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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight N2780B

HP Agilent Keysight N2780B AC/DC Current Probe 2 MHz 500 Arms The Keysight N2780B is an AC/DC current probe using hybrid Hall-effect and AC current transformer technology for clip-on measurements without breaking the circuit. OEM N2780B Series data sheet 5989-6432EN rates bandwidth DC to 2 MHz and continuous current 500 Arms with external N2779A power supply. Motor drive steady-state and transient current, switching power supplies, inverters, controllers, sensors, and high-current amplifiers on 1 MOhm BNC oscilloscopes. The Keysight N2780B is an AC/DC current probe using hybrid Hall-effect and AC current transformer technology for clip-on measurements without breaking the circuit. OEM N2780B Series data sheet 5989-6432EN rates bandwidth DC to 2 MHz and continuous current 500 Arms with external N2779A power supply. Motor drive steady-state and transient current, switching power supplies, inverters, controllers, sensors, and high-current amplifiers on 1 MOhm BNC oscilloscopes. Demagnetize button for residual core magnetism



MODEL	CALIBRATION
Agilent / Keysight N2780B	Available on request
CONDITION	STATUS
Used	In stock
RFQ / SKU	LISTING
N2780B	https://aumictechlabs.com/products/n2780b-2/

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight N2780B is an AC/DC current probe that combines Hall effect sensing with AC current transformer technology to deliver simultaneous DC and AC current measurements from 20 mA to 500 Arms continuous operation. Built for power electronics characterization, the probe

operates across a DC to 2 MHz bandwidth with $\pm 1.0\%$ amplitude accuracy (typical) and can handle peak currents up to 700 A and input voltages to 600 V CAT2. Its hybrid architecture eliminates the measurement dead zones inherent in transformer-only designs, capture the complete current signature in motor drives, power supplies, inverters, and switching controller circuits.

Technical Specifications

Bandwidth: DC to 2 MHz

Current Range: 20 mA minimum; 500 Arms continuous (RMS); 700 A peak

Amplitude Accuracy: $\pm 1.0\%$ of reading (typical), ± 500 mA offset (typical)

Noise: 2.5 mArms (typical)

Maximum Input Voltage: 600 V CAT2

Maximum Conductor Diameter: 20 mm

Output Connector: High impedance BNC

Power Requirement: 12 VDC external supply (Keysight N2779A recommended; supports up to three N278xB probes per supply unit)

Power Consumption: 7.2 VA maximum (at rated current)

Key Features

Hybrid Hall effect and current transformer technology for DC and AC measurement

Wide dynamic range with flat frequency response across the measurement band

Low insertion loss and high signal-to-noise ratio

Demagnetize button to eliminate residual core magnetism

Zero adjustment dial for offset and temperature drift correction

Typical Applications

Switching power supply design and validation

Motor drive and controller characterization

Inverter testing and efficiency analysis

Disk drive, LCD display, and electronic ballast current profiling

Current amplifier load testing

Compatibility & Integration

The N2780B interfaces with Keysight oscilloscopes via high-impedance BNC input. Compatible with 1000, 2000 X-Series, 3000 X-Series, 4000 X-Series, 5000, 6000, 7000, 8000, and 9000 Series instruments. Infiniium 90000A Series requires Keysight E2697A adapter; 90000 X-Series requires N5449A adapter. Set oscilloscope input impedance to 1 M Ω for accurate measurements.

N2780B Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	AC/DC current probe
Bandwidth	DC to 2 MHz (-3 dB)
Rise Time	175 ns or less
Maximum Continuous Current Rms	500 A
Maximum Peak Current Non Continuous	700 A peak
Lowest Measurable Current	20 mA (at plus or minus 3 percent accuracy at DC, scope 1 mV/div high-resolution mode)
Amplitude Accuracy	plus or minus 1.0 percent of reading plus or minus 500 mA (DC and 45 to 66 Hz, rated current)
Temperature Coefficient Sensitivity	plus or minus 2 percent or less (within rated temperature range per OEM table)
Output Sensitivity	0.01 V/A (100:1)
Noise	2.5 mArms or less (with 20 MHz band measuring instrument, N2782B/N2783B class table lists 2.5 mArms; N2780B series user guide lists noise for family)
Rated Supply Voltage	DC plus or minus 12 V plus or minus 0.5 V
Power Supply Accessory	N2779A three channel supply
Scope Interface	Direct BNC to 1 MOhm oscilloscope input
Compatible Scope Impedance	1 MOhm BNC required
Adapter HighZInfinium 80000 900	E2697A 50 Ohm to 1 MOhm
Adapter High Z 90000 X	N5449A high impedance probe adapter
Operating Temperature	0 C to 40 C
Operating Humidity	80 percent RH or less (no condensation)
Series Family	Keysight N2780B Series
Literature	Keysight 5989-6432EN N2780B Series AC/DC Current Probes
Demagnetize Function	Built-in DEMAG
Zero Adjustment	Offset and temperature drift correction control

PARAMETER	VALUE
Humidity	80 percent RH or less (no condensation)

General Specifications & Supplementary Characteristics

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Literature	Keysight 5989-6432EN N2780B Series AC/DC Current Probes
Demagnetize Function	Built-in DEMAG
Zero Adjustment	Offset and temperature drift correction control Notes Bandwidth, rise time, continuous and peak current, lowest measurable current, amplitude accuracy, temperature coefficient, sensitivity, supply, and compatibility from Keysight N2780B Series data sheet 5989-6432EN and N2780/1/2/3B Current Probes User Guide. Confirm faceplate and calibration certificate for unit-specific limits.

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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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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<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
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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.