

KEITHLEY

6485

The Keithley 6485 is a 5½-digit picoammeter designed to measure low currents with high sensitivity and speed. It offers eight current measurement ranges from 2 nA to 20 mA, making it ideal for characterizing optoelectronic components, testing sensors, and performing basic low-current measurements.

SPECIFICATIONS

General

Display	5½-digit vacuum fluorescent display (VFD)
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Physical

Operating Temperature	0 °C to 50 °C °C
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Weight	2.8 kg kg
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Measurement Specifications

Measurement Ranges	2 nA, 20 nA, 200 nA, 2 µA, 20 µA, 200 µA, 2 mA, 20 mA
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Display Resolution	5½ digits
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Maximum Resolution	10 fA
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DC Current Accuracy (2 nA Range)	±(0.4% + 400 fA)
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DC Current Accuracy (20 nA Range)	±(0.4% + 1 pA)
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DC Current Accuracy (200 nA Range)	±(0.2% + 10 pA)
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DC Current Accuracy (2 µA Range)	±(0.15% + 100 pA)
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DC Current Accuracy (20 µA Range)	±(0.1% + 1 nA)
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DC Current Accuracy (200 µA Range)	±(0.1% + 10 nA)
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DC Current Accuracy (2 mA Range)	±(0.1% + 100 nA)
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DC Current Accuracy (20 mA Range)	±(0.1% + 1 µA)
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Temperature Coefficient	0.1 × (specified accuracy) per °C (for 0 °C to 18 °C and 28 °C to 50 °C)
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Input Characteristics

Maximum Overload Input Voltage (Continuous)	220 V peak
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Isolation (Input Common to Chassis)	500 V peak
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System Performance and Triggering

Maximum Reading Rate (Internal Buffer)	1000 readings/s
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Maximum Reading Rate (over GPIB)	900 readings/s
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Internal Buffer Size	2500 readings
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Digital Filter Configurations	Median (1 to 10 readings), Average (1 to 100 readings, repeat or moving)
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Connectivity and Control

GPIB Interface	IEEE-488.2
Trigger Link Connector Type	8-pin micro-DIN
Command Set Compatibility	SCPI-1996
Emulation Modes	Keithley 485

Power and Electrical

AC Line Voltage Input Range	100 V to 240 V AC
AC Line Frequency Range	50 Hz to 60 Hz
Power Consumption	30 VA maximum

Physical Characteristics

Rack Unit Size	2U half-rack
Dimensions with Bumpers (W x H x D)	238 mm × 104 mm × 370 mm

Environmental and Safety

Storage Temperature Range	-25 °C to 65 °C
Operating Altitude Limit	2000 m
Warm-up Time	1 hour
EMC/RFI Standards	EN 61326-1
CE Mark Status	Yes

Accessories and Calibration

Optional Shielded Cables	4801 Low-Noise BNC Input Cable
Optional Rack Mount Kits	4288-1 (single), 4288-2 (dual)
Calibration Interval	1 year

Instrument Features

Zero Check Function	Selectable on/off, redirects input current to ground for safe connection and zeroing
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Interfaces

Trigger Link Channels	6 independent channels
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Control & Software

Programming Language	SCPI (Standard Commands for Programmable Instruments)
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Measurement Control

Measurement Ranging	Automatic or manual
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TECHNOLOGY

Analog-to-digital measurement

APPLICATIONS

Low current measurement, photodiode characterization, fiber optic testing, component testing

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