

Small Instrumentation Modules

SIM980 — Analog summing amplifier (4-channel)

- **Four summing inputs**
- **± 10 V operating range**
- **1 MHz bandwidth**
- **Low crosstalk (-80 dB)**
- **$< 100 \mu\text{V}$ 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

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.)	$+5 \text{ VDC}$ (100 mA), $\pm 15 \text{ VDC}$ (300 mA)
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

Distribution in the UK & Ireland



**Characterisation,
Measurement &
Analysis**

Lambda Photometrics Limited
Lambda House Batford Mill
Harpenden Herts AL5 5BZ
United Kingdom
E: info@lambdaphoto.co.uk
W: www.lambdaphoto.co.uk
T: +44 (0)1582 764334
F: +44 (0)1582 712084