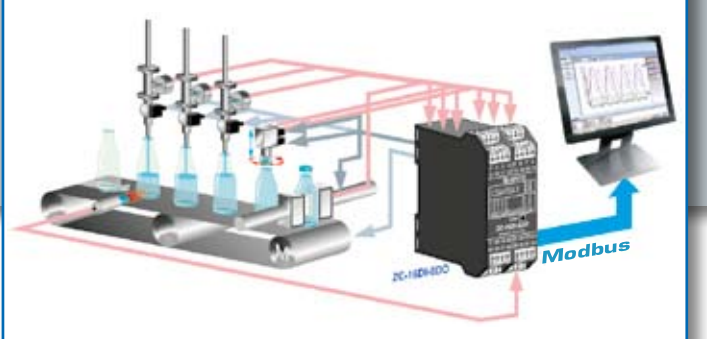
TEMPERATURE MONITORING



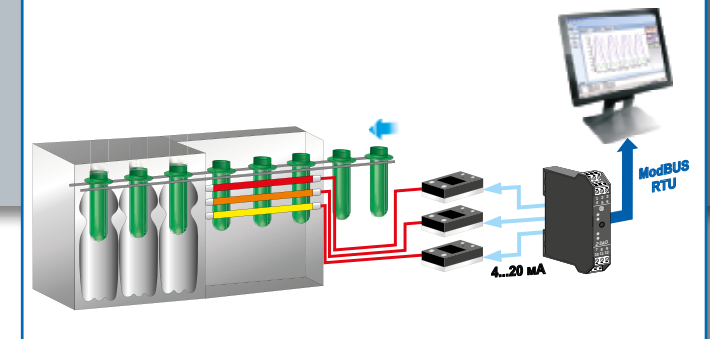
ELECTRIC CONSUMPTION ANALYSIS



END OF LINE TESTING



LABORATORY TESTING



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