



# Z109PT2-1

## RTD TO DC CURRENT / VOLTAGE ISOLATOR CONVERTER

### Highlights

- Power Supply Vac/dc
- Selectable input RTD type (Pt100, Pt500, Pt1000, Ni100) 2/3/4 wires
- Selectable output mA, V
- Sampling frequency from 240 sps (@11bit+sign resolution) to 15 sps (@15 bit +sign resolution)
- Isolation 1.500 Vac at 3-ways power supply /input / output
- Setting via DIP switches, software or APP
- Micro USB connector (front side)
- Operating temperature -20...+60°C
- UL Certification

Z109PT2-1 is a temperature converter for 2/3/4 wire RTD sensor (PT100, PT1000, PT500, Ni100) and provides a mA/V standard output signal.

A 3-way galvanic isolation among power supply // input // output circuits assures the integrity of your signals.

The device can also power an external sensor by 2-wire technique with 20 Vdc stabilized / 20 mA max, short circuit protected.

Z109PT2-1 offers high accuracy class (0,1%), fast response time (up to 35 ms), wide operating temperature range and low power consumption.

Besides DIP-switch settings, the module has a Micro USB connector on the front side and can be configured by PC software (EASY SETUP) or dedicated app for Android devices setting: start / end scale, additional input types, square root extraction, filter, burnout etc.

Z109PT2-1 is certified in accordance with UL standard.



Mobile Phone with  
USB OTG support



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# Z109PT2-1



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### TECHNICAL DATA

#### GENERAL DATA

Power Supply	10..40 Vdc; 19..28 Vac (50..60 Hz)
Power transducer	20 V stabilized, 20 mA max, 2 wire-technique
Power consumption	1,6 W (@24V) 2,5 W (max)
Isolation	1.500 Vac 3-ways
Protection Degree	IP20
LED status indicators	Power on Off scale Setting error
Sampling frequency	From 240 sps @11bit+sign resolution to 15 sps @15bit+sign resolution
Response time	35 ms @11bit resolution, 140 ms @16bit resolution
Interface	Micro USB
Accuracy class	0,1% (RTD) – 0,3% (voltage output)
Thermal drift	0.01%/K
Settings	DIP switch PC Software (EASY SETUP) Mobile app (EASY SETUP app)
Operating temperature	-20..+60°C
Dimension	100 x 112 x 17,5 mm (wxhxd)
Connections	Removable 3-way screw terminals, 5,08 mm pitch, cable section 2,5 mm <sup>2</sup>
Case	PA6, black color
Mounting	35 mm DIN rail (IEC/EN 60175)
Weight	200 g
Approvals	CE, UL-UR CSA
Norms	EN 61000-6-4, EN 61000-6-2, EN 61010-1

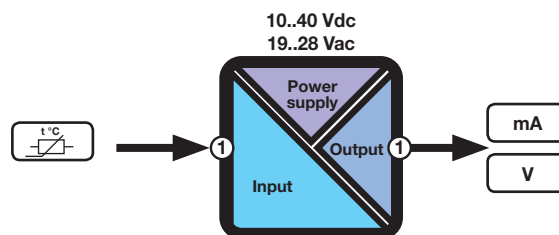
#### INPUT DATA

Channels	1
Type	RTD PT100, PT500, PT1000, Ni100 2, 3 or 4 wires measurement, energising current 1 mA, resolution 0.1 °C

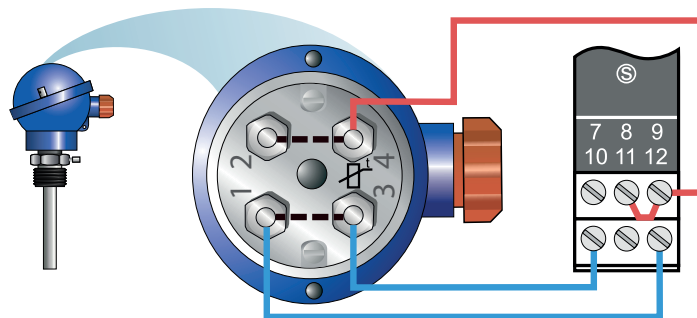
#### OUTPUT DATA

Channels	1
Type	VOLTAGE: 0..5 / 0..10 / 1..5 / 2..10 V, min load resistance 2 kΩ Resolution: 2.5 μV / 1.25mV. CURRENT: 0..20 / 4..20 mA, max load resistance 600 Ω Resolution: 2.5 μA / 1.25mV.

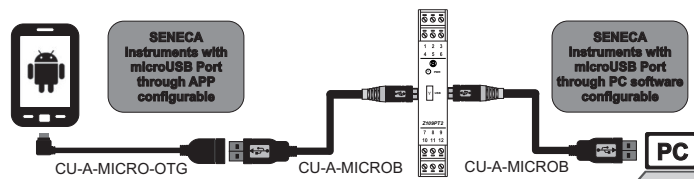
### SIGNAL / ISOLATION DIAGRAM



### APPLICATION EXAMPLE



### SETTING BY USB INTERFACE



### ORDER CODES

Code	Description
Z109PT2-1	RTD to DC current / voltage isolator converter, 9..40 Vdc/19..28 Vac
CU-A-MICROB	USB-A Micro USB-B 5 P plug cable
CU-A-MICRO-OTG	Micro USB OTG to USB Type A (female) adapter cable
EASY SETUP	Plug&Play software suite for SENECA programmable instruments
EASY SETUP APP	App iOS / Android EASY SETUP suite
Z-POWER-115-15VA	DIN rail 19 Vac transformer, 115 / 15 VA with thermofuse
Z-POWER-230-15VA	DIN rail 19 Vac transformer, 230 / 15 VA with thermofuse
Z-POWER-230-25VA	DIN rail 19 Vac transformer, 230 / 25 VA with thermofuse
Z-SUPPLY	Single-phase switching power supply 24V @ 1.5A



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