

**I/O MODULES**

**Z-PC SERIES**

**R SERIES**

**I/O**

 **SENECA**  
www.seneca.it

100% Made & Designed in Italy



# Z-PC SERIES

# Scalable and Distributed I/O Modules



**AC/DC switching power supply**



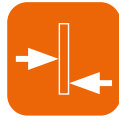
**Operating temperature up to -20..+70°C**



**Hot swapping**



**Transducer Power Supply**



**Slim width 17.5 mm**



**UL - CSA certification**



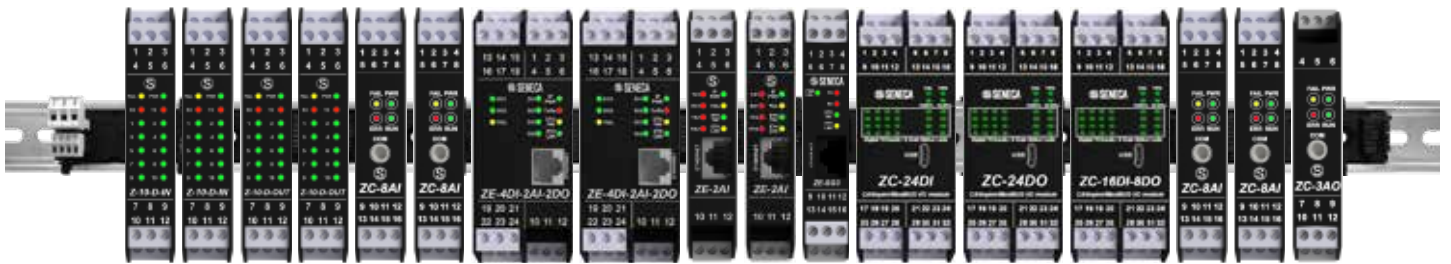
**Max isolation 1.5 kVac**



**IDC10 bus system for power and data**



**Pluggable terminals 2.5 mm<sup>2</sup>**



## Extended Range



The Z-PC series offers an extensive range for acquisition and control: over 160 I/O modules, CPUs, RTUs, HMIs, and accessories handle from a few to thousands of analog, digital, temperature, and load-cell signals, ensuring maximum modularity and system scalability.

## Universal applications



Being modular, the Z-PC series adapts to any application: distributed automation, remote control, data acquisition, energy monitoring, building automation, laboratory testing, and multi-sector industrial systems.

## Multiprotocol support



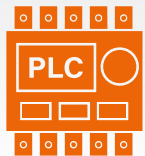
RTU/TCP-IP, Profinet IO and CANopen, offering communications up to 115 kbps on RS-485 and 100 Mbps on Ethernet, with web configuration, minimal cycle times, and flexible architectures without additional devices.

## Flexible configuration



Z-PC Series I/O modules offer multiple configuration possibilities from a single module to complex applications: plug&play EASY SETUP software, Z-NET4 design environment, SoftPLC IEC 61131-3, Web Server.

## PLC integration



Z-PC Series I/O modules integrate with SENECA controllers and RTUs (Z-TWS4, Z-PASS2-S, SSD-S, R-PASS-S), creating open IT-OT architectures based on Straton IEC 61131 SoftPLC. They provide advanced control, data logging, remote assistance, and IEC 60870 and 61850 protocols.

## Third-party integration



Z-PC Series I/O modules create open and flexible IT-OT architectures. They can also be integrated with third-party systems such as controllers, HMIs, network analyzers, third-party devices, PLCs, sensors, actuators, network interfaces, and software/Cloud platforms.

## Openness and connectivity



The Z-PC series ensures high connectivity thanks to support for IT protocols, fieldbuses, Ethernet, radio, fiber optics, and IIoT solutions. Integration with gateways, routers, VPNs, and radio modems enables remote control, remote assistance, and secure cloud data access.

## Data Recorder



Data Recorder is open, scalable data-recording software for Windows PCs, ideal for testing, laboratories, and process monitoring. It acquires data from Z-PC modules or Modbus devices, with serial or Ethernet connections and advanced analysis and reporting functions.

## DIGITAL I/O MODULES

**Z-D-IN**

Module with 5 digital inputs ModBUS RTU

**Z-D-OUT**

Module with 5 Modbus RTU digital outputs

**Z-10-D-IN**

Module with 10 digital inputs Mod-BUS RTU

**Z-10-D-OUT**

Module with 10 Modbus RTU digital outputs

**Z-5DI-2DO**

Module 5DI 2DO Modbus RTU

**Z-D-IO**

Control module 6DI, 2DO Modbus RTU

**ZC-24DI**

Module with 24 digital inputs Modbus RTU / CANopen

**ZC-24DO**

Module with 24 digital outputs Modbus RTU / CANopen

**ZC-16DI-8DO**

Module 16DI, 8DO Modbus RTU / CANopen



## ANALOG I/O MODULES

**Z-4AI**

Module with 4 analog inputs (mA, V) Modbus RTU

**Z-8AI**

Module with 4 analog inputs (mA, V) Modbus RTU

**Z-3AO**

Module with 3 analog outputs (mA, V) Modbus RTU

**Z-DAQ-PID**

Universal PID I/O module Modbus RTU

**Z-4AI**

Module with 4 analog inputs (mA, V) Modbus RTU

**Z-8AI**

Module with 4 analog inputs (mA, V) Modbus RTU

**Z-3AO**

Module with 3 analog outputs (mA, V) Modbus RTU

**Z-DAQ-PID**

Universal PID I/O module Modbus RTU



## MIXED DIGITAL / ANALOG I/O MODULES



### Z-4DI-2AI-2DO

Mixed module 4DI, 2AI, 2DO, Modbus RTU



### ZE-4DI-2AI-2DO

Mixed module 4DI, 2AI, 2DO, Modbus RTU / TCP-IP



### ZE-4DI-2AI-2DO-P

Mixed module 2AI, 2DI, 2DO, Profinet



## ELECTRICAL QUANTITIES



### Z203-2

Single-phase network analyzer 500 Vac / 5 A Modbus RTU



### Z204-1

Vac/dc TRMS converter with analog output, Modbus RTU



## TEMPERATURE I/O MODULES



### Z-4RTD2

Module with 4 RTD inputs, Modbus RTU, 6-way isolation, 14-bit



### Z-4RTD-2-SI

Module with 4 RTD inputs, Modbus RTU, 3-way isolation, 24-bit



### Z-4TC

Module with 4 inputs TC J, K, R, S, T, B, E, N / mV, Modbus RTU



### Z-8NTC

Module with 8 NTC inputs / Modbus RTU



### Z-8TC-1

Module with 8 thermocouple inputs Modbus RTU @14-bit



### Z-8TC-LAB

Module with 8 TC inputs Modbus RTU @15-bit, interchangeable terminals



### Z-8TC-SI

Module 8 inputs from thermocouples Modbus RTU @24-bit



### Z-8TC-SI-LAB

Module 8 TC Modbus RTU @24-bit with interchangeable terminals



### ZC-4RTD

4 input module for P100, Ni100, Pt500, Pt1000 / CANopen



### ZC-8TC

8 thermocouple input module (J,K,E,N,S,R,B,T) CANopen



## WEIGHING I/O MODULES



### Z-SG

Strain-gauge converter module Modbus RTU



### Z-SG3

Advanced strain-gauge converter / Modbus RTU module



### ZE-SG3

Strain gauge converter module ModBUS RTU / TCP-IP



### ZE-SG3-P

Advanced strain-gauge converter / Profinet module



### ZC-SG

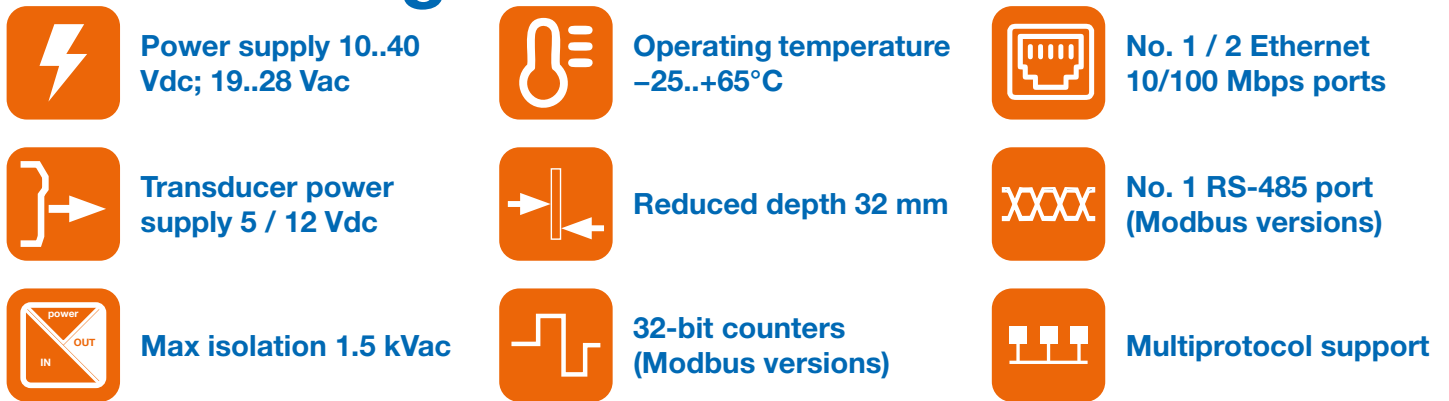
Strain-gauge input module CANopen





# R SERIES

# I/O Modules with Integrated Networking



Power supply 10..40 Vdc; 19..28 Vac



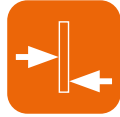
Operating temperature -25..+65°C



No. 1 / 2 Ethernet 10/100 Mbps ports



Transducer power supply 5 / 12 Vdc



Reduced depth 32 mm



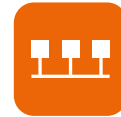
No. 1 RS-485 port (Modbus versions)



Max isolation 1.5 kVac



32-bit counters (Modbus versions)



Multiprotocol support

## Applications



R Series I/O modules are designed for flexible wiring needs, reduced installation spaces (thickness 32 mm), high-density I/O applications.

## Modbus RTU/TCP-IP models

### Modbus

Modbus models support both Modbus TCP-IP communication (on 1 or 2 Ethernet ports) and serial RS485 communication with Modbus RTU protocol, up to 64 nodes without a repeater and speeds of 115 kbps.

## Profinet Models



R Series I/O modules with Profinet IO RT Class 1 protocol are characterized by a minimum cycle time of 2 ms and Ethernet speed of 100 Mbps. They support star, tree, and ring network architectures.

## Configuration



The configuration of ModBUS I/O is done via a web server. Profinet IO versions support softPLC IEC 61131-3 (e.g., Straton, CODESYS) and third-party design environments (e.g., Siemens TIA Portal).

## Daisy Chain



Thanks to the dual Ethernet interface, a daisy chain connection to the next Ethernet device can be made, avoiding costly industrial switches and simplifying wiring.

## Fault-by-pass



The Ethernet connection and data transmission remain active even in the event of a module failure or power outage, ensuring service availability and continuity.

## Modbus Pass-Through



Thanks to the "ModBUS Pass Through" feature, the module can redirect requests from Modbus TCP-IP to RS485, acting effectively as a gateway.

## Peer-To-Peer



Digital signals can be duplicated to one or more modules in Peer-to-Peer mode (I/O mirror functionality) and transmitted over distance without using a PLC Master.

## DIGITAL I/O MODULES

Modbus  
RTU TCP/IP

**R-16DI-8DO**

Module 16DI, 8DO (SPST relays)  
Modbus RTU/TCP-IP

**R-32DIDO**

Module 32DIDO (MOSFET/PNP)  
Modbus RTU/TCP-IP



PROFI  
NET

**R-16DI-8DO-P**

Module 16DI, 8DO (SPST relays)  
Profinet

**R-32DIDO-P**

Module 32DIDO (MOSFET/PNP)  
Profinet



## MIXED DIGITAL / ANALOG / TEMPERATURE I/O MODULES

Modbus  
RTU TCP/IP

**R-8AI-8DIDO-2**

Module 8AI (mA, V, TC, Pt100),  
8DIDO, Modbus RTU/TCP-IP

**R-2AI-6DIDO**

Module with 4 analog inputs (mA, V)  
Modbus RTU

**R-4AO-8DIDO-2**

Module 4AO (mA, V), 6DIDO, Mod-  
bus RTU/TCP-IP



PROFI  
NET

**R-8AI-8DIDO-2-P**

Module 8AI (mA, V, TC, Pt100),  
8DIDO, Profinet

**R-2AI-6DIDO-P**

Module 2AI (mA, V, TC, Pt100),  
6DIDO, Profinet

**R-4AO-8DIDO-2-P**

Module 4AO (mA, V), 6DIDO, Mod-  
bus RTU/TCP-IP



## WEIGHING I/O MODULES

Modbus  
RTU TCP/IP

**R-SG-3**

Strain-gauge converter module Mod-  
bus RTU / TCP-IP



PROFI  
NET

**R-SG-3-P**

Strain-gauge converter module  
Profinet



## ACCESSORIES

**R-MP**

Module with 6 SPDT relay outputs,  
5 A



# SELECTION GUIDE



## SELECTION GUIDE / GENERAL DATA AND CONFIGURATION

Models	Power Supply	Power Supply Transducers	Max Isolation	Format	Dimensions	Operating Temp.	UL	
<b>DIGITAL</b>								
R-16DI-8DO	10..40 Vdc; 19..28 Vac	Yes, 12 Vdc / 40 mA	1.5 kVac	R	106 x 90 x 32 mm	-25..+65°C	-	
R-16DI-8DO-P	10..40 Vdc; 19..28 Vac	Yes, 12 Vdc / 40 mA	1.5 kVac	R	106 x 90 x 32 mm	-25..+65°C	-	
R-32DIDO-2	10..40 Vdc; 19..28 Vac	-	1.5 kVac	R	106 x 90 x 32 mm	-25..+65°C	-	
R-32DIDO-2-P	10..40 Vdc; 19..28 Vac	-	1.5 kVac	R	106 x 90 x 32 mm	-25..+65°C	-	
Z-10-D-OUT	10..40 Vdc; 19..28 Vac	-	1.5 kVac	Z-PC	17.5x102.5x111 mm	-10..+65°C	x	
Z-10-D-IN	10..40 Vdc; 19..28 Vac	Yes, 17 Vdc / 40 mA	1.5 kVac	Z-PC	17.5x102.5x111 mm	-10..+65°C	x	
Z-5DI-2DO	10..40 Vdc; 19..28 Vac	Yes, 16 V / 30 mA	1.5 kVac	Z-PC	17.5x102.5x111 mm	-20..+65°C	x	
ZC-16DI-8DO	10..40 Vdc; 19..28 Vac	Yes, 16 V / 40 mA	1.5 kVac	Z-PC	35x102.5x111 mm	-10..+65°C	-	
ZC-24DI	10..40 Vdc; 19..28 Vac	Yes, 16 V / 70 mA	1.5 kVac	Z-PC	35x102.5x111 mm	-10..+65°C	-	
ZC-24DO	10..40 Vdc; 19..28 Vac	-	1.5 kVac	Z-PC	35x102.5x111 mm	-10..+65°C	-	
Z-D-IN	10..40 Vdc; 19..28 Vac	Yes, 17Vdc / 20 mA	1.5 kVac	Z-PC	17.5x102.5x111 mm	-10..+65°C	-	
Z-D-IO	10..40 Vdc; 19..28 Vac	Yes, 20 V / 30 mA	1.5 kVac	Z-PC	17.5x102.5x111 mm	-10..+65°C	-	
Z-D-OUT	10..40 Vdc; 19..28 Vac	-	1.5 kVac	Z-PC	17.5x102.5x111 mm	-10..+65°C	-	
<b>ANALOG</b>								
Z-3AO	10..40 Vdc; 19..28 Vac	-	1.5 kVac	Z-PC	17.5x102.5x111 mm	-10..+65°C	x	
Z-4AI	10..40 Vdc; 19..28 Vac	Yes, 20 Vdc, 40 mA	1.5 kVac	Z-PC	17.5x102.5x111 mm	-10..+65°C	x	
Z-8AI	10..40 Vdc; 19..28 Vac	Yes, 13 Vdc / 90+90 mA	1.5 kVac	Z-PC	17.5x102.5x111 mm	-10..+65°C	-	
ZC-3AO	10..40 Vdc; 19..28 Vac	-	1.5 kVac	Z-PC	17.5x102.5x111 mm	-10..+65°C	-	
ZC-8AI	10..40 Vdc; 19..28 Vac	Yes, 22 mA / 16 V	1.5 kVac	Z-PC	17.5x102.5x111 mm	-10..+65°C	-	
Z-DAQ-PID	10..40 Vdc; 19..28 Vac	Yes, 17 Vdc / 25 mA	1.5 kVac	Z-PC	17.5x102.5x111 mm	-10..+65°C	-	
ZE-2AI	10..40 Vdc; 19..28 Vac	Yes, 12 V / 40 mA	1.5 kVac	Z-PC	17.5x102.5x111 mm	-25..+70°C	-	
ZE-2AI-P	10..40 Vdc; 19..28 Vac	Yes, 12 V / 40 mA	1.5 kVac	Z-PC	17.5x102.5x111 mm	-25..+70°C	-	
<b>MIXED</b>								
R-8AI-8DIDO-2	10..40 Vdc; 19..28 Vac	-	1.5 kVac	R	106 x 90 x 32 mm	-25..+65°C	-	Daisy C
R-8AI-8DIDO-2-P	10..40 Vdc; 19..28 Vac	-	1.5 kVac	R	106 x 90 x 32 mm	-25..+65°C	-	
R-2AI-6DIDO	10..40 Vdc; 19..28 Vac	-	1.5 kVac	R	53.3x90x32.2 mm	-25..+65°C	-	
R-2AI-6DIDO-P	10..40 Vdc; 19..28 Vac	-	1.5 kVac	R	53.3x90x32.2 mm	-25..+65°C	-	
R-4AO-8DIDO	10..40 Vdc; 19..28 Vac	-	1.5 kVac	R	106 x 90 x 32 mm	-25..+65°C	-	
R-4AO-8DIDO-P	10..40 Vdc; 19..28 Vac	-	1.5 kVac	R	106 x 90 x 32 mm	-25..+65°C	-	
Z-4DI-2AI-2DO	10..40 Vdc; 19..28 Vac	Yes, 12 V / 40 mA, 12 V / 20 mA	3 kVac	Z-PC	35x102.5x111 mm	-25..+70°C	-	
ZE-4DI-2AI-2DO	10..40 Vdc; 19..28 Vac	Yes, 12 V / 40 mA, 12 V / 20 mA	3 kVac	Z-PC	35x102.5x111 mm	-25..+70°C	-	
ZE-4DI-2AI-2DO-P	10..40 Vdc; 19..28 Vac	Yes, 12 V / 40 mA, 12 V / 20 mA	3 kVac	Z-PC	35x102.5x111 mm	-25..+70°C	-	
<b>TEMPERATURE</b>								
Z-4RTD2	10..40 Vdc; 19..28 Vac	-	1.5 kVac	Z-PC	17.5x102.5x111 mm	-20..+70°C	x	
Z-4RTD2-SI	10..40 Vdc; 19..28 Vac	-	1.5 kVac	Z-PC	17.5x102.5x111 mm	-25..+70°C	-	
Z-4TC	10..40 Vdc; 19..28 Vac	-	1.5 kVac	Z-PC	17.5x102.5x111 mm	-25..+65°C	-	
Z-8NTC	10..40 Vdc; 19..28 Vac	-	1.5 kVac	Z-PC	17.5x102.5x111 mm	-20..+70°C	-	
Z-8TC-1	10..40 Vdc; 19..28 Vac	-	1.5 kVac	Z-PC	17.5x102.5x111 mm	-20..+65°C	-	
Z-8TC-LAB	10..40 Vdc; 19..28 Vac	-	1.5 kVac	Z-PC	17.5x102.5x111 mm	-20..+65°C	-	
Z-8TC-SI	10..40 Vdc; 19..28 Vac	-	1.5 kVac	Z-PC	17.5x102.5x111 mm	-25..+70°C	-	
Z-8TC-SI-LAB	10..40 Vdc; 19..28 Vac	-	1.5 kVac	Z-PC	17.5x102.5x111 mm	-25..+70°C	-	
ZC-4RTD	10..40 Vdc; 19..28 Vac	-	1.5 kVac	Z-PC	17.5x102.5x111 mm	-10..+65°C	-	
ZC-8TC	10..40 Vdc; 19..28 Vac	-	1.5 kVac	Z-PC	17.5x102.5x111 mm	-10..+65°C	-	
<b>WEIGHING</b>								
R-SG3	10..40 Vdc; 19..28 Vac	Yes, 5 Vdc / 60 mA	1.5 kVac	R	53.3x90x32.2 mm	-25..+65°C	-	
R-SG3-P	10..40 Vdc; 19..28 Vac	Yes, 5 Vdc / 60 mA	1.5 kVac	R	53.3x90x32.2 mm	-25..+65°C	-	
ZC-SG	10..40 Vdc; 19..28 Vac	Yes, 5 Vdc	1.5 kVac	Z-PC	17.5x102.5x111 mm	-10..+65°C	-	
ZE-SG3	10..40 Vdc; 19..28 Vac	Yes, 5Vdc / 60 mA	1.5 kVac	Z-PC	17.5x102.5x111 mm	-25..+70°C	-	
ZE-SG3-P	10..40 Vdc; 19..28 Vac	Yes, 5Vdc / 60 mA	1.5 kVac	Z-PC	17.5x102.5x111 mm	-25..+70°C	-	
Z-SG	10..40 Vdc; 19..28 Vac	Yes, 5Vdc / 60 mA	1.5 kVac	Z-PC	17.5x102.5x111 mm	-10..+65°C	-	
Z204-1	10..40 Vdc; 19..28 Vac	-	4 kVac	Z-PC	35x102.5x111 mm	-20..+65°C	-	

## ION

Special Features	DIP Switch	EASY SETUP	EASY SET-UP 2	Z-NET4	Web Server	Descriptive files (xml, gsd, gsdml, eds, etc.)
Daisy Chain, Fault-By-Pass, Pass-Through, Peer-To-Peer	x				x	
Daisy Chain, Fault-By-Pass	x					x
Daisy Chain, Fault-By-Pass, Pass-Through, Peer-To-Peer	x				x	
Daisy Chain, Fault-By-Pass	x					x
Programmable fail-safe function	x	x	x	x		
-	x	x	x	x		
-	x	x	x	x		
-	x	x	x	x		x
-	x	x	x	x		x
-	x	x	x	x		x
-	x	x	x	x		
-	x	x	x	x		
Programmable fail-safe function	x	x	x			
-	x	x	x	x		
-	x	x	x	x		
-	x	x	x	x		
-	x	x	x			x
-	x	x	x			x
-	x	x	x	x		
-	x	x	x		x	
-	x					x
Daisy Chain, Fault-By-Pass, Pass-Through, Peer-To-Peer, 1 input available for PT100	x				x	
Daisy Chain, Fault-By-Pass, 1 input available for PT100	x					x
Pass-Through, Peer-to-Peer	x				x	
Pass-Through, Peer-to-Peer	x					x
Daisy Chain, Fault-By-Pass, Pass-Through, Peer-To-Peer	x				x	
Daisy Chain, Fault-By-Pass	x					x
-	x	x	x	x		
-	x	x	x		x	
-	x					x
-	x	x	x	x		
-	x	x	x	x		
-	x	x	x	x		
Interchangeable terminals	x	x				
-	x	x				
Interchangeable terminals	x	x				
-	x	x	x			x
-	x	x	x			x
Pass-Through, Peer-to-Peer, weighing functions	x				x	
Weighing functions	x					x
Tare acquisition, stable weighing	x	x	x			x
Tare acquisition, stable weighing, predictive filter, piece counting	x				x	
Tare acquisition, stable weighing, predictive filter, piece counting	x					x
Tare acquisition, stable weighing	x	x	x	x		
-	x	x				

## CHOICE GUIDE / COMMUNICATION AND I/O

Models	Protocols				Interfaces					DI	
	ModBUS RTU	Modbus TCP-IP	CANopen	Profinet IO	Ethernet ports	Serial ports	USB Ports	Jack	CAN Port	#	Type
<b>DIGITAL</b>											
R-16DI-8DO	x	x			2	1 (RS485)				16	PNP, NPN
R-16DI-8DO-P				x	2					16	PNP, NPN
R-32DIDO-2	x	x			2	1 (RS485)					
R-32DIDO-2-P				x	2						
Z-10-D-OUT	x					1 (RS485)					
Z-10-D-IN	x					1 (RS485)				10	Reed, Contact, Proximity, PNP, NPN
Z-5DI-2DO	x					1 (RS485)	1			5	Reed, Contact, Proximity, PNP, NPN
ZC-16DI-8DO	x		x			1 (RS485)	1		1	16	PNP
ZC-24DI	x		x			1 (RS485)	1		1	24	PNP
ZC-24DO	x		x			1 (RS485)	1		1		
Z-D-IN	x					1 (RS485)				5	Reed, Contact, proximity PNP, NPN
Z-D-IO	x					1 (RS485)				6	Reed, Contact, Proximity, PNP, NPN
Z-D-OUT	x					1 (RS485)	1				
<b>ANALOG</b>											
Z-3AO	x					1 (RS485)	1				
Z-4AI	x					1 (RS485)	1				
Z-8AI	x					1 (RS485)	1				
ZC-3AO			x			1 (RS232)		1	1		
ZC-8AI			x			1 (RS232)		1	1		
Z-DAQ-PID	x					1 (RS232/RS485)		1			
ZE-2AI	x	x			1	1 (RS485)					
ZE-2AI-P				x	1						
<b>MIXED</b>											
R-8AI-8DIDO-2	x	x			2	1 (RS485)					
R-8AI-8DIDO-2-P				x	2						
R-2AI-6DIDO	x	x			1	1 (RS485)					
R-2AI-6DIDO-P				x	1						
R-4AO-8DIDO	x	x			2	1 (RS485)					
R-4AO-8DIDO-P				x	2						
Z-4DI-2AI-2DO	x					1 (RS485)	1			4	PNP, NPN
ZE-4DI-2AI-2DO	x	x			1	1 (RS485)				4	PNP, NPN
ZE-4DI-2AI-2DO-P				x	1					4	PNP, NPN
<b>TEMPERATURE</b>											
Z-4RTD2	x					1 (RS485)	1				
Z-4RTD2-SI	x					1 (RS485)	1				
Z-4TC	x					1 (RS485)	1				
Z-8NTC	x					1 (RS485)	1				
Z-8TC-1	x					1 (RS485)	1				
Z-8TC-LAB	x					1 (RS485)	1				
Z-8TC-SI	x					1 (RS485)	1				
Z-8TC-SI-LAB	x					1 (RS485)	1				
ZC-4RTD			x			1 (RS232)		1	1		
ZC-8TC			x			1 (RS232)		1	1		
<b>WEIGHING</b>											
R-SG3	x	x			1	1 (RS485)	1				
R-SG3-P				x	1						
ZC-SG			x			1 (RS232)		1	1		
ZE-SG3	x	x			1	1 (RS485)					
ZE-SG3-P				x	1						
Z-SG	x					1 (RS485)	1				
Z-SG3	x					1 (RS485)	1				
<b>ELECTRICAL MEASUREMENTS</b>											
Z203-2	x					1 RS-232, 1 RS-485	1				
Z204-1	x					1 RS-232, 1 RS-485		1			

	Counters	DO		DI/DO		AI		Resolution	AO		
		#	Type	#	Type	#	Type		#	Type	Resolution
	16, 5kHz, 32bit	8	SPST Relay								
		8	SPST Relay								
	32, 500Hz, 32 bit			32	PNP, NPN, Mosfet						
	-			32	PNP, NPN, Mosfet						
	-	10	Mosfet								
NPN	10, 2.5 kHz, 32-bit										
NPN	5, 5kHz, 32bit	2	SPST Relay			8					
	8, 10kHz, 32bit	8	Mosfet								
	8, 10kHz, 32bit										
	-	24	Mosfet								
NPN	4, 100Hz, 16bit; 1, 10 kHz, 32bit										
NPN	-	2	SPST Relay								
	-	5	SPST Relay								
									3	mA, V	12 bit
						4	mA, V	16 bit			
						8	mA, V	16 bit			
									3	mA,V	14 bit
						8	mA, V	15 bit			
						1	mA, V, mV, Ohm, TC J,K,T,E,N,R,S,B,L, PT100, PT500, PT1000, NI100		1	mA, V	
						2	mA, V	16 bit			
						2	mA, V	16 bit			
				8	PNP, NPN, Mosfet	8	mA, V, mV, TC J,K,T,E,N,R,S,B,L, PT100	24 bit			
	-			8	PNP, NPN, Mosfet	8	mA, V, mV, TC J,K,T,E,N,R,S,B,L, PT100	24 bit			
				6	PNP, NPN, Mosfet	2	mA, V, mV, TC J,K,T,E,N,R,S,B,L, PT100	16 bit			
				6	PNP, NPN, Mosfet	2	mA, V, mV, TC J,K,T,E,N,R,S,B,L, PT100	16 bit			
				8	PNP, NPN, Mosfet	8			4	mA, V	13 bit
	-			8	PNP, NPN, Mosfet	8			4	mA, V	13 bit
	4, 5kHz, 32bit	2	SPDT Relay			2	mA, V	16 bit			
	4, 5kHz, 32bit	2	SPDT Relay			2	mA, V	16 bit			
	-	2	SPDT Relay			2	mA, V	16 bit			
						4	PT100, PT500, PT1000, NI100	14 bit			
						4	PT100, PT500, PT1000, NI100, CU50, CU100, NI120, NI1000	24 bit			
						4	TC J,K,R,S,T,B,E,N, mV	16 bit			
						8	NTC	16 bit			
						8	TC J, K, E, N, S, R, B, T	16 bit			
						8	TC J, K, E, N, S, R, B, T	16 bit			
						8	TC J,K,R,S,T,B,E,N,L mV	24 bit			
						8	TC J,K,R,S,T,B,E,N,L mV	24 bit			
						4	Pt100, Ni100, Pt500, Pt1000	14 bit			
						8	TC J,K,E,N,S,R,B,T, mV	15 bit			
				2	On-Off	1	Load Cell (mV)	24 bit			
				2	On-Off	1	Load Cell (mV)	24 bit			
				1	On-Off	1	Load Cell (mV)	15 bit			
				2	On-Off	1	Load Cell (mV)	24 bit	1	mA, V	
				2	On-Off	1	Load Cell (mV)	24 bit			
				1	On-Off	1	Load Cell (mV)	24 bit	1	mA, V	
				2	On-Off	1	Load Cell (mV)	24 bit	1	mA, V	
							Aac, Vac		1	mA, V	
							Vac/dc		1	mA, V	

# SIGNAL FLOW

SENSORS & ACTUATORS



mA  
V  
Ohm  
mV



Analog I/O Modules

**Inputs**  
Namur, reed, photoelectric, Proximity  
TTL  
Variable Reluctance  
PNP, NPN  
24 V Pulses  
**Counters**  
**Outputs**  
SPST / SPDT Relays  
Mosfet



Digital I/O Modules

**Analog** mA, V  
**Digital** Namur, reed, photoelectric, proximity, TTL, variable reluctance, PNP, NPN, 24 V pulses, relay, MOSFET



Mixed I/O Modules

Modbus

PROFIBUS

CANopen



Data Recorder  
DAQ Software



Multifunction controllers  
IEC 61131-3  
IEC 61850/870



RTU / IIoT Edge Gateway

IT / IIoT Protocols

MQTT(s), OPC UA, http(s) post, Wi-Fi, 4G, PPP, HTTP(s), SMTP, FTP(s), SNMP



HMI



SCADA / Control Room



Remote Control / Remote Assistance



**Strain Gauge Load Cells**

**Thermocouples**  
J, K, R, S, T, B, E, N  
**Thermistors**  
NTC  
**Resistance thermometers**  
Pt100, Pt500, Pt1000,  
Ni1000, Cu50, Cu100,  
Ni120  
**mV**  
**Ohm**

**A, V  
AC/DC**



**WEIGHING I/O Modules**



**TEMPERATURE I/O Modules**



**Network Analyzers**



**PLCs and Third-Party Devices**



**Radio Modules**



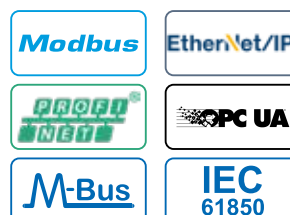
**Protocol Conversion Gateways**



**IoT / Cloud Platforms**



**Data Center**





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