

# Small Instrumentation Modules

## SIM983 — Scaling amplifier

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



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

Gain	$\pm 0.01$ to $\pm 19.99$
Max. output	$\pm 10$ V
THD	0.003% (90 dB) @ 1 kHz
Slew rate	70 V/ $\mu\text{s}$
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 ( $\pm 15$ 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

SIM983      Scaling amplifier