

Modbus

Z-4RTD2 / Z-4RTD2-SI

4-CH RTD INPUTS / RS485 WITH 6 / 3-WAY ISOLATION AND 14 / 24 BIT RESOLUTION MODULES

Highlights

- **Power supply: 10..40 Vdc / 19..28 Vac**
- **Isolation: 1,5 kVac at 6-way (Z-4RDT2) or 3-way (Z-4RTD2-SI)**
- **Operating temperature: -25/20...+70°C**
- **2-, 3-, 4-wire RTD input**
- **ModBUS RTU RS485 interface**
- **Resolution at 14 bits (Z-4RTD2) or 24 bits (Z-RTD2-SI)**
- **•Configuration via DIP switch or EASY SETUP 2**
- **UL certified (Z-4RTD2)**

Z-4RTD2 is an acquisition module for thermoresistances (PT100, PT1000, PT500, Ni100 2, 3 or 4 wires) with 4 independent and mutually isolated 6-way measurement channels up to 1.5 kVac, 14-bit resolution and ModBUS RTU protocol. The module is configurable via DIP-switch or Micro USB port on the front panel with EASY Setup PC software.

Temperature measurement is available in floating-point, inverse floating-point, 16-bit fixed-point, tenths of a degree, tenths or hundredths of an ohm formats. A fault or freeze value of the last reading can be set. Compared with Z-4RDT2, Z-4RTD-SI has 3-way 1.5 kVac isolation, 24-bit resolution and acquires additional RTD types such as Ni120, Ni1000, Cu50, Cu100.

100% Made & Designed in Italy

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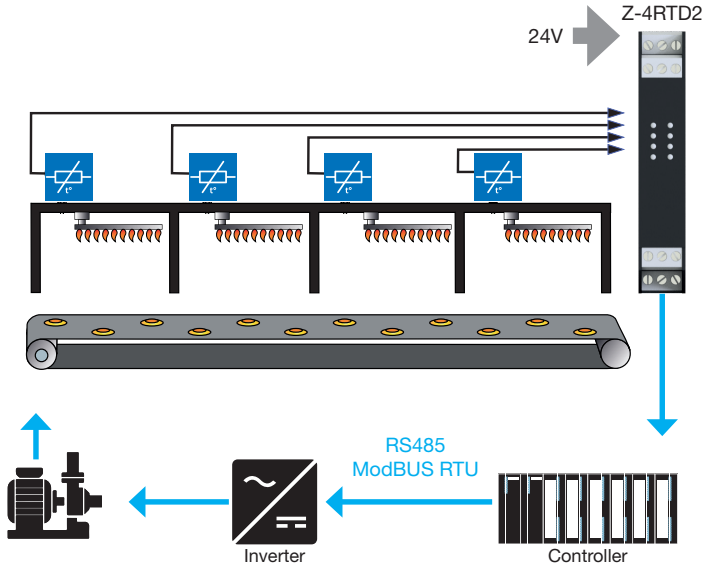
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Z-4RTD2 / Z-4RTD2-SI

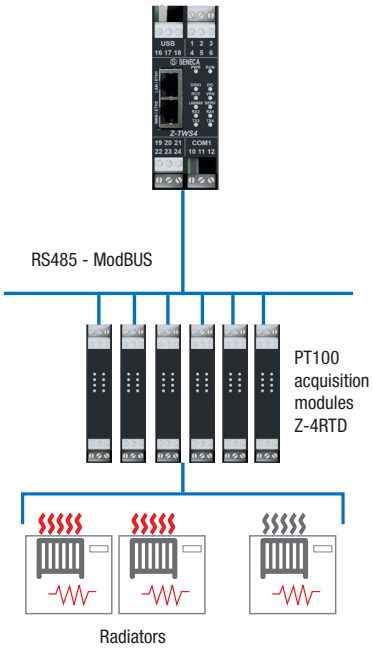
	Z-4RTD2	Z-4RTD2-SI
		
	4-CH RTD inputs (Pt100, Pt500, PT1000, Ni100) module, 6-way isolation, 14 bit resolution, ModBUS RTU RS485	4-CH RTD inputs (Pt100, Pt500, PT1000, Ni100, Ni120, Ni1000, Cu50, Cu100) module, 3-way isolation, 24-bit resolution, ModBUS RTU RS485
GENERAL DATA		
Power supply	10..40 Vdc / 19..28 Vac	10..40 Vdc / 19..28 Vac
Power consumption	0,7 W	0,7 W
Isolation	1,5 kVac (@6-ways)	1,5 kVac (@6-ways)
Status indicators	Power supply Error Data Transmission Data Reception	Power supply Error Data Transmission Data Reception
Operating temperature	-20..+70°C (-20..+65°C UL)	-25..+70°C
Storage temperature	-20..+85°C	-30..+85°C
Humidity	30..90% non condensing	30..90% non condensing
Protection degree	IP20	IP20
Weight	Approx 140 g	Approx 140 g
Dimension	17.5x100x112 mm	17.5x100x112 mm
Case	PA6 black color	PA6 black color
Connections	Removable 4-way screw terminals, max. cross section 1.5mm , pitch 3.5mm Front micro USB IDC10 rear connector for DIN rail IEC EN 60715	Removable 4-way screw terminals, max. cross section 1.5mm , pitch 3.5mm Front micro USB IDC10 rear connector for DIN rail IEC EN 60715
Mounting	For 35 mm DIN rail 46277	For 35 mm DIN rail 46277
Data Memory	EEPROM for configuration parameters, retention time 10 years	EEPROM for configuration parameters, retention time 10 years
Approvals	CE, UL	CE
COMMUNICATION		
Interfaces	RS485 2-wire Micro USB	RS485 2-wire Micro USB
Speed	Up to 115,200 bps	Up to 115,200 bps
Protocols	MosBUS RTU slave	MosBUS RTU slave
Communication time	< 10 ms (@38,400 bps)	< 10 ms (@38,400 bps)
Max distance	Up to 1,200 m	Up to 1,200 m
Connectivity	Max 32 nodes	Max 32 nodes
PROGRAMMING		
System software (Z-NET4)	Yes	Yes
Plug&play configurator (EASY SETUP 2)	Yes	Yes
IP-switches	Yes	Yes
Programmable parameters	Eight-level programmable filter for reading stabilization; Rejection at 50 Hz or 60 Hz; Floating-point, inverse floating-point, 16-bit fixed-point, tenths of a degree, tenths/hundredths of an ohm measurement; Acquisition speed; Reset value in case of fault or freezing last reading; Three-wire resistance compensation on average value	Eight-level programmable filter for reading stabilization; Rejection at 50 Hz or 60 Hz; Floating-point, inverse floating-point, 16-bit fixed-point, tenths of a degree, tenths/hundredths of an ohm measurement; Acquisition speed; Reset value in case of fault or freezing last reading; Three-wire resistance compensation on average value
INPUT DATA		
Channels	4	4
Type	RTD with 2,3,4 wire wiring PT100, EN 60751/A2 (ITS-90), -200..+650°C PT500, EN 60751/A2 (ITS-90), -200..+750°C PT1000, EN 60751/A2 (ITS-90), -200..+210°C NI100, EN 60751/A2 (ITS-90), -60..+250°C	RTD with 2,3,4 wire wiring PT100, EN 60751/A2 (ITS-90), -200..+650°C PT500, EN 60751/A2 (ITS-90), -200..+750°C PT1000, EN 60751/A2 (ITS-90), -200..+210°C NI100, EN 60751/A2 (ITS-90), -60..+250°C CU50 GOST 6651-2009, -180..+200°C CU100 GOST 6651-2009, -180..+200°C Ni120 DIN 43760, -60..+250°C
ADC		
Resolution	14 bits	24 bits
Accuracy class	0,05	0,05
Stability	0,04%	0,04%
Linearity	0.025 %	0.025 %
Thermal drift	< 50 ppm/K	< 50 ppm/K

CONNECTION SCHEMES

Temperature acquisition and transmission to loop control system



Temperature control system



ORDER CODES	
Code	**Description**
Z-4RTD2	4-CH RTD inputs (Pt100, Pt500, PT1000, Ni100) module, 6-way isolation, 14 bit resolution, ModBUS RTU RS485
Z-4RTD2-SI	4-CH RTD inputs (Pt100, Pt500, PT1000, Ni100, Ni120, Ni1000, Cu50, Cu100) module, 3-way isolation, 24-bit resolution, ModBUS RTU RS485
ACCESSORIES	
Z-PC-DIN2-17.5	Support for quick mounting on DIN rail 2 slots step 17.5mm
Z-PC-DIN8-17.5	Support for quick mounting on DIN rail 8 slots pitch 17.5 mm
Z-PC-DINAL2-17.5	Support for quick mounting on DIN rail head + 2 slots pitch 17.5 mm
Z-SUPPLY	Single-phase switching power supply 24V @ 1.5 A
CU-A-MICROB	USB-A Micro USB-B plug cable 5 P
SOFTWARE	
Z-NET4	Z-PC Line I/O system and controller configurator, including Web Editor, Trend Viewer, Data Recorder
EASY SETUP 2	Plug & Play Configurator

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SENECA
Via Austria, 26 • 35127 Padova - (I) - Tel. +39 049 87.05.359
Fax +39 049 87.06.287 • www.seneca.it • info@seneca.it

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