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Data Sheet

August 13, 2026

KEITHLEY

Keithley 2290-10 10KV Power Supply

Keithley 2290-10 10 kV High Voltage Power Supply The Keithley 2290-10 is a single-output high-voltage DC supply for plus 100 V to plus 10000 V at up to 1.000 mA (10 W). Voltage set accuracy is plus/minus 0.06 percent of full scale with 1 V set and display resolution. Current resolution is 1 uA. Output ripple is 0.01 percent of full scale VRMS from 300 Hz to 300 kHz (under 1 VRMS maximum), supporting picoamp-class leakage measurements with a protected SMU. Control is from the front-panel keypad, analog 0 to 10 V programming, RS-232, or IEEE-488. A safety interlock gates the high-voltage output. Optional 2290-PM-200 clamps low-voltage instruments if a DUT breaks down. The Keithley 2290-10 is a single-output high-voltage DC supply for plus 100 V to plus 10000 V at up to 1.000 mA (10 W). Voltage set accuracy is plus/minus 0.06 percent of full scale with 1 V set and display resolution. Current resolution is 1 uA. Output ripple is 0.01 percent of full scale VRMS from 300 Hz to 300 kHz (under 1 VRMS maximum), supporting picoamp-class leakage measurements with a protected SMU. Control is from the front-panel keypad, analog 0 to 10 V programming, RS-232, or IEEE-488. A safety interlock gates the high-voltage output. Optional 2290-PM-200 clamps low-voltage instruments if a DUT breaks down. High resistivity and leakage current measurements



MODEL

Keithley 2290-10

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

2290-10

LISTING

<https://aumictechlabs.com/products/2290-10-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keithley 2290-10 is a high-voltage DC power supply delivering up to 10 kV with maximum output current of 1 mA. Engineered for precise high-voltage sourcing and monitoring, it serves applications including device breakdown testing, insulation testing, high-voltage resistivity measurements, and high-energy physics research. The unit combines low output noise with selectable filters to enable accurate low-level current measurements. Built-in interlock controls disable high-voltage output when safety interlocks are disengaged, and an optional protection module safeguards connected low-voltage instrumentation from voltage spikes during device breakdown events.

Technical Specifications

Output Characteristics

Voltage Range: +100 V DC to +10,000 V DC (1 V resolution) Maximum Output Current: 1.000 mA DC (1 μ A resolution) Output Ripple: 0.01% of full scale, VRMS (300 Hz–300 kHz); <1 VRMS maximum With selectable filters: 1.0 mVRMS @ 1 kV, 2.0 mVRMS @ 3 kV, 3.0 mVRMS @ 5 kV

Accuracy & Regulation

Voltage Set Accuracy: $\pm 0.06\%$ of full scale or $\pm(0.01\% \text{ of setting} + 2.5 \text{ V})$ Voltage Display Accuracy: $\pm 1 \text{ V}$ typical; $\pm 2 \text{ V}$ maximum Current Set Accuracy: 0.5% of full scale or $0.01\% \pm(0.01\% + 2.5 \mu\text{A})$ Current Display Accuracy: $\pm 1 \mu\text{A}$ typical; $\pm 2 \mu\text{A}$ maximum

Line Regulation: 0.001% for $\pm 10\%$ line voltage change **Load Regulation:** 0.04% for 100% load change (typical) **Response & Stability**

Rise Time (full load): <6 seconds to within 1 V of final value Settling Time (full load): <4 seconds to within 1 V of final value Discharge Time (full load): <1 second to under 10 V Recovery Time: 120 ms for 40% load step change (typical) Trip Response Time: <10 ms

Voltage Stability: $\pm 0.01\%$ per hour; <0.03% per eight hours **Temperature Drift:** 50 ppm/ $^{\circ}\text{C}$ (0° to 40°C , typical) **Output Stored Charge:** <20 μC maximum

Current Limit Range: 0 to 105% of full scale **Trip Current Range:** 10 μA to 105% of full scale

Key Features

Selectable output filters for noise reduction in sensitive measurements Safety interlock system with optional protection module IEEE-488 (GPIB) and RS-232 serial control Analog control voltage input for external modulation Power Rating: 75 W / 10 W

Typical Applications

High-voltage device breakdown testing Component and insulation testing High-voltage resistivity measurements High-energy physics research

Compatibility & Integration

Programming interfaces include IEEE-488 (GPIB) and RS-232, with analog control voltage input for system integration.

2290 Characteristics / Specifications

PARAMETER	VALUE
Model	2290-10
Manufacturer	Keithley Instruments (Tektronix)
Instrument Type	High voltage DC power supply
Alias	2290 10; Keithley 2290 10 kV
Output Voltage	plus 100 V to plus 10000 V DC (accuracy below 100 V not specified)
Output Current	1.000 mA DC maximum
Maximum Power	10 W
Voltage Set Accuracy	plus/minus 0.06 percent of full scale
Voltage Display Accuracy	set accuracy plus/minus 1 V typical (plus/minus 2 V maximum)
Voltage Resolution	1 V set and display
Voltage Limit Range	0 to 100 percent of full scale
Line Regulation	0.001 percent for plus/minus 10 percent line change (above 100 V)
Load Regulation	0.04 percent for 100 percent load change typical (above 100 V)
Output Ripple	0.01 percent of full scale VRMS (300 Hz to 300 kHz)
Ripple Maximum	less than 1 VRMS
Current Set Accuracy	0.5 percent of full scale
Current Resolution	1 uA
Current Display Accuracy	plus/minus 1 uA typical (plus/minus 2 uA maximum)
Current Limit Range	0 to 105 percent of full scale
Trip Current Range	10 uA to 105 percent of full scale (excluding stored output charge)
Output Stored Charge	less than 20 uC maximum
Trip Response Time	less than 10 ms
Rise Time Full Load	less than 6 s to within 1 V of final value
Discharge Time Full Load	1 s to under 10 V
Discharge Time No Load	less than 6 s to less than 1 percent of full scale typical

PARAMETER	VALUE
Settling Time	less than 4 s to within 1 V of final value
Recovery Time	120 ms for 40 percent load step typical
Stability	plus/minus 0.01 percent per hour; less than 0.03 percent per 8 hours
Temperature Drift	50 ppm per C, 0 to 40 C typical
Monitor Output Scale	0 to plus 10 V for 0 V to full scale
Monitor Current Rating	10 mA maximum
Monitor Output Impedance	100 ohm
Monitor Accuracy	plus/minus 0.2 percent of full scale with 1 M ohm load minimum
Monitor Update Rate	87.5 Hz
Analog Set Input Scale	0 to plus 10 V for 0 to full scale
Analog Set Input Impedance	1 M ohm
Analog Set Accuracy	plus/minus 0.2 percent of full scale
Analog Set Update Rate	87.5 Hz
Output Slew Rate	less than 3 s from 5 percent to 95 percent under full load
Input Power	75 W
Input Voltage	90 V to 264 VAC, 47 to 63 Hz
HV Output Connector	SHV female (Kings type 1764 1 or equivalent)
Analog Connectors	three BNC (program input, voltage monitor, current monitor)
Remote Interfaces	GPIB IEEE 488.1; RS 232 9 pinDsub
Interface Protocol	IEEE 488.1
Interlock Connector	3 pin 3M 37103 A165 00E MB
Interlock Enable Level	5 VDC enables HV; 0 VDC or open disables HV
Interlock Pin	5 V out, 70 mA maximum
Operating Environment	0 to 40 C, noncondensing
Spec Conditions	23 C plus/minus 5 C, less than 70 percent RH
Warm up Time	1 hour
Dimensions	89 mmHx 206 mmWx 406 mm D (3.5 × 8.1 × 16 in)

PARAMETER	VALUE
Weight	3.7 kg (8 lb)
Protection	arc and short circuit; programmable voltage and current limits and current trip
Safety	conformance to European Union low voltage directive
PM200 Leakage	less than 10 pA at 200 V typical (2290 PM 200 accessory)
PM200 Clamp Voltage	220 VDC minimum, 230 VDC typical, 240 VDC maximum
Rise Time	Full Load: less than 6 s to within 1 V of final value

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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Output Current	1.000 mA DC maximum
Maximum Power	10 W
Voltage Set Accuracy	plus/minus 0.06 percent of full scale
Voltage Display Accuracy	set accuracy plus/minus 1 V typical (plus/minus 2 V maximum)
Voltage Resolution	1 V set and display
Voltage Limit Range	0 to 100 percent of full scale
Line Regulation	0.001 percent for plus/minus 10 percent line change (above 100 V)
Load Regulation	0.04 percent for 100 percent load change typical (above 100 V)
Output Ripple	0.01 percent of full scale VRMS (300 Hz to 300 kHz)
Ripple Maximum	less than 1 VRMS
Current Set Accuracy	0.5 percent of full scale
Current Resolution	1 uA
Current Display Accuracy	plus/minus 1 uA typical (plus/minus 2 uA maximum)
Current Limit Range	0 to 105 percent of full scale
Trip Current Range	10 uA to 105 percent of full scale (excluding stored output charge)
Output Stored Charge	less than 20 uC maximum
Trip Response Time	less than 10 ms
Rise Time Full Load	less than 6 s to within 1 V of final value
Discharge Time Full Load	1 s to under 10 V
Discharge Time No Load	less than 6 s to less than 1 percent of full scale typical
Settling Time	less than 4 s to within 1 V of final value

PARAMETER	VALUE
Recovery Time	120 ms for 40 percent load step typical
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Interface Protocol	IEEE 488.1
Interlock Connector	3 pin 3M 37103 A165 00E MB
Interlock Enable Level	5 VDC enables HV; 0 VDC or open disables HV
Interlock Pin 1	5 V out, 70 mA maximum
Operating Environment	0 to 40 C, noncondensing
Spec Conditions	23 C plus/minus 5 C, less than 70 percent RH
Warm up Time	1 hour
Dimensions	89 mmHx 206 mmWx 406 mm D (3.5 x 8.1 x 16 in)
Weight	3.7 kg (8 lb)
Protection	arc and short circuit; programmable voltage and current limits and current trip
Safety	conformance to European Union low voltage directive
PM200 Leakage	less than 10 pA at 200 V typical (2290 PM 200 accessory)
PM200 Clamp Voltage	220 VDC minimum, 230 VDC typical, 240 VDC maximum

Notes

Specs from Keithley Series 2290 High Voltage Power Supplies datasheet (2290-10 characteristics; times with current limit at 105 percent FS and resistive load). Confirm interlock wiring and whether 2290-PM-200 is fitted. Accessories include 2290-10-SHV, 2290-10-SHVUC, 2290-10-SHVBH, and rack kits 2290-10-RMK-1/2. Do not confuse with 2290-5 (5 kV).

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.