

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 MΩ |
| Bandwidth | DC to 1 MHz |
| Input noise (typ.) | 45 nV/√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" × 3.6" × 7.0" (WHD) |
| Weight | 1.5 lbs. |
| Warranty | One year parts and labor on defects in materials and workmanship |

Ordering Information

SIM983 Scaling amplifier