

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 ... \$1295 (U.S. list)



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 ± 100 μV , 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

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	± 100 μV (after 5 min. warm up)
Max. input & output	± 10 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 (± 15 V and $+5$ 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