



Small Instrumentation Modules

SIM983 — Scaling amplifier

- Adjustable gain and offset
- 3½-digit resolution
- 1 MHz bandwidth
- Low-noise input
- ± 10 V operating range

• SIM983



SIM983 Scaling Amplifier

The SIM983 Scaling Amplifier provides fine adjustable gain and offset control for analog signals. Both gain and offset are set with 3½ digits of resolution, and the signal path has more than 1 MHz of bandwidth. Its low noise, high gain, and high slew rate make the SIM983 a very convenient tool for sensitive analog signal conditioning.

The digital control circuitry in the SIM983 is designed with SRS's special clock-stopping architecture in which the microcontroller is turned on only when switch settings are being changed. This guarantees that no digital noise contaminates low-level analog signals.

Specifications

Impedance	1 M Ω
Bandwidth	DC to 1 MHz
Input noise (typ.)	45 nV/ $\sqrt{\text{Hz}}$ @ 1 kHz
Offset	± 10 V (3½-digit resolution)
Max. input	± 10 V

Gain	± 0.01 to ± 19.99
Max. output	± 10 V
THD	0.003 % (90 dB) @ 1 kHz
Slew rate	70 V/ μs
Operating temperature	0 °C to 40 °C, non-condensing
Interface	Serial via SIM interface
Connectors	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 and +5 V)
Dimensions	1.5" \times 3.6" \times 7.0" (WHD)
Weight	1.5 lbs.
Warranty	One year parts and labor on defects in materials and workmanship

Ordering Information

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