

## CZ109R PROGRAMMABLE UNIVERSAL CONVERTER

CZ109R is a versatile microprocessor module for the conversion and conditioning of an analog signal in direct current. It provides an interface between the field sensors and instrumentation with several standard analog input. Free configuration of input and output via dip-switch or PC with a serial cable.



- Single channel
- Galvanic isolation between input and output
- Input and output directly proportional or inverse
- Safety function on the state of input
- Error message with LED
- Low voltage power supply - typical: V24ac / dc
- Rail mounting DIN35mm - DIN46277 width 1 DIN module (17.5 mm)

### DESCRIPTION

- Universal input voltage (DC), current (DC), thermocouples, PT100, potentiometer.
- Sensor power supply 2-wire: 20Vdc stabilized, 20mA max protected against short circuit.
- Measurement and retransmission in voltage and current isolated analog output.
- Selection by dip-switch: type of input, zero and span, output mode (zero elevation, scale inversion), output voltage span (5 or 10 V).
- Front panel indicating power on, off scale or setting error.
- Possibility of programming via PC to zero, span, square root extraction, filter, burn-out etc.
- Insulation 3 points: 1500Vca.

### TECHNICAL SPECIFICATIONS

Power supply:	19-40 Vdc, 19-28 Vac 50-60Hz, max 2.5W; 1.6W at 24Vdc with output 20mA			
Voltage Input:	Bipolar up to 10Vdc in 4 scales: 200mV, 2V, 5V, 10V, input impedance 1Mohm, resolution 0.01%			
Current Input:	Bipolar until 20mA dc, input impedance of 2.5 ohms, 2µA resolution			
Resistance thermometer (RTD) Input:	measures three-wire, the -200 ... + 600 ° C, excitation current 0.56 mA, resolution 0.035 ohm, automatic detection cable interruption or RTD.			
Thermocouple input:	J, K, R, S, T, B, E, N; Resolution 5 mV, automatic detection of TC interruption			
Potentiometer input:	full scale min 500 ohm, max 15 Kohm, resolution 0.01%.			
All inputs:	Sampling Rate: 3 readings per second			
Output:	Impressed current 0 ... 20/4 ... 20mA max load resistance of 600 ohms. Voltage 0...5V / 0...10V / 1...5V / 2...10V, 2500 Ohms min load resistance Resolution 0.025% (0...20mA / 10V / 5V) / 0.032% (4...20mA / 10V / 5V)			
Environmental conditions:	temperature 0...55°C, humidity 30...90% @ 40°C condensing free			
Error% on the range:	Calibration:	Thermal:	Linearity Error:	EMI:<1%
Input voltage / current:	0.2%	0.02%/°C	0.05%	<1%
Thermocouple J, K, E, T, N:	0.2%	0.02%/°C	0.4%<0°C<0.05%	+/-1°C
Thermocouple R,S:	0.2%	0.02%/°C	0.3%<100°C<0.05%	+/- 2°C
Thermocouple B(>360°C):	0.2%	0.02%/°C	0.3%<600°C<0.1%	+/- 4°C
Cold junction compensation:	1.5°C between 10 and 40°C environment			
Potentiometer (ohm):	0.2%	0.02%/°C	0.05%	<1%
Resistance thermometer RTD input:	0.2%	(0.015+0.01 %v.l.)°C/°C	t<0°C 0.5% t>0°C 0.15%	<1%
Voltage Output:	0.1%	0.01%/°C	0.1%	
Input Protection:	excluding current: 60V continuous; 200mA constant current			
Output / power protection:	impulsive overvoltage max 400W / ms			
Data storage:	EEPROM; retention time: 10 years			
CE conformity:	EN50081-2 electromagnetic emission, industrial environment EN50082-2 electromagnetic immunity industrial environment EN61010-1 security; EN60742 requirements			



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