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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 59501B D/A CONVERTER

HP 59501B Isolated DAC Power Supply Programmer The HP 59501B is an isolated digital-to-analog converter that programs analog-controlled HP power supplies from HP-IB, and can also serve as a low-power DC source. OEM 59501B literature lists unipolar 0 to 9.99 V (low range 0 to 0.999 V) or bipolar minus 10 to plus 9.98 V (low range minus 1 to plus 0.998 V), rear-panel unipolar/bipolar switch, high/low range for 10:1 resolution, and 600 Vdc isolation between HP-IB data lines and output terminals. HP-IB analog programming of supplies without digital control, and isolated low-power DC stimulus. The HP 59501B is an isolated digital-to-analog converter that programs analog-controlled HP power supplies from HP-IB, and can also serve as a low-power DC source. OEM 59501B literature lists unipolar 0 to 9.99 V (low range 0 to 0.999 V) or bipolar minus 10 to plus 9.98 V (low range minus 1 to plus 0.998 V), rear-panel unipolar/bipolar switch, high/low range for 10:1 resolution, and 600 Vdc isolation between HP-IB data lines and output terminals. HP-IB analog programming of supplies without digital control, and isolated low-power DC stimulus.

**MODEL****Agilent / Keysight
59501B****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****59501B****LISTING**<https://aumictechlabs.com/products/59501b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight 59501B is an isolated digital-to-analog converter and power supply programmer that bridges HP-IB control systems to analog-capable power supplies lacking native bus interface. It enables remote, digitally controlled voltage and current programming of

compatible instruments and functions as a standalone low-level DC signal source.

Technical Specifications

Output Voltage Ranges Unipolar High: 0 to 9.99 V (10 mV resolution) Unipolar Low: 0 to 9.999 V (1 mV resolution) Bipolar High: -10 to +9.98 V (20 mV resolution) Bipolar Low: -1 to +0.998 V (2 mV resolution)

DC Output Current: 10 mA maximum

Accuracy (at 23°C ±5°C) Unipolar High: 0.04% + 0.5 mV Unipolar Low: 0.04% + 1 mV Bipolar High: 0.04% + 1 mV Bipolar Low: 0.04% + 2 mV

Temperature Stability Unipolar High: 0.01%/°C + 0.5 mV/°C Unipolar Low: 0.14%/°C + 0.1 mV/°C Bipolar High: 0.013%/°C + 0.5 mV/°C Bipolar Low: 0.01%/°C + 0.1 mV/°C

Performance Parameters D/A Conversion Time: 250 µs Output Ripple/Noise: 2 mV rms / 10 mV p-p Zero Adjust Range: ±250 mV Full Scale Adjust: ±5% Isolation: 600 Vdc (HP-IB to output) Input Power: 10 VA, 48-63 Hz (100/120/220/240 Vac selectable, -13% to +6%)

Key Features Selectable unipolar and bipolar output modes via rear-panel switch HP-IB command interface for system integration Isolated analog output for safe power supply programming Precision zero and full-scale calibration adjustments Low output impedance supports 10 mA sourcing capability

Typical Applications Remote voltage and current programming of analog-controlled power supplies in automated test systems. Low-level precision DC signal generation for instrumentation control.

Compatibility & Integration Designed for HP power supplies with analog control inputs but no built-in HP-IB interface. Supports current limit programming when paired with supplies using internal HP-IB options for voltage control.

59501B Characteristics / Specifications

PARAMETER	VALUE
Model	59501B
Instrument Type	Isolated DAC / power supply programmer
Unipolar High Range	0 to 9.99 V
Unipolar Low Range	0 to 0.999 V
Bipolar High Range	minus 10 to plus 9.98 V
Bipolar Low Range	minus 1 to plus 0.998 V
Unipolar Resolution High	10 mV
Unipolar Resolution Low	1 mV
Bipolar Resolution High	20 mV
Bipolar Resolution Low	2 mV
Unipolar Accuracy High	0.1 percent plus 5 mV at 23 C plus or minus 5 C
Unipolar Accuracy Low	0.1 percent plus 1 mV at 23 C plus or minus 5 C
Bipolar Accuracy High	0.1 percent plus 10 mV at 23 C plus or minus 5 C
Ripple	10 mV p-p
Hpib Isolation	600 Vdc between HP-IB data lines and output terminals
Line Voltage	100, 120, 220, or 240 Vac (minus 13 percent, plus 6 percent)
Line Frequency	47 to 63 Hz
Input Power	10 VA
Dimensions	212.9 mmWx 101.6 mmHx 294.6 mm D (8.38 × 4 × 11.6 in)
Net Mass	1.82 kg (4 lb)
Shipping Mass	2.27 kg (5 lb)
Remote Interface	HP-IB
Output Mode Select	rear-panel unipolar/bipolar switch
Range Control	programmable high/low range
Manufacturer	HP Agilent Keysight

PARAMETER

VALUE

Form Factor

half-rack DAC programmer

Use Case

analog programming of DC supplies

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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Use Case

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Notes

From HP 59501B isolated DAC / power-supply programmer specifications. When used as a programmer, accuracy is stated versus the supply full-scale and programmed value on that same data sheet.

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.