

Small Instrumentation Modules

SIM980 — Analog summing amplifier (4-channel)

- Four summing inputs
- ± 10 V operating range
- 1 MHz bandwidth
- Low crosstalk (-80 dB)
- < 100 μ V input offset
- High slew rate



SIM980 Summing Amplifier

The SIM980 Summing Amplifier has four input channels that can be added or subtracted from each other. The *output* noise is less than $60 \text{ nV}/\sqrt{\text{Hz}}$, and crosstalk between channels is less than -80 dB. With a bandwidth of 1 MHz, a slew rate of $40 \text{ V}/\mu\text{s}$, and input offsets that are trimmed to $\pm 100 \mu\text{V}$, the SIM980 is extremely useful in many analog applications.

The digital control circuitry in the SIM980 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

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|------------------|--|
| Number of inputs | 4 |
| Function | Inverting, non-inverting or off |
| Gain | $1\times$ |
| Impedance | $1 \text{ M}\Omega$ |
| Bandwidth | DC to 1 MHz |
| Output noise | $60 \text{ nV}/\sqrt{\text{Hz}}$ @ 1 kHz |

| | |
|-----------------------|--|
| Crosstalk | -80 dB @ 1 kHz |
| Offset | $\pm 100 \mu\text{V}$ (after 5 min. warm up) |
| Max. input & output | $\pm 10 \text{ V}$ |
| Input slew rate | $40 \text{ V}/\mu\text{s}$ |
| THD | 0.01% (80 dB) @ 1 kHz |
| Output slew rate | $75 \text{ V}/\mu\text{s}$ |
| Operating temperature | 0°C to 40°C , non-condensing |
| Interface | Serial via SIM interface |
| Connectors | BNC (5 front-panel, 1 rear-panel) DB15 (male) SIM interface |
| Power (max.) | Powered by SIM900 Mainframe, or by user-provided DC power supply ($\pm 15 \text{ V}$ and $+5 \text{ V}$) |
| Dimensions, weight | $1.5'' \times 3.6'' \times 7.0''$ (WHD), 1.5 lbs. |
| Warranty | One year parts and labor on defects in materials and workmanship |

Ordering Information

SIM980 Summing amplifier