

# Keysight B2980A Series Femto/Picoammeter & Electrometer/High Resistance Meter

The world's only graphical Picoammeter/Electrometer that can confidently measure down to 0.01 fA and up to 10 PΩ

## Key features and benefits

- Best-in-class 2 pA – 20 mA ranges and internal 1,000 V source ensure accurate 0.01 fA & 10 PΩ measurement capabilities
- Battery operation eliminates AC power noise from measurements
- Time domain view enables capture of transient signal effects and selection of desired measurement data
- Real time histogram view provides quick statistical analysis of measurement data
- Test setup integrity checking function and dedicated accessories ensure maximum accuracy

**+0.000087 pA**  
0.01 fA (0.00001 pA) effective resolution and 0.001 fA display resolution

Noise Data

The setup integrity checker (N1420A) measures and records the measurement setup's noise level

Battery operated models (B2985A & B2987A)

Time domain view (roll view)

Histogram view

The diagram illustrates the Keysight B2980A Series Femto/Picoammeter & Electrometer/High Resistance Meter. It shows the device in a battery-operated configuration (B2985A & B2987A) and in its standard configuration. The main device is shown with a digital display reading **+0.000087 pA**. A callout box indicates a resolution of 0.01 fA (0.00001 pA) effective resolution and 0.001 fA display resolution. Another callout box shows a 'Noise Data' table. A diagram shows the device connected to a 'Sample under test' with lightning bolts indicating noise. A callout box states that the setup integrity checker (N1420A) measures and records the measurement setup's noise level. Two inset images show the device's graphical user interface: the 'Time domain view (roll view)' and the 'Histogram view'. The histogram view shows a mean of -0.000495 pA and a standard deviation of +0.000105 pA.

## Key Specifications

Model	Femto/Picoammeter		Electrometer/ High Resistance Meter	
	B2981A	B2983A	B2985A	B2987A
Measurement resolution	6½ digits	6½ digits	6½ digits	6½ digits
Current measure	0.01 fA - 20 mA	0.01 fA - 20 mA	0.01 fA - 20 mA	0.01 fA - 20 mA
Minimum range	2 pA	2 pA	2 pA	2 pA
Resistance measure			Up to 10 PΩ	Up to 10 PΩ
Voltage measure			1 μV - 20 V	1 μV - 20 V
Input resistance			> 200 TΩ	> 200 TΩ
Charge measure			1 fC - 2 μC	1 fC - 2 μC
Temperature measurement			√	√
Humidity measurement			√	√
Voltage source			Up to ±1,000 V	Up to ±1,000 V
Minimum resolution			700 μV	700 μV
Reading rate	20,000 rdg/s	20,000 rdg/s	20,000 rdg/s	20,000 rdg/s
Battery operation		√		√

### Keysight B2900A Family

The B2980A series is a member of the B2900A Precision Instrument Family, which includes several different source and measurement solutions. Further information is available at [www.keysight.com/find/b2900a](http://www.keysight.com/find/b2900a)



B2900A Series of Source Measure Units (SMUs) for cost-effective source/measurement capabilities



B2960A Series of Low Noise Power Source for ultra low noise and more sourcing capabilities

Refer to [Keysight.com](http://Keysight.com) website for product details, technical overviews and other information. Please visit [www.keysight.com/find/b2980a](http://www.keysight.com/find/b2980a)

#### Three-Year Warranty

[www.keysight.com/find/ThreeYearWarranty](http://www.keysight.com/find/ThreeYearWarranty)

Keysight's commitment to superior product quality and lower total cost of ownership. The only test and measurement company with three-year warranty standard on all instruments, worldwide.



## Options

Model number	Options	Description
B2981A	A6J	ANSI Z540-1-1994 Calibration
B2983A	UK6	Commercial calibration certificate with test data
B2985A		
B2987A	B2980A-1CM	Rack mount kit

## Key Accessories

Model number	Description
N1413A	High resistance meter fixture adapter
N1414A	High resistance measurement universal adapter
N1415A	Triaxial to alligator cable, 200 V, 1.5 m
N1418A	Lithium-ion battery pack for B2983/B2987

## Productivity Tools

Model number	Description
N1410A	Starter kit for B2985/B2987
N1420A	Setup integrity checker for B2980 series, fixed perpetual license

## Manuals

Model number	Description
N1403A-ABA	User Guide English for B2980 Series
N1403A-ABJ	User Guide Japanese for B2980 Series