

SPECIFICATIONS

CIO-EXP-RTD16

RTD Signal Conditioning



**MEASUREMENT
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Power Consumption

+5V 380 mA typical, 533 mA maximum

Analog Input Section

Multiplexer type	HI507
Number of channels	16 differential
Input ranges	±10V
Gain options	
First stage	X1, X2, X4, or X8
Second stage	X1, X7, or User defined between X7 and X64
Multiplexer switching time	5 µs typical to 0.01% of 5V step
Channel to channel settling time	50 µs maximum to 0.01% of 5V step
Gain Error	±0.02% of full scale typical, 0.25% of full scale maximum
Gain Non-Linearity	
Gain = X1, X2 or X4	±0.002% of full scale typical, 0.015% of full scale maximum
Gain = X8	±0.002% of full scale typical, 0.025% of full scale maximum
Offset Error	Each channel adjustable to zero
Gain drift	±10 ppm/°C typical
Offset drift	
Gain = X1	±60µV/°C typical
Gain = X2	±40µV/°C typical
Gain = X4	±25µV/°C typical
Gain = X8	±20µV/°C typical
Common Mode Range	±10V
CMRR @ 60Hz	
Gain = X1	94 dB
Gain = X2, X4 or X8	100 dB
Absolute maximum input voltage	±50V
Miscellaneous	79 Hz low pass filter each channel

Analog Output

Amplifier type	OP07
Number of channels	1
Output Range	±10V

Current Excitation

Excitation	Switch selectable for 1 mA on board or custom value determined by resistor selection
Voltage compliance	2V
Accuracy	Trimmable

Digital Section

Digital Type	
Din 0 - 2	HI508 multiplexer
Din 3	1 CMOS load
Number of channels	4 inputs

Input High	2.0 volts minimum, +5.5 volts absolute maximum
Din 0 - 2	2.4V minimum
Din 3	1.7V minimum
Input Low	2.0 volts minimum, +5.5 volts absolute maximum
Din 0 - 2	0.8V maximum
Din 3	1.0V maximum

Environmental

Operating temperature range	0 to 60°C
Storage temperature range	-40 to 100°C
Humidity	0 to 90% non-condensing

Measurement Computing Corporation
16 Commerce Boulevard,
Middleboro, Massachusetts 02346

(508) 946-5100
Fax: (508) 946-9500

E-mail: info@measurementcomputing.com
www.measurementcomputing.com