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Data Sheet

August 13, 2026

STANFORD RESEARCH SYSTEMS

Stanford Research PS310 Stanford Research PS310 High Voltage Power Supply, $\hat{A}\pm 12$ V to $\hat{A}\pm 1.25$ kV, 20 mA

Stanford Research Systems PS310 High Voltage Power Supply The SRS PS310 is the 1.25 kV dual-polarity member of the PS300 Series programmable high-voltage supplies. Output is 12 V to ± 1.25 kV at 20 mA (25 W class). Line regulation is 0.001 % for a ± 10 % line change; load regulation is 0.005 % for 100 % load change. Arc and short-circuit protection, programmable voltage/current limits, and a current trip (10 μ s response) protect loads. GPIB and analog 0 to +10 V monitor/set interfaces are standard on the series. The SRS PS310 is the 1.25 kV dual-polarity member of the PS300 Series programmable high-voltage supplies. Output is 12 V to ± 1.25 kV at 20 mA (25 W class). Line regulation is 0.001 % for a ± 10 % line change; load regulation is 0.005 % for 100 % load change. Arc and short-circuit protection, programmable voltage/current limits, and a current trip (10 μ s response) protect loads. GPIB and analog 0 to +10 V monitor/set interfaces are standard on the series. Photomultiplier and MCP bias; electrostatic optics; detector bias of either polarity; automated HV sequencing in nuclear and AMO labs.



MODEL

Stanford Research Systems PS310

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

PS310

LISTING

<https://aumictechlabs.com/products/ps310-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Stanford Research Systems PS310 is a microprocessor-controlled switching high-voltage DC power supply engineered for laboratory and test applications requiring stable, precise output across an extended voltage range. Delivering 25 W of output power, the unit spans ± 12 V to ± 1.25 kV with dual polarity capability and supports both constant voltage and constant current operation modes.

Technical Specifications

Output Performance

Voltage range: ± 12 V to ± 1.25 kV
Maximum output current: 20 mA
Output power: 25 W
Voltage regulation: 0.001% line regulation ($\pm 10\%$ line change), 0.04% load regulation (100% load change)
Voltage set accuracy: $\pm 0.01\%$ + 0.05% of full scale (typical)
Voltage display accuracy: ± 1 V typical, ± 2 V maximum
Voltage resolution: 1 V
Output ripple: $< 0.01\%$ of full scale (300 Hz to 300 kHz)
Current limit range: 0 to 105% of full scale
Current trip range: 10 μ A to 105% of full scale
Current set accuracy: 0.5% of full scale
Stability: 0.01% per hour, $< 0.03\%$ per 8 hours
Temperature drift: 50 ppm/ $^{\circ}$ C (10 to 40 $^{\circ}$ C)

Protection & Response

Arc and short circuit protection with programmable voltage limit, current limit, and current trip functions. Trip response time < 10 ms. Load recovery time 12 ms for 40% step change. Discharge time < 6 s to $< 1\%$ of full-scale voltage with no load.

Input Power

100, 120/220, or 240 VAC; 50 or 60 Hz operation.

Key Features

- Dual-polarity output with independent voltage and current controls
- Front-panel LED displays for voltage and current monitoring
- Programmable via 0–10 VDC analog input (rear panel)
- Dual analog outputs for voltage and current monitoring (1 Ω output impedance, 10 mA drive capability)
- Optional GPIB interface (Option 01)

Typical Applications

High-voltage characterization, detector bias, vacuum tube testing, and applications requiring precise current limiting with arc protection.

Compatibility & Integration

Analog input and output provisions enable integration with automated test systems. GPIB option supports remote command and monitoring in networked laboratory environments.

Features & description

From manufacturer datasheet

Features

- Dual polarity ± 12 V to ± 1.25 kV, 20 mA • 1 V set and display resolution • Output ripple less than 0.0015 % of full scale rms typical • 0 to +10 V analog monitor and external voltage set • SHV male output (Kings 1704-1) • 8.1 in x 3.5 in x 16 in chassis, 8 lbs, 50 W line power

PS310 Characteristics / Specifications

PARAMETER	VALUE
Model	PS310
Manufacturer	Stanford Research Systems
Instrument Type	High Voltage Power Supply
Series	PS300
Alias	PS310; SRS PS310
Output Voltage Range	12 V to +/-1.25 kV
Maximum Output Current	20 mA
Polarity	dual polarity
Power Class	25 W
Voltage Set Accuracy	0.01 % + 0.05 % of full scale typical
Voltage Display Accuracy	Vset accuracy +/-1 V typical (+/-2 V max)
Voltage Resolution	1 V (set and display)
Voltage Resettability	1 V
Voltage Limit Range	0 to 100 % of full scale
Line Regulation	0.001 % for +/-10 % line change
Load Regulation	0.005 % for 100 % load change typical
Output Ripple Typical	less than 0.0015 % of full scale Vrms
Output Ripple Maximum	less than 0.002 % of full scale Vrms
Current Limit and Trip Range	0 to 105 % of full scale
Trip Current Minimum	10 uA
Trip Response Time	less than 10 us
Current Set Accuracy	0.01 % + 0.05 % of full scale
Current Resolution	10 uA
Current Display Accuracy	+/-10 uA typical, +/-20 uA max
Stability Per Hour	0.01 % per hour

PARAMETER	VALUE
Stability Per Eight Hours	less than 0.03 % per 8 hours
Temperature Drift	50 ppm/C, 0 to 50 C typical
Recovery Time	12 ms for 40 % step change in load current typical
Discharge Time	less than 6 s to less than 1 % of full-scale voltage with no load typical
Monitor Output Scale	0 to +10 V for 0 to full-scale output regardless of polarity
Monitor Current Rating	10 mA max
Monitor Output Impedance	less than 1 ohm
Monitor Accuracy	0.2 % of full scale
Monitor Update Rate	8 Hz
External Set Input Scale	0 to +10 V for 0 to full-scale output
External Set Input Impedance	1 MOhm
External Set Accuracy	0.2 % of full scale
External Set Update Rate	16 Hz
Output Slew Rate	less than 0.3 s for 0 to full scale under full load
HV Connector	SHV male, Kings type 1704-1
Mating Connector	SHV female, Kings type 1705-14
Dimensions	8.1 in x 3.5 in x 16 in (WHD)
Weight	8 lbs
Line Power	50 W, 100/120/220/240 VAC, 50/60 Hz Notes Specs from SRS PS300 catalog, PS300 product page, and PS300 series manual. PS310 is the 1.25 kV/20 mA dual-polarity model. Confirm polarity switch setting and SHV cable. Warm-up of one hour is specified for performance on related 10 kV models; apply the same discipline here.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Current Resolution	10 uA
Current Display Accuracy	+/-10 uA typical, +/-20 uA max
Stability Per Hour	0.01 % per hour
Stability Per Eight Hours	less than 0.03 % per 8 hours

PARAMETER	VALUE
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Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.