

KEYSIGHT TECHNOLOGIES (AGILENT HP)

6813B

The Keysight 6813B is a highly versatile, single-phase AC Power Source and Power Analyzer designed for demanding applications such as power supply testing, UPS evaluation, avionics ATE, and power factor corrected equipment testing. Delivering up to 1750 VA AC power and 1350 W DC power, it integrates the functionality of an AC/DC source, arbitrary waveform generator, and a comprehensive harmonic power analyzer into a single 4U chassis.

SPECIFICATIONS

AC Output Specifications

Maximum AC Power Rating	1750 VA
AC Voltage Ranges	135 Vrms / 270 Vrms
AC Voltage Range (Low)	0 to 135 Vrms
AC Voltage Range (High)	0 to 270 Vrms
Maximum AC RMS Current (Low Range)	13 A
Maximum AC RMS Current (High Range)	6.5 A
AC Output Frequency Range	45 Hz to 1000 Hz
Maximum Peak Current (Low Range)	40 A
Maximum Peak Current (High Range)	20 A

DC Output Specifications

Maximum DC Power Rating	1350 W
DC Voltage Ranges	190 V / 380 V
DC Voltage Range (Low)	0 to 190 V
DC Voltage Range (High)	0 to 380 V
Maximum DC Current (Low Range)	10 A
Maximum DC Current (High Range)	5 A

Measurement Capabilities (Analyzer Function)

DC Voltage Measurement Accuracy (Low Range)	$\pm(0.1\% \text{ of reading} + 0.5 \text{ V})$
DC Voltage Measurement Accuracy (High Range)	$\pm(0.1\% \text{ of reading} + 1 \text{ V})$
Active Power Measurement Accuracy (45 to 100 Hz, PF = 1)	$\pm(1.5\% \text{ of reading} + 17.5 \text{ W})$
Apparent Power Measurement Accuracy (45 to 100 Hz)	$\pm(1.5\% \text{ of reading} + 17.5 \text{ VA})$
Power Factor Measurement Range	0.00 to 1.00
Harmonic Amplitude Measurement Range	Fundamental to 50th harmonic

Programming Accuracy and Resolution

AC Voltage Programming Accuracy (Low Range, 45 to 100 Hz)	$\pm(0.15\% \text{ of output} + 0.3 \text{ V})$
AC Voltage Programming Accuracy (High Range, 45 to 100 Hz)	$\pm(0.15\% \text{ of output} + 0.6 \text{ V})$
DC Voltage Programming Accuracy (Low Range)	$\pm(0.1\% \text{ of output} + 0.5 \text{ V})$
DC Voltage Programming Accuracy (High Range)	$\pm(0.1\% \text{ of output} + 1 \text{ V})$
Frequency Programming Resolution	10 μHz

Input Power Requirements

Input Phase Configuration	Single-phase
Input AC Frequency Range	47 to 63 Hz
Maximum Input Power	2800 VA
Nominal Input AC Voltage Options	200 VAC / 230 VAC

Protection and Isolation Features

Overcurrent Protection (OCP)	Yes, programmable electronic shutdown or current limit
Overvoltage Protection (OVP)	Yes, programmable
Overtemperature Protection (OTP)	Yes, automatic thermal shutdown

System, Interfaces and Connectivity

Remote Sensing Terminals	Yes, rear-panel terminals
Command Language	SCPI (Standard Commands for Programmable Instruments)
Arbitrary Waveform Generation	Yes, built-in arbitrary waveform capability

Physical and Environmental

Rack Unit Height	5U
Cooling Configuration	Forced air cooling with internal fan (rear exhaust)

Regulatory and Compliance

Recommended Calibration Interval	1 year
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Programming Resolution

AC Voltage Programming Resolution (Low Range)	12.5 mV
AC Voltage Programming Resolution (High Range)	25 mV
DC Voltage Programming Resolution (Low Range)	12.5 mV
DC Voltage Programming Resolution (High Range)	25 mV
Current Limit Programming Resolution	4 mA

Measurement Resolution

RMS Voltage Measurement Resolution	10 mV
RMS Current Measurement Resolution	4 mA

Harmonic Measurement

Harmonic Frequency Range	45 Hz - 1000 Hz
Harmonic Order Range	Up to 50th harmonic

Input Power

Maximum Input Current (100 VAC nominal input)	32 A
Maximum Input Current (120 VAC nominal input)	26 A
Maximum Input Current (200 VAC nominal input)	16 A
Maximum Input Current (208 VAC nominal input)	16 A
Maximum Input Current (230 VAC nominal input)	15 A

Output

Output Coupling	AC, DC, AC+DC
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APPLICATIONS

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

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