

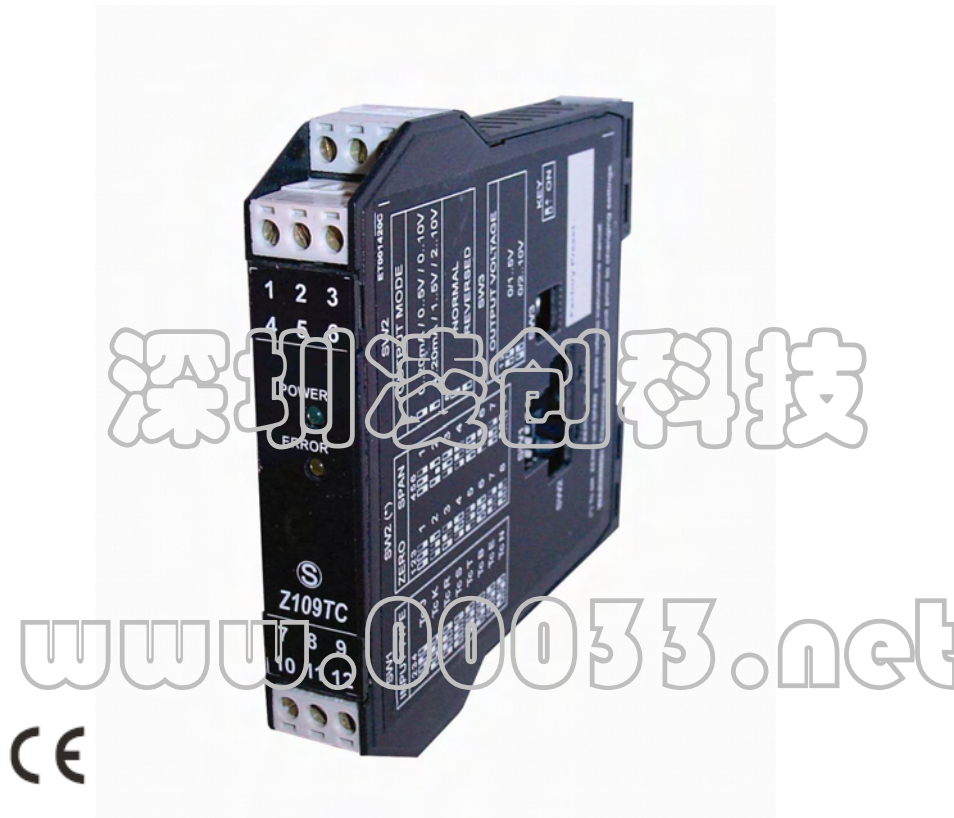
# Z-LINE

## Z109TC

Thermocouple Converter with galvanic isolation

**Z-LINE**

Temperature converters



- ▶ INPUT: Thermocouple type (J,K,R,S,T,B,E,N) with zero and span configurable by dip-switch
- ▶ OUTPUT: N.1 channel current 0..20, 4..20 mA  
voltage 0..5, 1..5, 0..10, 2..10 Vdc (scale inversion also)
- ▶ Galvanic isolation @ 3-way
- ▶ Screw-fit terminals removable
- ▶ Din rail mounting
- ▶ Power supply: 19..40 Vdc, 19..28 Vac

## TECHNICAL DATA

### Z109TC • Thermocouple converter



#### ELECTRICAL

|                         |                                                                                                                                                                                              |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power Supply            | 19..40 Vdc, 19..28 Vac, 9..30 Vdc (opt.)                                                                                                                                                     |
| Power consumption       | 2.5 W, 1.6 W @ 24 Vdc                                                                                                                                                                        |
| Isolation               | Power supply // input // output 1.500 Vac                                                                                                                                                    |
| Protection              | <ul style="list-style-type: none"> <li>• 200 mA continuous current input</li> <li>• 60 V continuous other inputs</li> <li>• 400 W/ms output / supply (against pulse overvoltages)</li> </ul> |
| Status indicators (LED) | <ul style="list-style-type: none"> <li>• Power</li> <li>• Off scale or setting error</li> </ul>                                                                                              |
| Installation category   | II                                                                                                                                                                                           |
| Pollution degree        | 2                                                                                                                                                                                            |
| Protection degree       | IP20                                                                                                                                                                                         |
| Connections             | Plug-in screw clamp terminal blocks, up to 2.5 mm <sup>2</sup>                                                                                                                               |

#### THERMOMECHANICS

|                       |                                            |
|-----------------------|--------------------------------------------|
| Operating temperature | 0..+ 50°C                                  |
| Humidity              | 0..90 % a +40°C (non condensing)           |
| Dimensions            | 17.5 x 100 x 112 mm                        |
| Weight                | 140 g approx                               |
| Enclosure             | V0 self-extinguish glass filled nylon case |
| Mounting              | 35 mm guide DIN 46277                      |

#### ORDER CODES

| Code  | Description                                                               |
|-------|---------------------------------------------------------------------------|
| Model | Z109TC Thermocouple converter, 19..40 Vdc / 19..28 Vac (option 9..30 Vdc) |

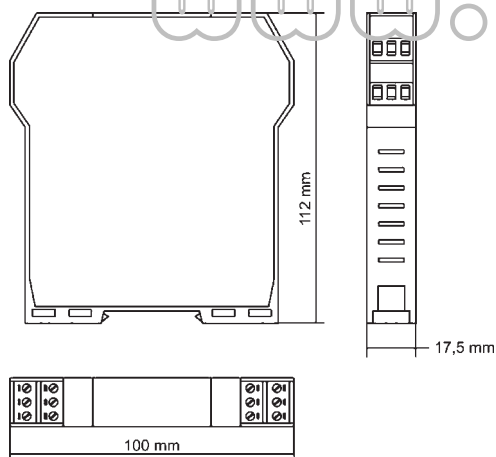
#### I/O SIGNALS AND MEASURE

|             |                                                                                                                                                                                                                                                                                                  |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input       | <ul style="list-style-type: none"> <li>• Thermocouples: J: -200 / +1000°C, K: -200 / +1300 °C, R: 0/+1750°C, S: 0/+1750°C, T-200 / +400 °C, E-200 / +800 °C, B: 0 / +1800°C, N: -200 / +1300 °C</li> <li>• Resolution 5 µV</li> <li>• TC interrupt automatic detection</li> </ul>                |
| Output      | <ul style="list-style-type: none"> <li>• Current 0..20 / 4..20 mA, active or passive connection max load 600 Ω</li> <li>• Voltage 0.5 / 1..5 / 0..10 / 2..10 Vdc, load &gt; 2,5 KΩ</li> <li>• Resolution 0,025% / 0.032%</li> </ul>                                                              |
| Errors      | <ul style="list-style-type: none"> <li>• Precision: 0.2 %d.l. (0.1 %d.l. voltage output)</li> <li>• Linearity: 1°C, 3°C TCB oltre 600°C, 0.1 % voltage output</li> <li>• Thermal drift: 0.02 %/°C (+0.01 %/°C voltage output)</li> <li>• Cold junction compensation: 1.5°C (10-40 °C)</li> </ul> |
| Samples     | 3 sample per second                                                                                                                                                                                                                                                                              |
| Data memory | EEPROM for setup parameters, 10 years retention time                                                                                                                                                                                                                                             |

#### CONFIGURATION AND NORMS

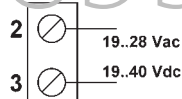
|            |                                                 |
|------------|-------------------------------------------------|
| DIP switch | Span, output mode, TC type, input zero and span |
| CE norms   | EN50081-2, EN50082-2, EN61010-1                 |

## DIMENSIONS

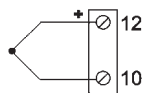


## ELECTRICAL CONNECTIONS

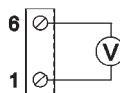
#### Power Supply



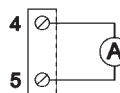
#### Thermocouple INPUT



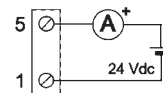
#### Voltage Retrasmitted OUTPUT



#### Current Active OUTPUT



#### Current Passive OUTPUT



## CIRCUIT DIAGRAM

