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Specifications

This appendix lists the specifications for the SCXI-1104/C module. These specifications are typical at 25 °C unless otherwise noted.

Analog Input

Input Characteristics

Number of channels	32 differential
Input signal ranges	30 VAC _{rms} ±42 VAC _{peak} ±60 VDC
Max working voltage (signal + common mode)	Each input should remain within ±42 VAC _{peak} , ±60 VDC of CGND
Input damage level.....	±42 VAC _{peak} or ±60 VDC
Inputs protected.....	CH<0..31>
Common-mode input range	±60 VDC with respect to CGND

Transfer Characteristics

Nonlinearity	0.01% FSR
Offset error	
After calibration	300 µV max
Before calibration	1 mV typ
Gain error (relative to calibration reference)	
After calibration	0.02% of reading max
Before calibration	0.1% of reading typ

Amplifier Characteristics

Input impedance

Normal powered on	1 MΩ
Powered off	900 kΩ
Overload	900 kΩ

Input bias current±0.5 nA

Input offset current±1.0 nA

CMRR

50 to 60 Hz	70 dB
DC.....	70 dB

Output range±10 V

Output impedance.....91 Ω

Dynamic Characteristics

Bandwidth

SCXI-1104.....	2 Hz
SCXI-1104C	10 kHz

Minimum sample interval

0.012% accuracy.....3 μs

0.0061% accuracy.....10 μs

System noise (referenced to input)500 μV_{rms}

Digital Signals

Absolute max voltage input rating.....5.5 V with respect to DGND

Digital input specifications (referenced to DGND)

V_{IH} input logic high voltage2 V min

V_{IL} input logic low voltage.....0.8 V max

I_I input current leakage±1 μA max

Digital output specifications (referenced to DGND)

V_{OH} output logic high voltage3.7 V min at 4 mA max

V_{OL} output logic low voltage0.4 V max at 4 mA max

Filters

Cutoff frequency (-3 dB)

SCXI-1104	2 Hz
SCXI-1104C	10 kHz

NMR (60 Hz) 40 dB (SCXI-1104)

Step response (either gain)

Accuracy	SCXI-1104	SCXI-1104C
To 0.1%	1 s	200 µs
To 0.01%	10 s	1 ms

Stability

Recommended warm-up time 20 min

Offset temperature coefficient 50 µV/°C

Gain temperature coefficient..... 20 ppm/°C



Note The offset and gain temperature coefficients apply outside the range of >35 °C and <15 °C.

Physical

Dimensions..... 11.5 by 27.3 cm
(4.54 by 10.75 in.)

I/O connectors 50-pin male ribbon cable
rear connector
96-pin male DIN C front
connector

Environment

Operating temperature..... 0 to 50 °C

Storage temperature -55 to 150 °C

Relative humidity..... 5% to 90% noncondensing

Power Requirements

5 V supply.....	15 mA max
±15 V supply (regulated from ±24 V supply)	150 mA max