



# 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.



# Z109PT2-1



## RTD TO DC CURRENT / VOLTAGE ISOLATOR CONVERTER



### 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)<br>2,5 W (max)   |
| Isolation             | 1.500 Vac 3-ways  |
| Protection Degree     | IP20  |
| LED status indicators | Power on<br>Off scale<br>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<br>PC Software (EASY SETUP)<br>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<br>PT100, PT500, PT1000, Ni100<br>2, 3 or 4 wires measurement, energising current 1 mA, resolution 0.1 °C |

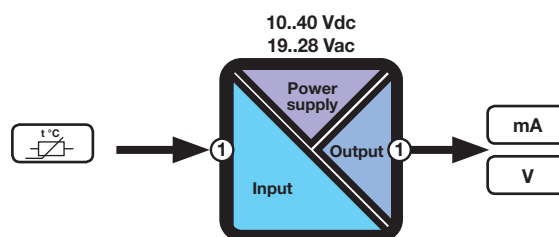
#### OUTPUT DATA

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

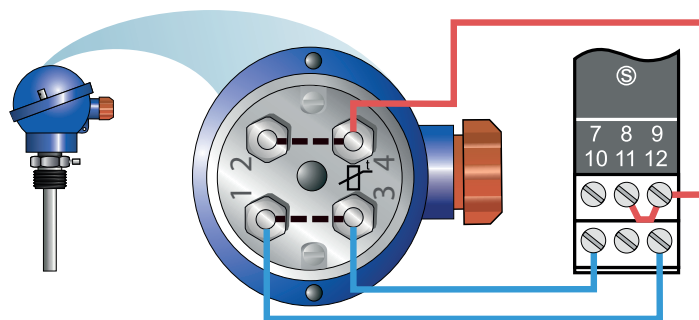
### ORDER CODES

| 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                       |

### SIGNAL / ISOLATION DIAGRAM



### APPLICATION EXAMPLE



### SETTING BY USB INTERFACE

