

Small Instrumentation Modules

SIM984 — Isolation amplifier

- Isolation voltage up to ± 1000 V
- Gain of x1, x10, or x100
- 1 MHz bandwidth
- 15 nV/ $\sqrt{\text{Hz}}$ input noise
- 1 M Ω input impedance



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SIM984 Isolation Amplifier

The SIM984 is a wide bandwidth, low noise isolation amplifier. It has a gain of up to x100 and a bandwidth up to 1 MHz. The input stage is floating and is optically coupled to the output stage which is chassis grounded. The input signal can float up to 1000 V above or below ground. DC output offset can be adjusted from the front panel with a small screwdriver. In addition to measuring isolated signals, the SIM984 can also be used to break ground loops and reduce common-mode interference.

Specifications

Isolation voltage	± 1000 V (max)
IMRR	150 dB (DC)
Max. input	± 10 V
Input impedance	1 M Ω
Input noise (typ)	15 nV/ $\sqrt{\text{Hz}}$ at 1 kHz
Gain	x1, x10, x100 ($\pm 0.5\%$)
Frequency range	DC to 100 Hz (Low BW) DC to 10 kHz Mediate BW) DC to 1 MHz (High BW)

Output	± 10 V, ± 20 mA (max), 50 Ω
Output offset	± 0.1 V, adjustable
Output offset drift	1 mV/ $^{\circ}\text{C}$ (typ)
Output noise	80 μVrms (100 Hz BW) 200 μVrms (10 kHz BW) 1.5 mVrms (1 MHz BW)
Interface	Serial via SIM interface
Connectors	Banana jacks (2 front-panel) BNC (2 front-panel, 1 rear-panel) DB15 (male) SIM interface
Power	Powered by SIM900 Mainframe, or by user-provided DC power supply (± 15 V, +5 V, and +24V)
Dimensions	1.5" \times 3.6" \times 7.0" (WHD)
Weight	1.5 lbs.
Warranty	One year parts and labor on defects

Ordering Information

SIM984 Isolation amplifier