Small Instrumentation Modules

SIM928 — Rechargeable isolated voltage source

- ***±20 V isolated voltage source***
- ***Ultra-low noise output***
- ***Two switchable, recharging batteries for continuous operation***
- ***Battery lifetime: 1000 charge cycles***
- ***Output floats to ±40 V***
- ***Short-circuit protected***

- ***SIM928 ... $1095*** ***(U.S. list)***

SIM928 Isolated Voltage Source

The SIM928 Isolated Voltage Source is ideal for applications where ultra-clean DC voltage is required. Voltage can be set between ±20 VDC with millivolt resolution, and the source can drive up to ±10 mA. The output circuit is optically isolated from all earth-referenced charging circuitry, providing maximum flexibility and noise immunity. The system can float to ±40 V, and the output is short-circuit protected.

At the heart of the SIM928 are two independent nickel-metal-hydride rechargeable batteries, each providing up to 12 hours of operation under full-load conditions. When a battery is nearly depleted, the SIM928 automatically switches in a second battery. The switchover between batteries is virtually glitch-free, giving you uninterrupted power around the clock. The depleted battery is automatically charged to capacity in about 5 hours. The batteries are guaranteed for 1000 charging cycles, and SRS offers replacement battery sets.

In applications that occur over long time intervals, starting with a fully charged battery may be desirable. A battery charge override feature allows you to manually switch in the fully charged battery (assuming it is in "ready" state) at any time.

Banana binding posts are provided for the + terminal, – terminal and chassis ground.

Output

Output range	±20 V, 1 mV resolution
Max. output current	±10 mA
Floating output	±40 V (common mode to ground)
Noise	10 µVrms (1 kHz bandwidth)
Current limit	15 mA
Short-circuit duration	indefinite

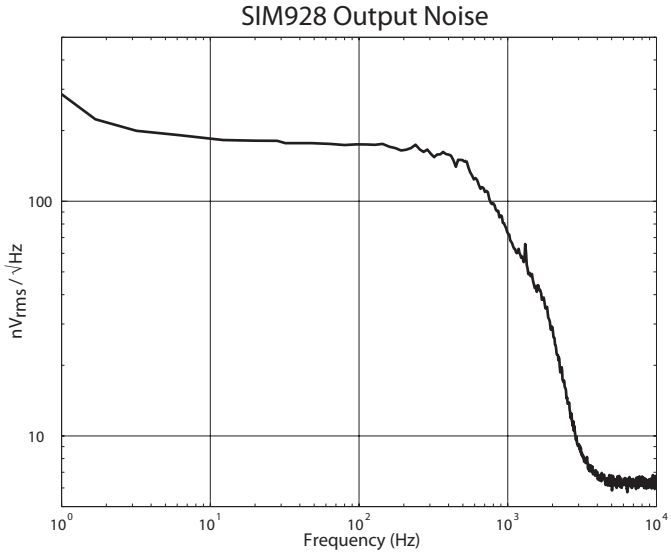
Batteries

Number of batteries	2 (1 operating, 1 charging/standby)
Type	Nickel metal hydride
Charge time	5 hrs.
Discharge time	12 hrs. (10 mA load)
Lifetime	>1000 charge cycles, 2 yr. shelf life
Battery switching	Automatically switches batteries when active battery is fully discharged.
Switchover glitch	<1 mV for <1 ms
Battery charge override	Allows manual switching of batteries. Triggered when front-panel button is held for 5 seconds or more. Only armed when standby battery is in ready state.

General

Operating temperature	0 °C to 40 °C, non-condensing
Interface	Serial via SIM interface
Connectors	Banana binding posts (+ terminal, – terminal, and chassis ground) DB15 (male) SIM interface
Power	Powered by SIM900 Mainframe, or by user-provided DC power supply (+24 V, –15 V and +5 V)
Dimensions	1.5" × 3.6" × 7.0" (WHD)
Weight	3 lbs.
Warranty	One year parts and labor on defects in materials and workmanship

SIM928 rear panel



Ordering Information

SIM928	Isolated voltage source	$1095
O928RBA	Replacement battery assembly	$250