

Z-PC LINE

Hardware & Software for data acquisition, distributed automation, remote control

SHORT GUIDE



- ▶ Multi-function control units (PLC, Web Server, Datalogger, Bridge)
- ▶ RTU
- ▶ Analog & digital I/O modules
- ▶ Communication modules
- ▶ Software & accessories

About Us

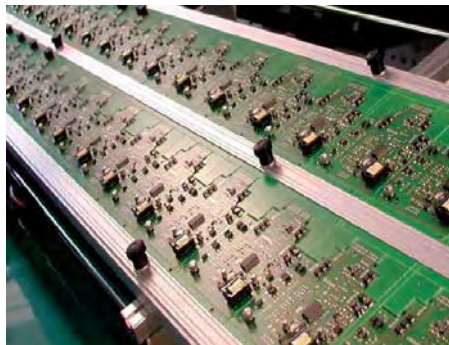


With over 15 years manufacturing in the industrial automation field, Seneca srl has grown to be a major force in the signal conditioning and "Modbus" I/O arenas. Our innovative product lines, professional approach and worldwide network of trained distributors guarantee the most elegant solutions to all your process interfacing and data acquisition challenges. As an ISO 9001 certified company, your highest quality expectations are exceeded.

The Seneca product line is designed and built in Italy to all relevant Directives, such as:

- EN 50081-2 electro-magnetic emissions (Heavy Industrial)
- EN 50082-2 electro-magnetic susceptibility (Heavy Industrial)
- EN 61010-1 Safety for electronic & control Instruments
- RoHS Directive 2002/95/EC
- RINA (the Italian Register of Shipping)

All our modules are designed to comprise a single circuit board, manufactured using the latest Surface Mount Technologies. This ensures the most compact, rugged, reliable and safe product possible. Their full galvanic isolation features coupled with the ridged adherence to the CE Directives guarantees that they will function correctly in the most inhospitable environments allowable without interfering with the operation of any other compliant equipment.



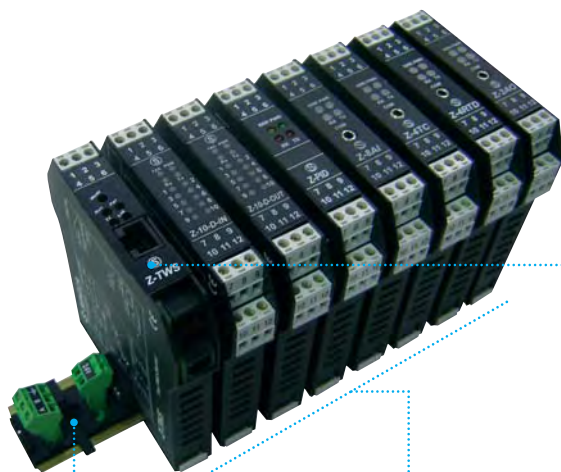
Seneca has invested heavily in its own EMC laboratories to enable in depth compliance testing at all stages of the design process. For total confidence, the accuracy of our in house facility is regularly gauged against external compliance laboratories. All Seneca modules are designed with multipoint galvanic isolation, giving up to 3.000 V isolation between power supply, inputs, outputs and serial communication lines. Wherever possible, the modules are designed around CPUs with full floating point maths capabilities and high processing speeds, supported by the largest memory practical. All Seneca products are fully designed, manufactured and tested in our factory using advanced Surface Mount and Pin Through Hole technologies and automated test and calibration equipment. Because all aspects of the design, production and test are under our immediate control, we believe we offer the fastest and most flexible response times to our clients and distributor network.

Z-PC LINE - OVERVIEW

Modular Solution

Flexible and distributed remote control

- ▶ Direct control of I/O signals
- ▶ High configurability and diagnostics of every module
- ▶ Remote management via web or serial port
- ▶ Reduction in cabling, commissioning and maintenance costs



CONNECTION METHOD

- Supports in GRP PA6 (to 30%), for 35mm DIN-rail mounting
- Hot Swapping
- Terminals for power supply and data line
- Mounting on DIN 46277 rail in vertical position

I/O MODULES

- I/O modules can be positioned close to the sensors/actuators
- Control of field I/O with 3-port isolation (power supply, inputs, outputs)

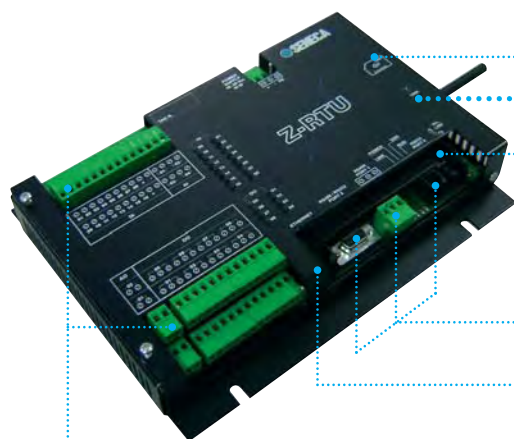
CONTROL UNIT

- PLC, Web Server, RTU
- RS485 for data exchange with peripherals
- RS232 interface (user free/programming)
- Ethernet port for supervising networks and remot connection
- 32-bit RISC Microprocessor, CPU RISC 200 MHz -20 MIPS; memory: 8 MB RAM, 16 MB flash (data)
- Battery backup for retention variables

Integrated Solution

Flexible and distributed remote control

- ▶ On-board isolated I/O (16 DI, 8 DO, 4 AI, 2 AO) with integral connectors
- ▶ I/O expansion with DIN Series Z-PC modules
- ▶ 3 serial communication ports + 1 Ethernet 10 Base-T
- ▶ Modem GSM/GPRS dual band (PSTN as option)



REMOTE COMMUNICATION

- Housing for SIM + antenna GSM/GPRS
- PSTN communication port

SERIAL PORTS

- RS232/RS485 programmable
- RS485 ModBUS RTU (connect I/O modules, ModBUS RTU/Master or Slave functions)
- RS232 debug/user

I/O WITH CONNECTORS

- 8+8 digital inputs (internal/external power supply)
- 2+2 analogue inputs (14 bits resolution, loop power)
- 4+4 digital outputs (relay SPDT, capacity 5A 250 Vac)
- 1+1 analogue outputs (12 bits resolution, volts/current)

ETHERNET 10 BASE-T

- Interface of control system with SCADA via OPC or Java/VB/Windows applications
- Use of other protocols such as ModBUS TCP/IP, ftp, http

Z-PC LINE - OVERVIEW

HIGHLIGHTS



The Z-PC Line is a remarkably flexible instrumentation system. The range of modules available covers all the usual signal input and output requirements for simple SCADA and Data Acquisition applications, the low cost radio links can eliminate a lot of field wiring and the innovative Seneca QuickFix bus system can reduce installation time dramatically.

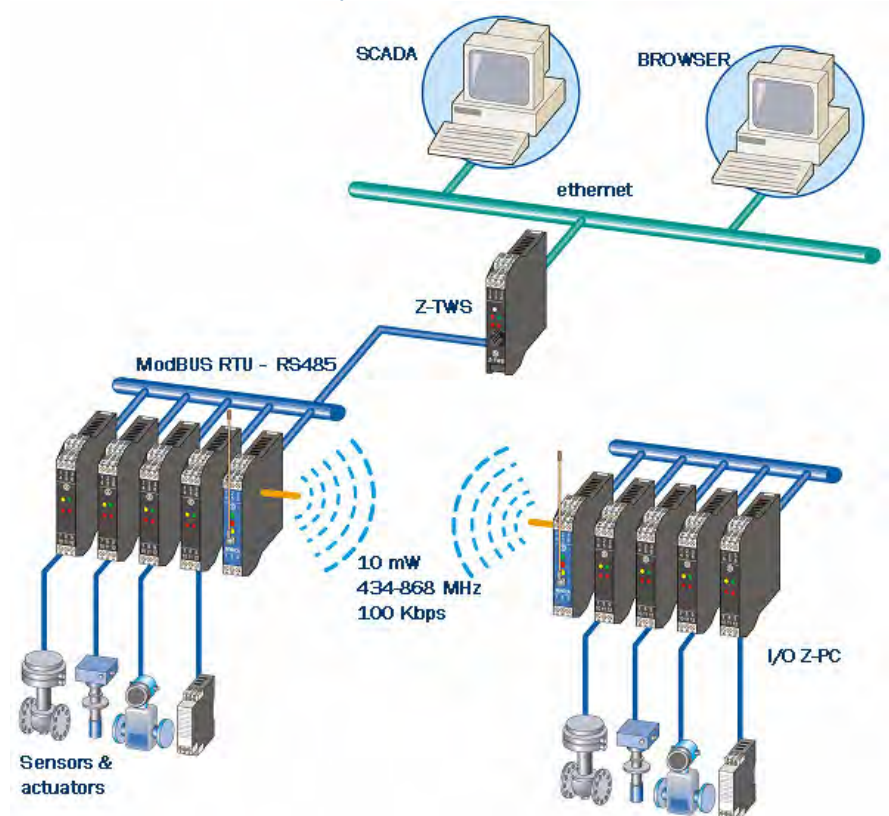
- Optimized acquisition of analogue signals
- Isolation 1.500 Vrms 3 points
- Serial interface RS485, bus communications with ModBUS-RTU protocol
- Maximum rate 57.600 bps
- Hot swapping system
- Tiny dimensions (standard width 17,5 mm)
- Power supply range 19..40 Vdc (opt. 9..30 Vdc) and 19..28 Vac
- Mounting on DIN guide 46277

I/O distributed modules cover a wide range of applications: acquisition. In particular we distinguish:

- Analogue I/O's: universal inputs, PID regulator, multiple inputs & outputs (current or voltage); up to 8 inputs per module.
- Digital I/O's: multiple inputs & outputs to control alarms and status functioning; up to 10 signals per module.
- Wireless Radio link modules (Z-Link, license free UHF transceiver) & standard serial converters.
- Z-TWS Web Server & PLC module turns the stand alone I/O modules into an easily programmable (in 7 standard programming languages) PLC with inbuilt web server capabilities. An immensely powerful yet cost effective system.

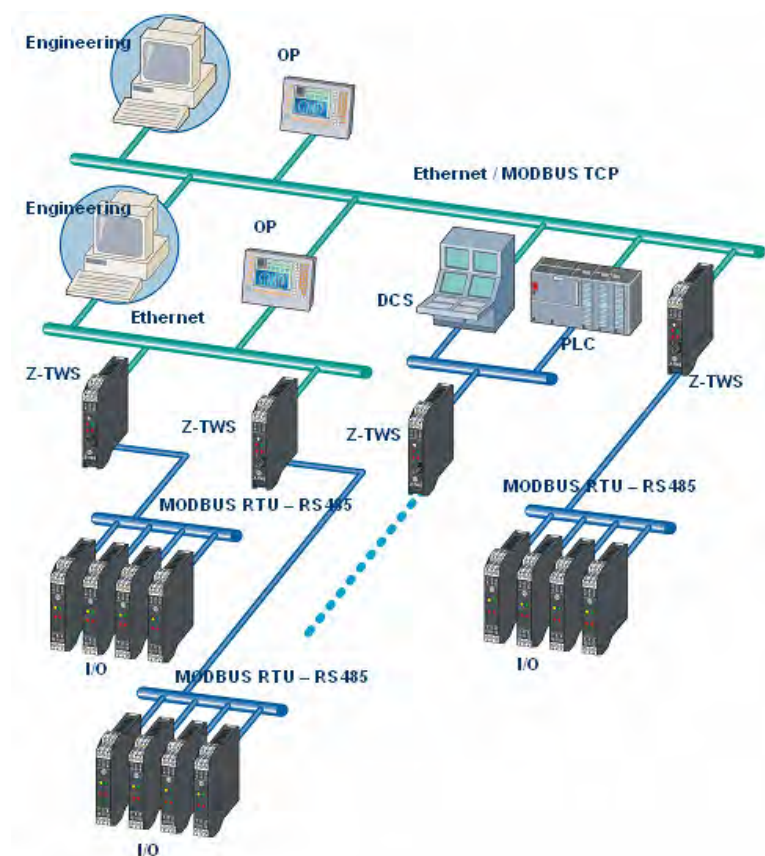
ARCHITECTURES

Local automation & Data acquisition

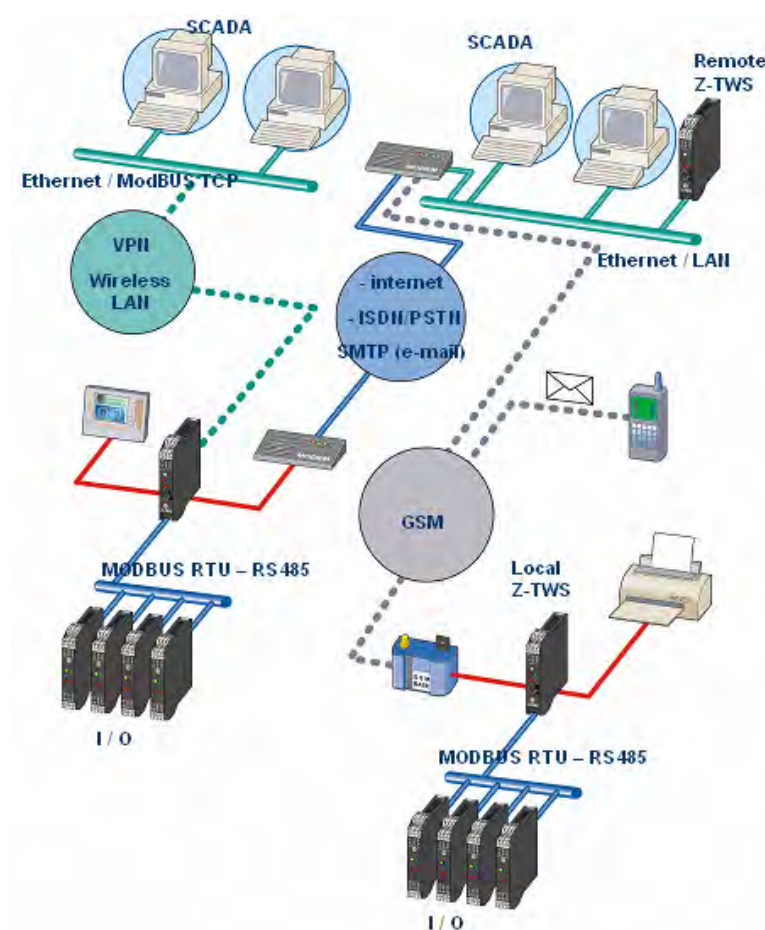


Z-PC LINE OVERVIEW

Distributed systems



Remote Control



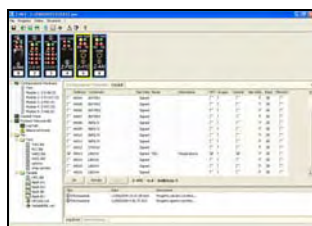
	Z-TWS-02	Z-TWS-64	Z-LWS	Z-BRIDGE	Z-RTU
					
	PLC, RTU, Web Server. Multi-function control unit.	64 bit multi-function control unit high performance.	Micro PLC. Controller for local automation (Web Server, logging e RTU not enabled).	Bridge TCP/IP. Serial protocol converter from ModBUS RTU to ModBUS TCP/IP.	All in one RTU, 16(8) DI, 8(4) DO, 4(2) AI, 2 (1) AO on board, GSM/GPRS or PSTN modem.
ORDER CODES	Z-TWS-02	Z-TWS-64	Z-LWS	Z-BRIDGE	Z-RTU-1 (Full I/O) Z-RTU-2 (Half I/O) -GSM (GSM modem) -PSTN (PSTN modem)
GENERAL DATA					
DC POWER SUPPLY	10..40 Vdc	10..40 Vdc	10..40 Vdc	10..40 Vdc	10..30 Vdc
AC POWER SUPPLY	19..28 Vac / 50-60 Hz	19..28 Vac / 50-60 Hz	19..28 Vac / 50-60 Hz	19..28 Vac / 50-60 Hz	-
CONSUMPTION	3.5 W max	3.5 W max	3.5 W max	3.5 W max	7 W (min); 15 W (max)
ISOLATION	1.500 Vac	1.500 Vac	1.500 Vac	1.500 Vac	1.500 Vac
STATUS INDICATORS	Power On	Power On	Power On	Power On	Digital I/O Status
	PLC On	PLC On	PLC On	PLC On	Power supply
	Ethernet Link	Ethernet Link	Ethernet Link	Ethernet Link	Error
	Ethernet Connection	Ethernet Connection	Ethernet Connection	Ethernet Connection	Link Ethernet Modem Status
OPERATING TEMP.	0..+55 °C	0..+55 °C	0..+55 °C	0..+55 °C	-10..+55 °C
STORAGE TEMP.	-20..+70 °C	-20..+70 °C	-20..+70 °C	-20..+70 °C	-20..+70 °C
HUMIDITY	30..90% a +40 °C (non condensing)	30..90% a +40 °C (non condensing)	30..90% a +40 °C (non condensing)	30..90% a +40 °C (non condensing)	30..90% a +40 °C (non condensing)
DIMENSIONS	17.5 x 100 x 112 mm	17.5 x 100 x 112 mm	17.5 x 100 x 112 mm	17.5 x 100 x 112 mm	185 x 242 x 90 mm
WEIGHT	Approx 250 g	Approx 250 g	Approx 250 g	Approx 250 g	875 g
HOT SWAPPING	yes	yes	yes	yes	
CONNECTION	Removable terminals with section of 2.5 mm ²	Removable terminals with section of 2.5 mm ²	Removable terminals with section of 2.5 mm ²	Removable terminals with section of 2.5 mm ²	Removable terminals with section of 2.5 mm ²
MOUNTING	35 mm symmetrical DIN rail 46277	35 mm symmetrical DIN rail 46277	35 mm symmetrical DIN rail 46277	35 mm symmetrical DIN rail 46277	-
COMMUNICATION, SIGNALS, PROCESSING					
RS232	1	1	1	1	1
RS485 (ModBUS RTU)	1	1	1	1	1
RS485 (I/O)	1	1	-	1	-
RS232/RS485 (PROGR.)	1	1	1	-	1
ETHERNET 10BASE-T	1	1	1	1	1
PROTOCOLS	ModBUS RTU, PPP, http, FTP, SMTP, (ModBUS) TCP/IP	ModBUS RTU, PPP, http, FTP, SMTP, (ModBUS) TCP/IP	ModBUS RTU, PPP, http, FTP (download files), (ModBUS) TCP/IP	ModBUS RTU (slave), PPP, http, FTP (download files), TCP/IP	ModBUS RTU, PPP, http, FTP, SMTP, (ModBUS) TCP/IP
CPU	µP RISC 32 bit – 20 MIPS	µP MISC 64 bit	CPU µP RISC 32 bit – 20 MIPS	CPU µP RISC 32 bit – 20 MIPS	CPU µP RISC 32 bit – 20 MIPS
FLASH MEMORY (DATA)	16 MB	16 MB	512 KB	512 KB	16 MB
RAM	8 MB	8 MB	256 KB	256 KB	8 MB
DIGITAL INPUTS					8+8 digital inputs (internal/external power supply)
DIGITAL OUTPUTS					4+4 digital outputs (SPDT relay, capacity 5A 250 Vac)
ANALOGUE OUTPUTS					1+1 analogue outputs (12 bits resolution, volts/current)
ANALOGUE INPUTS					2+2 analogue inputs (14 bits resolution, loop power)
INDUSTRIAL MODEM ON-BOARD					Dual band GSM 900/1800 MHz, Full Type approval PSTN (option)
NORMS	EN50081-2; EN 55011; EN 50082-2; EN 61000-2-2/4, EN 50140/141; EN 61010-1; EN 60742	EN50081-2; EN 55011; EN 50082-2; EN 61000-2-2/4, EN 50140/141; EN 61010-1; EN 60742	EN50081-2; EN 55011; EN 50082-2; EN 61000-2-2/4, EN 50140/141; EN 61010-1; EN 60742	EN50081-2; EN 55011; EN 50082-2; EN 61000-2-2/4, EN 50140/141; EN 61010-1; EN 60742	Lg 186, Lg 791/Dir. 73/23/CEE, D.Lgs.615 12.11.96, D.Lgs.626 25.11.96, D.Lgs.277 31.07.97, CEI 110-24, CEI EN 61293, CEI EN 60529, UNI EN 12954, UNI 10950
OPTIONS	- Profibus DP Slave - CanOPEN Master - Smart Speech Kit - IEC 870	- Profibus DP Slave - CanOPEN Master - Smart Speech Kit - IEC 870	- Profibus DP Slave - CanOPEN Master - Smart Speech Kit - IEC 870	- Profibus DP Slave - CanOPEN Master - Smart Speech Kit - IEC 870	- Profibus DP Slave - CanOPEN Master - Smart Speech Kit - IEC 870

					
	5 Digital Inputs module // RS485	5 Digital Outputs module // RS485	10 Digital Inputs module // RS485	10 Digital Outputs module // RS485	6 Digital Inputs / 2 Digital Outputs control module
ORDER CODE	Z-D-IN	Z-D-OUT	Z-10-D-IN	Z-10-D-OUT	Z-D-IO
SIGNALS					
INPUTS / OUTPUTS / FEATURES	5 opto-isolated inputs suitable for reed relays, - proximity switches, npn & pnp and contact closure - Counts up to 100Hz 1 fast count channel to 10K Hz 16 bit totaliser for each channel - Inputs protected from transients up to 600 W/ms 5 – 250 ms anti-bounce filter	5 SPST N/O relay output module 5 A @ 250 Vac resistive loads 2 A @ 250 Vac inductive loads - Maximum total current 12 A per module – the rated capacity of the single common terminal - Programmable comms failure state for relays - Programmable delay, 50 ms to 2.5 s	10 opto-isolated inputs suitable for reed relays, - proximity switches, npn & pnp and contact closure 8 inputs to 100 Hz with 16 bit totalisers 2 inputs to 10 KHz with 32 bit totalisers - Operates in count, frequency, period and on or off time modes to 100Hz - Operates in count or frequency mode to 10 KHz	10 short circuit protected Mosfet output channels. - Each output rated at 500 mA from 6 to 35 Vdc - Outputs protected against short circuit and overvoltage conditions - Programmable comms failure state for outputs - Diagnostic LEDs show output state, open circuit, overload	6 opto-isolated inputs contacts 2 relay 5 A, 250 Vac outputs "Stand-alone" operating mode: Z-D-IO connected to motor controller device or valves "Distributed" operating mode, control logic from supervisory system "I/O" operating mode, ModBUS I/O functions
COMMUNICATION					
INTERFACE	2 wire RS485	2 wire RS485	2 wire RS485	2 wire RS485	2 wire RS485
PROTOCOL	ModBUS RTU Slave	ModBUS RTU Slave	ModBUS RTU Slave	ModBUS RTU Slave	ModBUS RTU Slave
SPEED	4800 to 57600 bps	4800 to 57600 bps	4800 to 57600 bps	4800 to 57600 bps	4800 to 57600 bps
COMMS DISTANCE (MAX)	1,200 m	1,200 m	1,200 m	1,200 m	1,200 m
SAMPLING TIME	300 ms	300 ms	200 / 400 ms	240 / 450 ms	
COMMUNICATION TIME		< 20 ms @ 38,400 Baud	< 20 ms @ 38,400 Baud	< 20 ms @ 38,400 Baud	< 20 ms @ 38,400 Baud
SOFTWARE & PROGRAMMING	Parameters setting (filter time, input type, Baud rate and address)	Parameters setting (delay, fail state, baud rate and address)	Parameters setting (filter time, input type, baud rate and address)	Parameters setting (filter time, fail state, baud rate and address)	Motor / Valves control and alarms tasks
GENERAL DATA					
POWER SUPPLY	19..40 Vdc (9..30 opt.) 19..28 Vac, 50-60 Hz	19..40 Vdc (9..30 opt.) 19..28 Vac, 50-60 Hz	19..40 Vdc (9..30 opt.) 19..28 Vac, 50-60 Hz	19..40 Vdc (9..30 opt.) 19..28 Vac, 50-60 Hz	10..40 Vdc 19..28Vac, 50..60 Hz
POWER CONSUMPTION	2.5 W	2.5 W	2.5 W	1.5 W	2 W
GALVANIC ISOLATION	1,500 Vac	1,500 Vac	1,500 Vac	1,500 Vac	Input // Supply (1.5 kV) Input // Outputs (3.75 kV)
FRONT PANEL INDICATION LEDS	- Power On - Failure / Error - Transmit Data (Tx) - Receive Data (Rx) 5 Input Status	- Power On - Failure / Error - Transmit Data (Tx) - Receive Data (Rx) 5 Output Status	- Power On - Failure / Error - Transmit Data (Tx) - Receive Data (Rx) 10 Input Status	- Power On - Failure / Error - Transmit Data (Tx) - Receive Data (Rx) 10 Output Status	- Power On - Fail - Transmit Data (Tx) - Receive Data (Rx) 6 input status 2 output status
OPERATING TEMP.	0 to +55 °C	0 to +55 °C	0 to +55 °C	0 to +55 °C	0 to +60 °C
STORAGE	-20 to +70 °C	-20 to +70 °C	-20 to +70 °C	-20 to +70 °C	-20 to +70 °C
MAX HUMIDITY	30..90% @ + 40 °C non condensing	30..90% @ + 40 °C non condensing	30..90% @ + 40 °C non condensing	30..90% @ + 40 °C non condensing	30..90% @ + 40 °C non condensing
PROTECTION	IP20	IP20	IP20	IP20	IP20
CONNECTIONS	Screw clamp, plug in connectors, 2.5mm ² max	Screw clamp, plug in connectors, 2.5mm ² max	Screw clamp, plug in connectors, 2.5mm ² max	Screw clamp, plug in connectors, 2.5mm ² max	Screw clamp, plug in connectors, 2.5mm ² max
MOUNTING	35 mm symmetrical DIN rail	35 mm symmetrical DIN rail	35 mm symmetrical DIN rail	35 mm symmetrical DIN rail	35 mm symmetrical DIN rail
DIMENSIONS	17.5 x 100 x 112 mm	17.5 x 100 x 112 mm	17.5 x 100 x 112 mm	17.5 x 100 x 112 mm	17.5 x 100 x 112 mm
HOT SWAPPING	yes	yes	yes	yes	yes
WEIGHT	approx 200 g	approx 200 g	approx 200 g	approx 200 g	approx 200 g
STANDARDS	EN 50081-2, EN 55011, EN 50082-2, EN 61000-2-2/4, EN 50140/141, EN 61010-1	EN 50081-2, EN 55011, EN 50082-2, EN 61000-2-2/4, EN 50140/141, EN 61010-1	EN 50081-2, EN 55011, EN 50082-2, EN 61000-2-2/4, EN 50140/141, EN 61010-1	EN 50081-2, EN 55011, EN 50082-2, EN 61000-2-2/4, EN 50140/141, EN 61010-1	EN 61000-6-4/2002, EN 61000-6-2/2002, EN 61010, IEC1131

	Z-DAQ	Z-PID	Z-4AI	Z-4TC
				
	Universal Input module // RS485	Analogue I / O module + PID control // RS485	4 Analogue Input module // RS485	4 Thermocouple Input module // RS485
ORDER CODE	Z-DAQ	Z-PID	Z-4AI	Z-4TC
SIGNALS				
INPUTS	- Single (user configurable) input channel - Thermocouples: J, K, R, S, T, E; B & N - RTDs: Ni100 & PT100, 3/4 wires - Resistance to 15 KΩ Max - Current $\pm$ 20 mA max. - Voltage 10 V max. - Resolution: 0.1°C for thermocouples and RTDs, 10,000 parts for resistance, 10,000 bipolar points for current and voltage - Input Impedance: 2.5 Ω for current 1 MΩ for Voltage - Overload protection to 60 V continuous (max)	- Single (user configurable) input channel - Thermocouples: J, K, R, S, T, E; B & N - RTDs: Ni100 & PT100, 3/4 wires - Resistance to 15 KΩ Max - Current $\pm$ 20 mA max. - Voltage 10 V max. - Resolution: 0.1°C for thermocouples and RTDs, 1 in 10,000 for resistance, 1 in 10,000 (bipolar) for current and voltage - Input Impedance: 2.5 Ω for current 1 MΩ for Voltage - Overload protection to 60 V continuous (max)	4 (user configurable) input channels - Voltage: 2 to 10 Vdc full scale. - Current, $\pm$20 mA bipolar - Resolution 1 in 16,000 (bipolar) for current and voltage (15 bit). - Input Impedance: 100 Ω for current 100 KΩ for Voltage. - Overload protection to 60 V continuous (max)	4 (user configurable) input channels - Thermocouples Type: J, K, R, S, T, E; B & N - Voltage $\pm$ 80 mV max. - Input Impedance: 10 MΩ - Overload protected to 60 V max - Isolated Thermocouples required (Negative connections are commoned)
OUTPUTS		- Single analogue output 0/4 to 20 mA for PID control. - Resolution better than 1 in 3,200		
COMMUNICATION				
INTERFACE	2 wire RS485	2 wire RS485	2 wire RS485	2 wire RS485
PROTOCOL	ModBUS RTU Slave	ModBUS RTU Slave	ModBUS RTU Slave	ModBUS RTU Slave
SPEED	4800 to 57600 bps	4800 to 57600 bps	4800 to 57600 bps	4800 to 57600 bps
COMMS DISTANCE (MAX)	1,200 m	1,200 m	1,200 m	1,200 m
SAMPLING TIME	300 ms	300 ms	200 / 400 ms	240 / 450 ms
COMMUNICATION TIME	< 20 ms @ 38,400 Baud	< 20 ms @ 38,400 Baud	< 20 ms @ 38,400 Baud	< 20 ms @ 38,400 Baud
SOFTWARE	For parameters setting (filter time, input type, scaling, serial interface and address)	For parameters setting (filter time, input type, scaling, PID settings serial interface and address)	For parameter setting (filter time, input type, scaling, serial interface and address)	For parameters setting (filter time, input type, scaling, serial interface and address)
GENERAL DATA				
POWER SUPPLY	19..40 Vdc (9..30 opt.) 19..28 Vac, 50-60 Hz	19..40 Vdc (9..30 opt.) 19..28 Vac, 50-60 Hz	19..40 Vdc (9..30 opt.) 19..28 Vac, 50-60 Hz	19..40 Vdc (9..30 opt.) 19..28 Vac, 50-60 Hz
POWER CONSUMPTION	2.5 W	2.5 W	2.5 W	2.5 W
GALVANIC ISOLATION	1,500 Vac	1,500 Vac	1,500 Vac	1,500 Vac
TRANSDUCER POWER SUPPLY	20 mA @18 V min	20 mA @18 V min	40 mA @18 V min	-
FRONT PANEL INDICATION	- Power On - Failure / Error - Transmit Data (Tx) - Receive Data (Rx)	- Power On - Failure / Error - Transmit Data (Tx) - Receive Data (Rx)	- Power On - Failure / Error - Transmit Data (Tx) - Receive Data (Rx)	- Power On - Failure / Error - Transmit Data (Tx) - Receive Data (Rx)
OPERATING TEMP	0 to +55 °C	0 to +55 °C	0 to +55 °C	0 to +55 °C
STORAGE	-20 to +70 °C	-20 to +70 °C	-20 to +70 °C	-20 to +70 °C
MAX HUMIDITY	90% @ + 40 °C non condensing	90% @ + 40 °C non condensing	90% @ + 40 °C non condensing	90% @ + 40 °C non condensing
PROTECTION	IP20	IP20	IP20	IP20
CONNECTIONS	Screw clamp, plug in connectors, 2.5 mm ² max	Screw clamp, plug in connectors, 2.5 mm ² max	Screw clamp, plug in connectors, 2.5 mm ² max	Screw clamp, plug in connectors, 2.5 mm ² max
MOUNTING	35 mm symmetrical DIN rail	35 mm symmetrical DIN rail	35 mm symmetrical DIN rail	35 mm symmetrical DIN rail
DIMENSIONS	17.5 x 100 x 112 mm	17.5 x 100 x 112 mm	17.5 x 100 x 112 mm	17.5 x 100 x 112 mm
HOT SWAPPING	yes	yes	yes	yes
WEIGHT	200 g	200 g	200 g	200 g
STANDARDS	EN 50081-2, EN 55011, EN 50082-2, EN 61000-2-2/4, EN 50140/141	EN 50081-2, EN 55011, EN 50082-2, EN 61000-2-2/4, EN 50140/141	EN 50081-2, EN 55011, EN 50082-2, EN 61000-2-2/4, EN 50140/141	EN 50081-2, EN 55011, EN 50082-2, EN 61000-2-2/4, EN 50140/141

	Z-4RTD	Z-8AI	Z-3AO	Z-SG	Z203
					
	4 thermoresistance input module	8 analogue input module (current or voltage)	3 analogue output module	Strain gauge converter	Monophase network analyzer
ORDER CODE	Z-4RTD	Z-8AI	Z-3AO	Z-SG	Z203
SIGNALS					
INPUTS / OUTPUTS / FEATURES	4 channels input, 2, 3, 4 wires - Pt100: -200...+650 °C - Pt500: -200...+750 °C - Pt1000: -200...+210 °C - Ni100: -60...+250 °C - Precision class: 0,05 - Thermal drift: 25 ppm/K - Max conductor resistance: 25 Ω - Max voltage: 24 V	8 single-ended inputs, which can be connected in pairs as differential inputs. - Input impedance - Differential Mode: 200 KΩ - Single Ended Mode: 100 KΩ - Max common mode voltage: 20 Vdc - Input protection: max tension permitted 30 Vdc - Selectable full scales of ± 2.5 Vdc, ± 5 Vdc & ± 10 Vdc - Accuracy: 0.1% of full scale - Resolution 15 bit (14 + sign) - Thermal drift: < 200 ppm/°C	2 active current output 0/4...20mA (Max load: 500 Ω) 1 current input convertible in tension by dip-switch. - Resolution: 12 bit on 0..20 mA (= 5µA), 0..10 V (= 2.5 mV), 0.5V (= 1.25 mV). - Precision: <0.2 % on full scale. For current output, <0.3% on full scale for tension output. - Thermal stability: <0,01%°C for current output, <0,02%°C for tension output. - Linearity / stability: <0,01% - Outputs have the negative terminal in common. - Transient overload protection 400W/ms	INPUT 1 channel from strain gauge load cell - Supply voltage 5 Vdc - Transduction rate ± 1..± 128 mV/V - Voltage ± 5 mV.. ± 640 V OUTPUT 1 channel, 0..20/4..20 mA, 0.5/0..10 V - Resolution 10.000 point - Precision: 0.01% - Thermal drift 0.0025%/°C - ADC 24 bit	INPUT - Nr 6 measure inputs - Max voltage: 500 Vac, frequency 50-60 Hz - Max current: 5 A, 50-60 Hz - Precision class: 0,5 OUTPUT 1 channel, 0..20, 4..20 mA, 0..5, 0..10 / 1..5 / 1..10 V
COMMUNICATION					
INTERFACE RS485	2 wire RS485 (bus), ModBUS RTU Slave, 4.800..115.200 bps, max distance 1,200 m	2 wire RS485 (bus), ModBUS RTU Slave, 4.800..115.200 bps, max distance 1,200 m	2 wire RS485 (bus), ModBUS RTU Slave, 4.800..115.200 bps, max distance 1,200 m	2 wire RS485 (bus), ModBUS RTU Slave, 4.800..115.200 bps, max distance 1,200 m	2 wire RS485 (bus), ModBUS RTU Slave, 4.800..115.200 bps, max distance 1,200 m
INTERFACE RS232	RS232 (programming), parity None, Even & Odd selectable	RS232 (programming), parity None, Even & Odd selectable	RS232 (programming), parity None, Even & Odd selectable	RS232 (programming), parity None, Even & Odd selectable	RS232 (programming), parity None, Even & Odd selectable
SAMPLING TIME	< 500 ms (for all channels)	< 500 ms (for all channels)	< 500 ms (for all channels)		
COMMUNICATION TIME	Turn round time: < 20 ms @38400 bps	Turn round time: < 20 ms @38400 bps	Turn round time: < 20 ms @38400 bps		
SOFTWARE & CONFIGURATION	For parameters setting (filter time, input type, scaling, serial interface and address)	For parameters setting (filter time, input type, scaling, serial interface and address)		Software functions: reset tare, full scale setup, etc. Dip-switch: parameters setup	Parameters setting via software or dip-switch
GENERAL INFORMATIONS					
POWER SUPPLY	12..40 Vdc 19..28 Vac 50-60 Hz	10..40 Vdc 19..28 Vac 50-60 Hz	10..40 Vdc 19..28 Vac 50-60 Hz	10..40 Vdc 19..28 Vac 50-60 Hz	10..40 Vdc 19..28 Vac 50-60 Hz
POWER CONSUMPTION	0.7 W max	0.5 W max	1.8 W	2.5 W max	2.5 W max
GALVANIC ISOLATION	1,500 Vac	1,500 Vac	1,500 Vac	3,750 Vac (power) 1,500 Vac	3,750 Vac (power) 1,500 Vac
FRONT PANEL INDICATION LEDS	- Power On - Failure / Error - Transmit Data (Tx) - Receive Data (Rx)	- Power On - Failure / Error - Transmit Data (Tx) - Receive Data (Rx)	- Power On - Failure / Error - Transmit Data (Tx) - Receive Data (Rx)	- Power On - Failure / Error - Transmit Data (Tx) - Receive Data (Rx)	- Power On - Failure / Error - Transmit Data (Tx) - Receive Data (Rx)
OPERATING TEMP.	0 to +60 °C	0 to +55 °C	0 to +55 °C	0 to +55 °C	0 to +55 °C
STORAGE	-20 to +70 °C	-20 to +70 °C	-20 to +70 °C	-20 to +70 °C	-20 to +70 °C
MAX HUMIDITY	90% @ + 40 °C non condensing	30 to 90 % @ 40 °C non condensing	30 to 90 % @ 40 °C non condensing	30 to 90 % @ 40 °C non condensing	30 to 90 % @ 40 °C non condensing
PROTECTION	IP20	IP20	IP20	IP20	IP20
CONNECTIONS	Screw clamp, plug in connectors (2.5 mm ² max)	Screw clamp, plug in connectors (2.5 mm ² max)	Screw clamp, plug in connectors (2.5 mm ² max)	Screw clamp, plug in connectors (2.5 mm ² max)	Screw clamp, plug in connectors (2.5 mm ² max)
MOUNTING	35 mm symmetrical DIN rail	35 mm symmetrical DIN rail	35 mm symmetrical DIN rail	35 mm symmetrical DIN rail	35 mm symmetrical DIN rail
DIMENSIONS	17.5 x 100 x 112 mm	17.5 x 100 x 112 mm	17.5 x 100 x 112 mm	17.5 x 100 x 112 mm	17.5 x 100 x 112 mm
HOT SWAPPING	yes	yes	yes	yes	yes
WEIGHT	approx 140	approx 140	approx 140 g	approx 140	approx 140 g
STANDARDS	EN 50081-2, EN 61000-6-2 EN 61010-1	EN 50081-2, EN 55011 EN 50082-2, EN 61000-2-2/4, EN 50140/141	EN 50081-2, EN 55011 EN 50082-2, EN 61000-2-2/4, EN 50140	EN 61000-6-4/2002, EN 61000-6-2/2002, EN 61010-1	EN 61000-6-4/2002, EN 61000-6-2/2002, EN 61010-1

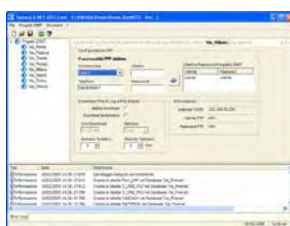
	Z107	S107P	Z-LINK	S-LINK
				
	Serial converter RS232 - RS485/422	Serial converter RS232 - RS485/422 (portable / desk)	Radio transceiver module	Radio transceiver module (portable / desk)
ORDER CODES	Z107	S107P	Z-LINK-434MHz Z-LINK-869MHz A-LINK-434MHz (external antenna) A-LINK-869MHz (external antenna) A-DIR-434MHz (directional antenna) A-DIR-434MHz (directional antenna)	S-LINK-434MHz S-LINK-869MHz A-LINK-434MHz (external antenna) A-LINK-869MHz (external antenna) A-DIR-434MHz (directional antenna) A-DIR-434MHz (directional antenna)
COMMUNICATION				
INTERFACES	- RS232 on screw terminals and RJ10 connector - RS485/422 on screw terminals - Handshake: automatic timing, command from RTS on RS232 interface, dip-switch. - Operating methods: 2 wires half duplex, 4 wires full duplex, point-to-point, multidrop.	- RS232 on DB9 connector - RS485/422 extractable clamps with screw type connections - Handshake: automatic timing, command from RTS on RS232 interface, dip-switch. - Operating methods: 2 wires half duplex, 4 wires full duplex, point-to-point, multidrop.	- Approx 100 m range - Multiple transceivers can work together as one system - RS232 - RS485 - Operating method half duplex	- RS232 - RS485 - Operating method half duplex
MODBUS RTU PROTOCOL			yes	yes
FREQUENCY			434 MHz (869 MHz optional)	434 MHz (869 MHz optional)
TX POWER			10 mW	10 mW
SPEED	9.600, 19.200, 38.400, 57.600, 115.200 bps	9.600, 19.200, 38.400, 57.600, 115.200 bps	100 Kbps	100 Kbps
MAX DISTANCE	1,200 m	1,200 m	100 m	100 m
CONNECTIVITY	32 nodes	32 nodes	32 nodes	32 nodes
SOFTWARE FUNCTIONS AND REGULATION			Programmable flash for other protocols	Programmable flash for other protocols
GENERAL FEATURES				
POWER SUPPLY	19..40 – 9..30 (opt.) Vdc 19..28 Vac (50-60 Hz)	9..12 Vdc - 100 mA - Net power supply 220 Vac	10..18 – 21.5..28 Vdc 8.5..14 – 17..20 Vac (50-60 Hz)	12 Vdc, power source 230 Vac
POWER CONSUMPTION	2.5 W	1.5 W	2.5 W	
ISOLATION	1,500 Vac	1,000 Vac	1,500 Vac	1,000 Vac
FRONTAL STATUS SIGNALING LED	- Power supply - Data transmission - Data reception - RTS status	- Power supply - Data transmission - Data reception - RTS status	- Power supply - Data transmission - Data reception - Fault	- Power supply - Data transmission - Data reception - Fault
OPERATING TEMPERATURE	0..+55 °C	0..+55 °C	0..+55 °C	0..+55 °C
STORAGE	-20..+70 °C	-20..+70 °C	-20..+70 °C	-20..+70 °C
MAX HUMIDITY	90% a + 40 °C	90% a + 40 °C	90% a + 40 °C	90% a + 40 °C
CONNECTIONS	Hand vice clamp for conductors up to 2,5 mm ²	RS232 on DB9-F connector RS485 on screw connectors (1.5 mm ² max)	Hand vice clamp for conductors up to 2,5 mm ²	Cable 2,5 mm ² / DB9-F connector
MOUNTING	DIN guide 35 mm 46277	Portable / desk	DIN guide 35 mm 46277	Portable / desk
DIMENSIONS	17.5 x 100 x 112 mm	100 x 50 x 25 mm	17.5 x 100 x 112 mm	25 x 68 x 25 mm
CASE	Nylon 6 filled 30% fibreglass-self-extinguishing V0	ABS	Nylon 6 filled 30% fibreglass-self-extinguishing V0	ABS
HOT SWAPPING	yes		yes	
WEIGHT	approx 200 g	approx 200 g	approx 200 g	approx 200 g
ACCESSORIES AND OPTIONS				- Directive antenna on licence request - Power supply 24 Vac
STANDARDS	EN 50081-2, EN 55011, EN 50082-2, EN 61000-2-2/4, EN 50140/141, EN 61010-1	EN 50081-2, EN 55011, EN 50082-2, EN 61000-2-2/4, EN 50140/141, EN 61010-1	EN 50081-2, EN 55011, EN 50082-2, EN 61000-2-2/4, EN 50140/141, EN 61010, ETSI 300-328	EN 50081-2, EN 55011, EN 50082-2, EN 61000-2-2/4, EN 50140/141, EN 61010, ETSI 300-328

Z-NET**Setup software for Z-PC System****Order codes**

Z-NET (free of charge)

Main features

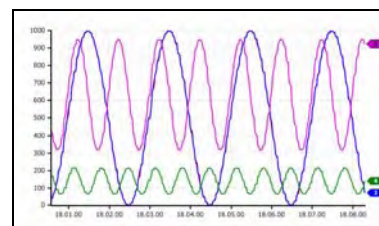
- Standard IEC 61131-3
- WIN NT, 200, XP and Microsoft .Net platforms.
- Reading and creation of designs with wizard
- Graphic program interface for CPU and I/O modules
- Ethernet communication (http, ftp), RS232 (ModBUS), RS232 (ASCII)
- Log information
- Configuration download via ftp
- Changing of TCP/IP, data, time, interface Ethernet address
- Automatic variables exportation for OPC Server, ISaGRAF, Movicon
- Remote control functions
- Web editor integrated for HTML / Java monitoring pages

Z-NET RTU**Remote connection manager****Order codes**

- Z-NET RTU-0 (basic functions)
- Z-NET RTU-1 (basic functions + exportable OCX)
- Z-NET RTU-2 (exportable OCX + automatic download up to 5 RTU's)
- Z-NET RTU-3 (exportable OCX + automatic download from 6 to 10 RTU's)
- Z-NET RTU-4 (exportable OCX + automatic download over 10 RTU's)

Main features

- Data storage of remote terminal units
- Automatic data download of remote stations
- Visualizing log and alarms
- Remote Access Service between Supervisory Center and Peripheral Units
- Historical data download from peripheral units
- OPC Server integrated for real time acquisition data
- OCX classes for visualizing historical alarms, trends, analogue variables, remote connection management

DATA RECORDER**PC Based Data Recorder****Order codes**

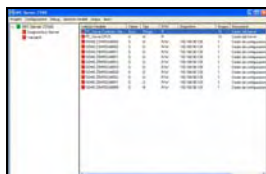
- DR-2 (2 channels)
- DR-4 (4 channels)
- DR-8 (8 channels)
- DR-16 (16 channels)
- DR-32 (32 channels)
- DR-64 (64 channels)

Options

- M (Math tool)
- A (Alarm tool)

Main features

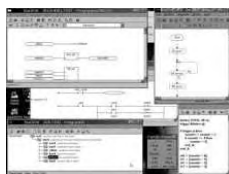
- Data archive and exportation on standard format
- Simultaneous visualization of last measures pages related to each channel
- Visualization in 0 ÷ 100 % range of each channel by means multiple graphication
- Storage and historical log for every sampling period of max, min and average values
- Visualization of current time
- Generation of log files
- Visualization of totalized values for changeover status of digital signals

OPC Server**Interexchange data software****Order codes**

- OPC Server (standard)
- OPC Server I/O (ModBUS driver)

Main features

- Data export in Microsoft standard format and data exchange with all SCADA system
- Variables managing and real-time communication with client applications
- Setup and acquisition of variables of devices on ethernet
- Server diagnostic
- Upgrading variables with different group times

IsaGRAF**IEC 61131 PLC development toolkit****Order codes**

- UNICONTROL01 (64 tag hardkey)
- UNICONTROL02 (256 tag hardkey)

Main features

- 7 programming languages: ladder diagram (LD), flow chart (FC), instruction list (IL), sequential function chart (SFC), function block diagram (FBD), structured text (ST)
- Programming and debug tool for PLC (Z-TWS) according with IEC 61131 standard software
- Modbus devices communication
- SENECA libraries

Z-POWER**19 Vac Transformer****Order codes**

- Z-POWER230-15VA
- Z-POWER230-25VA
- Z-POWER115-15VA

Main features

- Dimensions: 3 DIN modules (Z-POWER 15 VA), 5 DIN modules (Z-POWER 25 VA)
- Mounting on DIN guide 35 mm [1 housing support (48,65x24 mm)]
- Primary voltage 230 Vac $\pm$ 10%
- Box in fibreglass auto-extinguish (class V-0)
- RAL 7035
- Protection with thermo-fuse
- IP 40

Z-PC DIN**DIN rail mounting bus / supply support****Order codes**

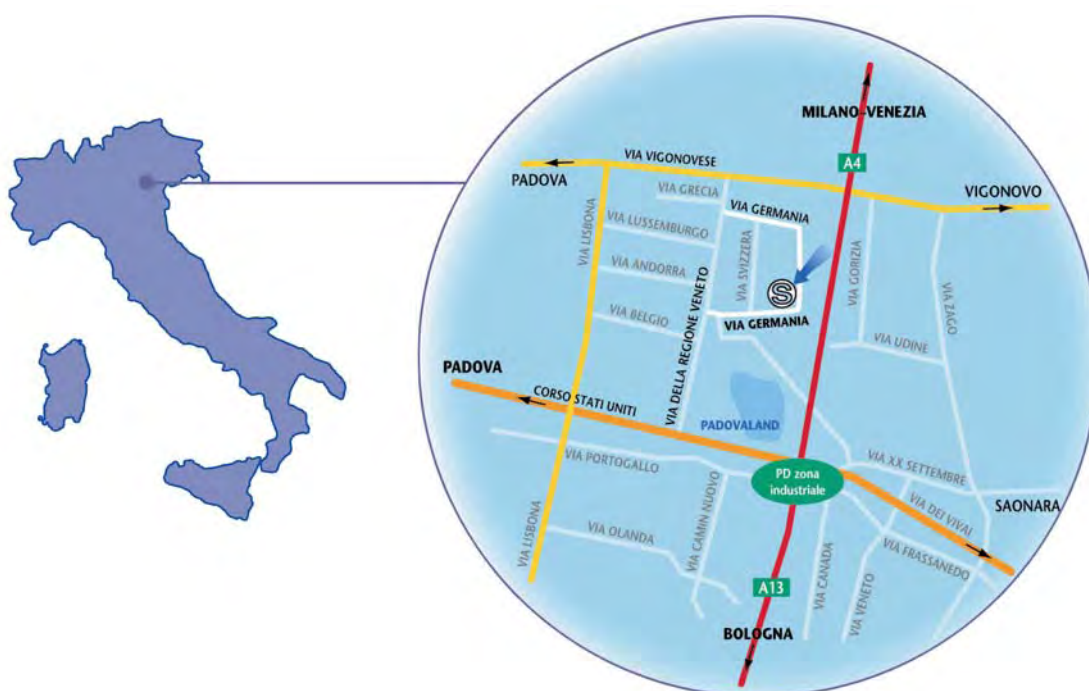
- Z-PC-DINAL (Power & Comms)
- Z-PC-DIN2 (2 slot)
- Z-PC-DIN4 (4 slot)
- Z-PC-DIN8 (8 slot)

Main features

- Mounting on DIN guide 35 mm
- Hot swapping system for module insertion/ removal
- Mounting system ensures correct distances and ventilation
- 2, 4 & 8 module slot configuration, simply connect them together to achieve the number required
- Case Nylon 30% fibreglass



How to reach us



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