

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



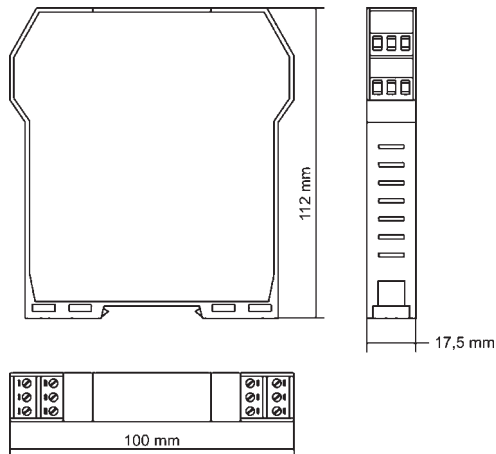
ELECTRICAL

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"> • 200 mA continuous current input • 60 V continuous other inputs • 400 W/ms output / supply (against pulse overvoltages)
Status indicators (LED)	<ul style="list-style-type: none"> • Power • Off scale or setting error
Installation category	II
Pollution degree	2
Protection degree	IP20
Connections	Plug-in screw clamp terminal blocks, up to 2.5 mm ²

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

DIMENSIONS



ORDER CODES

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

I/O SIGNALS AND MEASURE

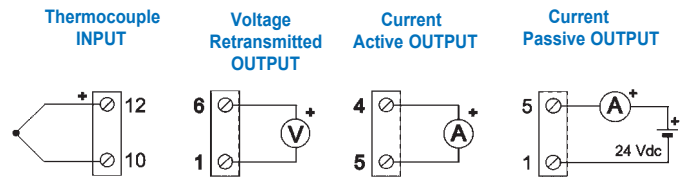
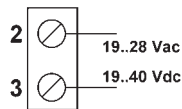
Input	<ul style="list-style-type: none"> • Thermocouples: J: -200 / +1000°C, K: -200 / +1300 °C, R: 0/+1750°C, S: 0/+1750°C, T-200 / +400 °C, E-200 / +800 °C, B: 0 / +1800°C, N: -200 / +1300 °C • Resolution 5 µV • TC interrupt automatic detection
Output	<ul style="list-style-type: none"> • Current 0..20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

ELECTRICAL CONNECTIONS

Power Supply



CIRCUIT DIAGRAM

