

## Z SERIES

### Z109TC - THERMOCOUPLE CONVERTER with galvanic separation

Instrument with galvanic separation used for converting a temperature signal from an thermocouple into a standard V-mA signal.

The instrument features galvanic separation at three points: input / output / power supply with 1500 Vac insulation.

Input from thermocouples type J, K, R, S, T, E, B and N, with approx. 40 pre-configured ranges selectable via dip switches on front panel. Possibility to setting the beginning and end of scale values as required by means of the programming buttons with storage of the set values on EEPROM.

The output can be programmed by dip switch for a series of standard signals:

- current 0 - 20 mA and 4 - 20 mA with both active and passive connection with maximum load of 600 ohm
- voltage 0 - 5Vdc, 1 - 5 Vdc, 0 - 10Vdc and 2 - 10Vdc.

The "V0" self-extinguishing glass filled nylon case is the width of 1 DIN module and is designed to fit on 35 mm mounting rail (DIN 46277).



#### TECHNICAL DATA

- Power supply : 19 - 40 Vdc / 19 - 28 Vac
- Power consumption : max 2,5 W
- Galvanic separation supply // input // output : 1500 Vac
- Multi-scale input :

Thermocouple type	Range
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

- Input resolution : resolution 5 uV, automatic TC interruption detection
- Errors :

Input	Calibration	Linearity	Thermal stability	Other
TC J, K, E, T and N	0,2% o.r.	1 °C over 0 °C	0,02%/°C	1% o.s. (3)(2)

TC R and S	0,2% o.r.	1 °C over 250 °C	0,02%/°C	1% o.s. (3)(2)
TC B	0,2% o.r.	3 °C over 600 °C	0,02%/°C	1% o.s. (3)(2)
Cold junction compensation	2 °C from 10 to 40 °C ambient			
Voltage output (4)	0,1% o.r.	0,1%	0,01%/°C	

(2) cable resistance effect 0,5uV/ohm

(3) for possible EMC interferences

(4) to sum to the other errors of selected input

- Sampling frequency : 3 samples / second
- Output impedance:
  - 0 - 600 ohm current loop impedance
  - load for voltage output > 2,5 Kohm
- Output resolution :
  - 0,025% for 0 - 20 mA / 0 - 10 V / 0 - 5 V
  - 0,032% for 4 - 20 mA / 2 - 10 V / 1 - 5 V
- Input protection :
  - current input 200 mA continuous
  - other inputs 60 V continuous
- Output / supply protection : from impulsive overvoltages 400 W/ms
- DATA memory : EEPROM for configuration parameters, 10 years retaining memory
- Operating temp. : 0 / + 50 °C (see also [Installation information](#))
- Humidity : 30 / 90% a +40 °C (non-condensing)
- Dimensions (b x h x d) : 17,5 x 100 x 112 mm
- Weight : approx. 200 g.
- [Other general features](#)

## ORDERING CODES

Code	Power supply
<b>Z109TC</b>	24 Vdc-ac

*For more info please refer to the operating manual*

Characteristics can be subject to change without notice