

KEYSIGHT TECHNOLOGIES (AGILENT HP)

6811B

The Keysight Technologies 6811B is a highly flexible, single-phase AC power source and power analyzer rated at 375 VA. Engineered for applications like power supply testing, UPS evaluation, and avionics ATE, it integrates the functionality of an AC source, a DC source, an arbitrary waveform generator, and a comprehensive power analyzer within a compact 3U rackmountable form factor.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488), RS-232, Remote Inhibit, Discrete Fault
Display	VFD (Vacuum Fluorescent Display)
Recommended Calibration Cycle	1 year

Physical

Power Supply	99 to 135 VAC / 198 to 264 VAC (user switchable), 47 to 63 Hz
Operating Temperature	0 to 40 °C °C
Dimensions (W×H×D)	425.5 mm × 132.6 mm × 571.5 mm mm
Weight	23.0 kg

AC Output Ratings

Maximum AC Power Rating	375 VA
Output Phase Configuration	Single-phase
AC Voltage Ranges	135 Vrms / 270 Vrms
Maximum AC RMS Voltage	300 Vrms
Maximum AC RMS Current (135 V range)	3.25 Arms
Maximum AC RMS Current (270 V range)	1.625 Arms
Maximum Peak Repetitive Current (135 V range)	12 A
Maximum Peak Repetitive Current (270 V range)	6 A
Peak Current Crest Factor Capability	3.6
Frequency Range	45 Hz to 1000 Hz
Frequency Resolution	10 mHz
Frequency Programming Accuracy	0.01%

DC Output Ratings

Maximum DC Power Rating	285 W
DC Voltage Ranges	190 VDC / 380 VDC
Maximum DC Voltage	425 VDC
Maximum DC Current (190 V range)	2.5 A
Maximum DC Current (380 V range)	1.25 A

Output Distortion and Regulation

Total Harmonic Distortion (THD) - Full Load (50/60 Hz)	< 0.5%
Total Harmonic Distortion (THD) - Full Load (45 Hz to 1 kHz)	< 1.0%
AC Load Regulation	0.5% of full scale
AC Line Regulation	0.1% of full scale
DC Load Regulation	0.5% of full scale
DC Line Regulation	0.1% of full scale
Programming Voltage Accuracy (AC, 135 V range)	0.15% of output + 0.3 V
Programming Voltage Accuracy (AC, 270 V range)	0.15% of output + 0.6 V
Programming Voltage Accuracy (DC, 190 V range)	0.1% of output + 0.5 V
Programming Voltage Accuracy (DC, 380 V range)	0.1% of output + 1.0 V

Measurement and Analyzer Capabilities

Voltage RMS Measurement Range	0 to 300 V
Voltage RMS Measurement Accuracy (45 Hz to 100 Hz, 135 V range)	0.15% of reading + 0.3 V
Voltage RMS Measurement Accuracy (45 Hz to 100 Hz, 270 V range)	0.15% of reading + 0.6 V
Current RMS Measurement Accuracy (45 Hz to 100 Hz, Low range)	0.5% of reading + 1.5 mA
Current RMS Measurement Accuracy (45 Hz to 100 Hz, High range)	0.5% of reading + 15 mA
Active Power Measurement Accuracy (45 Hz to 100 Hz, Low range)	1.5% of reading + 1 W
Active Power Measurement Accuracy (45 Hz to 100 Hz, High range)	1.5% of reading + 3 W
Apparent Power Measurement Accuracy (45 Hz to 100 Hz, Low range)	1.5% of reading + 1 VA
Apparent Power Measurement Accuracy (45 Hz to 100 Hz, High range)	1.5% of reading + 3 VA
Power Factor Measurement Range	0.00 to 1.00
Crest Factor Measurement Range	1.0 to 10.0
Harmonic Analysis Frequency Range	Fundamental (45 Hz to 1000 Hz) up to 50th harmonic

Waveform and Transient Generation

Standard Waveform Types	Sine, Square
Arbitrary Waveform Point Capacity	1024 points
Transient Programming Modes	Step, Pulse, List
Phase Angle Control Range	0 to 360 degrees
Phase Angle Programming Accuracy	1 degree
External Analog Modulation Input	Yes

System Connectivity and Control

Command Language Support	SCPI
--------------------------	------

Protection and Safeguards

Over-Voltage Protection (OVP)	Yes
Over-Current Protection (OCP)	Yes
Over-Temperature Protection (OTP)	Yes

Physical and Environmental

Storage Temperature Range	-40 to 75 °C
Cooling Mechanism	Forced-air with rear exhaust
Rack Unit Height	3U

Power Input

AC Input Power Consumption	1000 VA maximum
AC Input Frequency Range	47 Hz to 63 Hz
AC Input Voltage Option 100 Range	87 VAC to 106 VAC
AC Input Voltage Option 120 Range	104 VAC to 127 VAC
AC Input Voltage Option 200 Range	174 VAC to 220 VAC
AC Input Voltage Option 230 Range	191 VAC to 254 VAC

Outputs

Output Isolation Voltage	300 VAC / 425 VDC maximum relative to chassis ground
Remote Sensing Capability	Up to 2 V drop per output lead

Programming Accuracy

Voltage Programming Temperature Coefficient	0.04% + 0.02 V per °C
Frequency Programming Temperature Coefficient	10 ppm per °C

Measurement Resolution

Voltage RMS Measurement Resolution	0.01 V
Current RMS Measurement Resolution (Low Range)	1 mA
Current RMS Measurement Resolution (High Range)	10 mA

Measurement Performance

Maximum Harmonic Measurement Order	50th harmonic (for fundamental frequencies <= 250 Hz)
------------------------------------	---

Environmental

Maximum Operating Altitude	2000 m
----------------------------	--------

Measurements

DC Voltage Measurement Range	0 to ±190 VDC / 0 to ±380 VDC
Frequency Measurement Resolution	0.01 Hz
Phase Angle Measurement Resolution	0.1°
Active Power Measurement Resolution	0.01 W (low range) / 0.1 W (high range)
Apparent Power Measurement Resolution	0.01 VA (low range) / 0.1 VA (high range)
Power Factor Measurement Resolution	0.01
Crest Factor Measurement Resolution	0.01

Output Characteristics

Programmable Resistance Range (Option 005)	0 to 1.0 Ω
Programmable Inductance Range (Option 005)	0 to 2 mH

Inputs & Outputs

Remote Inhibit (RI) and Discrete Fault Indicator (DFI)	Available on rear panel terminal block
--	--

Compliance

Safety Standards Compliance	Certified to CSA C22.2 No. 1010.1, EN 61010-1, UL 3111-1
EMC Standards Compliance	Complies with EN 55011, EN 50082-1

TECHNOLOGY

Linear / Switching Hybrid

APPLICATIONS

Power supply testing, UPS testing, avionics ATE, and power factor corrected equipment evaluation

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.