2020

Power Supply Selection Guide

BK PRECISION

Power Solutions from B&K Precision

For more than six decades B&K Precision has provided reliable test and measurement instruments with global service and support. Power supplies are one of our most popular product categories and this guide will help you confidently select from a wide range of low-power (12 W) benchtop to high-power (5100 W) ATE-ready solutions and more.

Table of contents

Dual-Range & Multi-Range Power Supplies 3

Dual & Triple Output DC Power Supplies 4

ATE System Power Supply Solutions ..... 5 - 6

Programmable Power Supplies ..... 7 - 8

Basic & Education 9

AC Power Sources 10

Solar and Automotive Applications 11

Remote Communication Tools & Additional Resources 12

Finding the right power supply

Start by viewing the different categories, which are sorted by some of the selection criteria listed below.

Common power supply selection criteria

- Total output power
- Voltage and current ranges
- Ripple and noise
- Number of output channels
- Programmability and remote interfaces
- Resolution and accuracy
- Display type
- Transient response

ElectriKit

A helpful tool for electricians, technicians, engineers, students, hobbyists and anyone dealing with electrical power.

Key Features

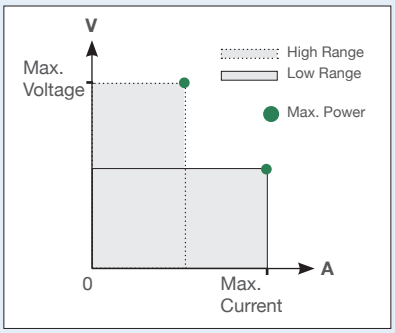
- Calculate DC power and single or three-phase AC true power, reactive power, and apparent power
- Delta-wye transformation, voltage drop, AWG size, THD, horsepower, and battery life calculators
- Ampacity table for insulated conductors per NEC Table 310.16
- Android™ version supports multiple languages including French, Japanese, and Spanish

GET IT ON Google Play

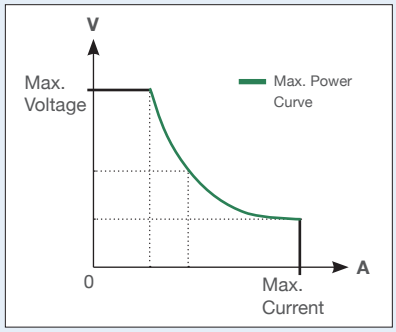
Download on the App Store

Dual-Range & Multi-Range Power Supplies

Dual-Range Operation



Multi-Range Operation



Sometimes also referred to as "autoranging", multi-range power supplies provide users more flexibility than traditional power supplies by extending the operating range beyond a single maximum power point. The supplies can provide any combination of higher voltage or higher current along a maximum power curve. This design helps save both bench space and cost by eliminating the need for having multiple power supplies on the bench or buying more power than necessary.

Model	Max Power	Max Voltage	Max Current	Range	Ripple & Noise	List Mode	Interfaces				
							USB	RS232	GPIB	RS485	LAN
Dual-range											
9171B	100 W	10 V, 20 V	10 A, 5 A	Dual	≤ 0.35 mVrms / ≤ 3 mVpp	●	●	o	o	o	o
9172B	105 W	35 V, 70 V	3 A, 1.5 A	Dual	≤ 0.5 mVrms / ≤ 5 mVpp	●	●	o	o	o	o
1737	120 W	30 V, 60 V	3 A, 2 A	Dual	≤ 1 mVrms	-	-	●	-	-	-
9181B	144 W	18 V, 36 V	8 A, 4 A	Dual	≤ 0.35 mVrms / ≤ 3 mVpp	●	●	o	o	o	o
9173B	200 W	10 V, 20 V x 2	10 A, 5 A x 2	Dual	≤ 0.35 mVrms / ≤ 3 mVpp	●	●	o	o	o	o
9182B	200 W	10 V, 20 V	20 A, 10 A	Dual	≤ 0.35 mVrms / ≤ 3 mVpp	●	●	o	o	o	o
9184B	200 W	100 V, 200 V	2 A, 1 A	Dual	≤ 1.5 mVrms / ≤ 15 mVpp	●	●	o	o	o	o
9174B	210 W	35 V, 70 V x 2	3 A, 1.5 A x 2	Dual	≤ 0.5 mVrms / ≤ 5 mVpp	●	●	o	o	o	o
9183B	210 W	35 V, 70 V	6 A, 3 A	Dual	≤ 0.5 mVrms / ≤ 5 mVpp	●	●	o	o	o	o
9185B	210 W	400 V, 600 V	0.5 A, 0.35 A	Dual	≤ 4.5 mVrms / ≤ 45 mVpp	●	●	o	o	o	o
1747	300 W	35 V, 60 V	10 A, 5 A	Dual	≤ 1 mVrms	-	-	●	-	-	-
Multi-range											
9110	100 W	60 V	5 A	Multi	≤ 2 mVrms	-	-	-	-	-	-
9111	180 W	60 V	8 A	Multi	≤ 5 mVrms	-	-	-	-	-	-
9201	200 W	60 V	10 A	Multi	≤ 8 mVpp	●	●	●	●	-	-
9202	360 W	60 V	15 A	Multi	≤ 15 mVpp	●	●	●	●	-	-
9205	600 W	60 V	25 A	Multi	≤ 20 mVpp	●	●	●	●	-	-
9206	600 W	150 V	10 A	Multi	≤ 50 mVpp	●	●	●	●	-	-
9115/-AT	1200 W	80 V	60 A	Multi	≤ 60 mVpp	●	●	●	●	●	-
9116	1200 W	150 V	30 A	Multi	≤ 60 mVpp	●	●	●	●	●	-
9117	3000 W	80 V	120 A	Multi	≤ 80 mVpp	●	●	●	●	●	●
PVS60085MR	3000 W	600 V	8.5 A	Multi	≤ 100 mVrms / ≤ 500 mVpp	●	●	●	●	-	●

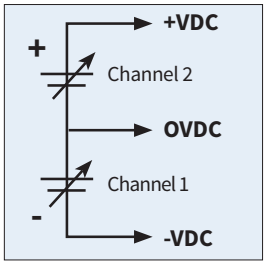
"●" Standard "o" Optional

Dual & Triple Output DC Power Supplies

Dual & triple output power supplies give users the flexibility to configure multiple channels to meet their application needs. Each output can be used independently or connected in series or parallel with other channels to increase voltage or current. This also allows for various output configurations such as positive and negative outputs for powering bipolar circuits and devices.

Common Features & Benefits

- Independent, floating and electrically isolated outputs
- Series or parallel operation to produce higher voltages or currents
- Display and adjust voltage and current settings for variable channels simultaneously



Bipolar output configuration
The independent and isolated outputs can be used to create positive and negative outputs between channels 1 and 2. This feature is useful for powering bipolar circuits and devices.

Model	Power	CH1		CH2		CH3		Standard Interfaces
		Voltage	Current	Voltage	Current	Voltage	Current	
1651A	44 W	24 V	500 mA	24 V	500 mA	5 V	4 A	N/A
1652	44 W	24 V	500 mA	24 V	500 mA	5 V	4 A	N/A
1760A	92 W	30 V	2 A	30 V	2 A	6.5 V	5 A	N/A
1670A	98 W	30 V	3 A	12 V	500 mA	5 V	500 mA	N/A
1671A	158 W	30 V	5 A	12 V	500 mA	5 V	500 mA	N/A
9130B	195 W	30 V	3 A	30 V	3 A	5 V	3 A	RS232, USB, GPIB
9173B	200 W	10 V / 20 V	10 A / 5 A	10 V / 20 V	10 A / 5 A	-	-	USB, RS232, RS485, analog control, GPIB, LAN, digital I/O
1672	207 W	32 V	3 A	32 V	3 A	5 V	3 A	N/A
9174B	210 W	35 V / 70 V	3 A / 1.5 A	35 V / 70 V	3 A / 1.5 A	-	-	USB, RS232, RS485, analog control, GPIB, LAN, digital I/O
1761	242 W	35 V	3 A	35 V	3 A	6.5 V	5 A	N/A
1762	266 W	60 V	2 A	60 V	2 A	6.5 V	5 A	N/A
9131B	375 W	30 V	6 A	30 V	6 A	5 V	3 A	RS232, USB, GPIB
9132B	375 W	60 V	3 A	60 V	3 A	5 V	3 A	RS232, USB, GPIB
1673	399 W	32 V	6 A	32 V	6 A	5 V	3 A	N/A

ATE System Power Solutions

- Up to 5100 W with voltage and current configurations up to 1000 V, 120 A
- Flexible I/O interfaces such as GPIB, LAN, USB, RS232, and analog control
- Programmability via SCPI commands, LabVIEW drivers, or application software allow for remote initiation and operation
- High programming accuracy combined with precise built-in measurements
- Comprehensive protection features such as OVP, OCP, and OTP to safeguard your DUT

Designed for easy integration into automated test equipment systems, our compact 1U, 2U, and 3U XLN, 9170/80, 9115, and PVS series DC power supplies offer the power, density, speed, and accuracy needed to meet today's system design challenges.

Model	Max Power	Max Voltage	Max Current	Response Time		Transient Response Time (for a load change from 50 to100% of rated output current)	Adjustable Slew Rate
				Rise Time Full Load (ms)/ No Load (ms)	Fall Time Full Load (ms)/No Load (ms)		
9171B	100 W	10 V, 20 V	10 A, 5 A	≤ 8 / ≤ 8	≤ 8/ ≤ 250	≤ 50 µs for output to recover to within 15 mV	0.001 to 2.5 V/ms
9172B	105 W	35 V, 70 V	3 A, 1.5 A	≤ 10 / ≤ 10	≤ 10 / ≤ 250	≤ 50 µs for output to recover to within 15 mV	0.001 to 7 V/ms
9181B	144 W	18 V, 36 V	8 A, 4 A	≤ 8 / ≤ 8	≤ 8/ ≤ 250	≤ 50 µs for output to recover to within 15 mV	0.001 to 4.5 V/ms
9173B	200 W	10 V, 20 V x 2	10 A, 5 A x 2	≤ 8 / ≤ 8	≤ 8/ ≤ 250	≤ 50 µs for output to recover to within 15 mV	0.001 to 2.5 V/ms
9182B	200 W	10 V, 20 V	20 A, 10 A	≤ 8 / ≤ 8	≤ 8/ ≤ 250	≤ 50 µs for output to recover to within 15 mV	0.001 to 2.5 V/ms
9184B	200 W	100 V, 200 V	2 A, 1 A	≤ 30 / ≤ 30	≤ 30/ ≤ 250	≤ 100 µs for output to recover to within 50 mV	0.001 to 6.666 V/ms
9174B	210 W	35 V, 70 V x 2	3 A, 1.5 A x 2	≤ 10 / ≤ 10	≤ 10/ ≤ 250	≤ 50 µs for output to recover to within 15 mV	0.001 to 7 V/ms
9183B	210 W	35 V, 70 V	6 A, 3 A	≤ 10 / ≤ 10	≤ 10/ ≤ 250	≤ 50 µs for output to recover to within 15 mV	0.001 to 7 V/ms
9185B	210 W	400 V, 600 V	0.5 A, 0.35 A	≤ 40 / ≤ 40	≤ 40/ ≤ 250	≤ 100 µs for output to recover to within 120 mV	0.001 to 15 V/ms
9115/-AT	1200 W	80 V	60 A	-	-	-	-
9116	1200 W	150 V	30 A	-	-	-	-
XLN3640 (-GL)	1440 W	36 V	40 A	≤ 15 / ≤ 15	≤ 15 / ≤ 1000	≤ 1 ms	0.01 to 2.4 V/ms
XLN6024 (-GL)	1440 W	60 V	24 A	≤ 20 / ≤ 20	≤ 20 / ≤ 1000	≤ 1 ms	0.01 to 3 V/ms
XLN8018 (-GL)	1440 W	80 V	18 A	≤ 25 / ≤ 25	≤ 25 / ≤ 1000	≤ 1 ms	0.01 to 3.2 V/ms
XLN10014 (-GL)	1440 W	100 V	14.4 A	≤ 30 / ≤ 30	≤ 30 / ≤ 1000	≤ 1 ms	0.01 to 3.3 V/ms
XLN15010 (-GL)	1560 W	150 V	10.4 A	≤ 100 / ≤ 100	≤ 100 / ≤ 1000	≤ 2 ms	0.01 to 1 V/ms
XLN30052 (-GL)	1560 W	300 V	5.2 A	≤ 100 / ≤ 100	≤ 100 / ≤ 2000	≤ 2 ms	0.01 to 3.3 V/ms
XLN60026 (-GL)	1560 W	600 V	2.6 A	≤ 100 / ≤ 100	≤ 100 / ≤ 3000	≤ 2 ms	0.01 to 6.6 V/ms
9117	3000 W	80 V	120 A	-	-	-	-
PVS60085MR	3000 W	600 V	8.5 A	≤ 100 / ≤ 100	≤ 150 / ≤ 3000	≤ 0.5 ms for output to recover within 0.5% of its rated output	0 to 6 V/ms
PVS10005	5000 W	1000 V	5 A	≤ 250 / ≤ 250	≤ 250 / ≤ 5000	≤ 0.5 ms for output to recover within 0.5% of its rated output	0 to 4 V/ms
PVS60085	5100 W	600 V	8.5 A	≤ 100 / ≤ 100	≤ 100 / ≤ 3000	≤ 0.5 ms for output to recover within 0.5% of its rated output	0 to 6 V/ms

ATE System Power Solutions (cont.)

Model	Interfaces							Rackmount kit	Rack unit
	USB	RS232	RS485	Analog control	GPIB	LAN	Digital I/O		
9171B	●	o	o	o	o	o	o	o	2U
9172B	●	o	o	o	o	o	o	o	2U
9181B	●	o	o	o	o	o	o	o	2U
9173B	●	o	o	o	o	o	o	o	3U
9182B	●	o	o	o	o	o	o	o	3U
9184B	●	o	o	o	o	o	o	o	3U
9174B	●	o	o	o	o	o	o	o	3U
9183B	●	o	o	o	o	o	o	o	3U
9185B	●	o	o	o	o	o	o	o	3U
9115/-AT	●	●	●	●	●	-	-	●	1U
9116	●	●	●	●	●	-	-	●	1U
XLN3640 (-GL)	●	-	●	●	o	o	-	o	1U
XLN6024 (-GL)	●	-	●	●	o	o	-	o	1U
XLN8018 (-GL)	●	-	●	●	o	o	-	o	1U
XLN10014 (-GL)	●	-	●	●	o	o	-	o	1U
XLN15010 (-GL)	●	-	●	●	o	o	-	o	1U
XLN30052 (-GL)	●	-	●	●	o	o	-	o	1U
XLN60026 (-GL)	●	-	●	●	o	o	-	o	1U
9117	●	●	●	●	●	●	-	●	2U
PVS60085MR	●	-	●	●	o	o	-	o	2U
PVS10005	●	-	●	●	o	o	-	o	2U
PVS60085	●	-	●	●	o	o	-	o	2U

"●" Standard "o" Optional

Programmable Power Supplies (≤ 200 W)

These DC power supplies offer high speed and accuracy combined with advanced features such as DUT protection, list mode, and full programmability. Many supplies offer a SCPI compatible command set and come with LabVIEW drivers.

Model	Power	Max Voltage	Max Current	Ripple & Noise	Programming Accuracy		Programming Resolution		Interfaces						Rackmount kit
					Voltage	Current	Voltage	Current	USB	RS232	RS485	Analog control	GPIB	LAN	
1785B	90 W	18 V	5 A	≤ 1 mVrms	≤ 0.05% + 10 mV	≤ 0.2% + 10 mA	10 mV	10 mA	o	●	-	-	-	-	o
1786B	96 W	32 V	3 A	≤ 1 mVrms	≤ 0.05% + 10 mV	≤ 0.2% + 10 mA	10 mV	10 mA	o	●	-	-	-	-	o
9120A	96 W	32 V	3 A	≤ 4 mVpp	< 0.03% +3 mV	< 0.05% +2 mA	0.5 mV	0.1 mA	●	●	-	-	-	-	o
9171B	100 W	10 V, 20 V	10 A, 5 A	≤ 0.35 mVrms / ≤ 3 mVpp	≤ 0.05 % +5 mV	≤ 0.1 % +2 mA	1 mV	1 mA	●	o	o	o	o	o	o
9121A	100 W	20 V	5 A	≤ 3 mVpp	< 0.03% +3 mV	< 0.05% +2 mA	0.5 mV	0.1 mA	●	●	-	-	-	-	o
9172B	105 W	35 V, 70 V	3 A, 1.5 A	≤ 0.5 mVrms / ≤ 5 mVpp	≤ 0.05 % +10 mV	≤ 0.1 % +1 mA	2 mV	0.1 mA	●	o	o	o	o	o	o
1787B	108 W	72	1.5 A	≤1 mVrms	≤ 0.05% + 10 mV	≤ 0.2% + 10 mA	10 mV	10 mA	o	●	-	-	-	-	o
9181B	144 W	18 V, 36 V	8 A, 4 A	≤ 0.35 mVrms / ≤ 3 mVpp	≤ 0.05 % +5 mV	≤ 0.1 % +2 mA	1 mV	1 mA	●	o	o	o	o	o	o
9123A	150 W	30 V	5 A	≤ 4 mVpp	< 0.03% +3 mV	< 0.05% +2.5 mA	0.5 mV	0.1 mA	●	●	-	-	●	-	o
9122A	150 W	60 V	2.5 A	≤ 5 mVpp	< 0.03% +6 mV	< 0.05% +1.5 mA	1 mV	0.1 mA	●	●	-	-	-	-	o
1788	192 W	32 V	6 A	≤ 1 mVrms	≤ 0.05% + 10 mV	≤ 0.2% + 10 mA	10 mV	10 mA	o	●	-	-	-	-	o
1698B	200 W	60 V	3.3 A	≤ 30 mVpp	1.5% + 2 counts	1.5% + 2 counts	10 mV	1 mA	●	-	●	-	-	-	-
9182B	200 W	10 V, 20 V	20 A, 10 A	≤ 0.35 mVrms / ≤ 3 mVpp	≤ 0.05 % +5 mV	≤ 0.1 % +5 mA	1 mV	1 mA	●	o	o	o	o	o	o
9173B	200 W	10 V, 20 V x 2	10 A, 5 A x 2	≤ 0.35 mVrms / ≤ 3 mVpp	≤ 0.05 % +5 mV	≤ 0.1 % +2 mA	1 mV	1 mA	●	o	o	o	o	o	o
1696B	200 W	20 V	10 A	≤ 30 mVpp	1.5% + 2 counts	1.5% + 2 counts	10 mV	1 mA	●	-	●	-	-	-	-
1697B	200 W	40 V	5 A	≤ 30 mVpp	1.5% + 2 counts	1.5% + 2 counts	10 mV	1 mA	●	-	●	-	-	-	-
9184B	200 W	100 V, 200 V	2 A, 1 A	≤ 1.5 mVrms / ≤ 15 mVpp	≤ 0.05 % +50 mV	≤ 0.1 % +1 mA	10 mV	0.1 mA	●	o	o	o	o	o	o

"●" Standard "o" Optional

Programmable Power Supplies (210 W - 5100 W)

Model	Power	Max Voltage	Max Current	Ripple & Noise	Programming Accuracy		Programming Resolution		Interfaces						Rackmount kit
					Voltage	Current	Voltage	Current	USB	RS232	RS485	Analog control	GPIB	LAN	
9183B	210 W	35 V, 70 V	6 A, 3 A	≤ 0.5 mVrms /≤5 mVpp	≤ 0.05 % +10 mV	≤ 0.1 % +2 mA	2 mV	0.2 mA	●	o	o	o	o	o	o
9174B	210 W	35 V, 70 V x 2	3 A, 1.5 A x 2	≤ 0.5 mVrms / ≤ 5 mVpp	≤ 0.05 % +10 mV	≤ 0.1 % +1 mA	2 mV	0.1 mA	●	o	o	o	o	o	o
9185B	210 W	400 V, 600 V	0.5 A, 0.35 A	≤ 4.5 mVrms / ≤ 45 mVpp	≤ 0.05 % +100 mV	≤ 0.1 % +0.1 mA	20 mV	0.01 mA	●	o	o	o	o	o	o
1685B	300 W	60 V	5 A	≤ 50 mVpp	± 0.2% +3counts	± 0.2% +3 counts	100 mV	10 mA	●	-	-	●	-	-	-
1688B	360 W	18 V	20 A	≤ 50 mVpp	± 0.2% + 3 counts	± 0.2% +3 counts	100 mV	100 mA	●	-	-	●	-	-	-
1687B	360 W	36 V	10 A	≤ 50 mVpp	± 0.2% + 3 counts	± 0.2% +3 counts	100 mV	100 mA	●	-	-	●	-	-	-
9151	540 W	20 V	27 A	≤ 0.005% +3 mVpp	< 0.02% +6mV	< 0.1% +15 mA	1 mV	1 mA	●	●	-	-	-	-	o
9152	540 W	30 V	18 A	≤ 0.005% +3 mVpp	< 0.02% +6 mV	< 0.1% +15 mA	1 mV	1 mA	●	●	-	-	-	-	o
9115/-AT	1200 W	80 V	60 A	≤ 60 mVpp	0.02 % +30 mV	0.1 % + 60 mA	1 mV	1 mA	●	●	●	●	●	-	●
9116	1200 W	150 V	30 A	≤ 60 mVpp	0.05 % + 30 mV	0.2 % + 30 mA	3 mV	1 mA	●	●	●	●	●	-	●
XLN3640 (-GL)	1440 W	36 V	40 A	≤ 5 mVrms / ≤ 60 mVpp	0.05 % +10 mV	0.05 % + 10 mA	1 mV	1 mA	●	-	●	●	●	●	o
XLN6024 (-GL)	1440 W	60 V	24 A	≤ 6 mVrms / ≤ 70 mVpp	0.05 % +15 mV	0.05 % +18 mA	1.5 mV	1 mA	●	-	●	●	●	●	o
XLN8018 (-GL)	1440 W	80 V	18 A	≤ 7 mVrms / ≤ 80 mVpp	0.05 % +20 mV	0.05 % +7 mA	2 mV	1 mA	●	-	●	●	●	●	o
XLN10014 (-GL)	1440 W	100 V	14.4 A	≤ 8 mVrms / ≤ 80 mVpp	0.05 % +25 mV	0.05 % +6 mA	2.5 mV	1 mA	●	-	●	●	●	●	o
XLN15010 (-GL)	1560 W	150 V	10.4 A	≤ 10 mVrms / ≤ 100 mVpp	0.05 % +75 mV	0.1 % +30 mA	10 mV	1 mA	●	-	●	●	●	●	o
XLN30052 (-GL)	1560 W	300 V	5.2 A	≤ 25 mVrms / ≤ 150 mVpp	0.05 % +150 mV	0.1 % +15.6 mA	10 mV	1 mA	●	-	●	●	●	●	o
XLN60026 (-GL)	1560 W	600 V	2.6 A	≤ 50 mVrms / ≤ 300 mVpp	0.05 % +300 mV	0.1 % +7.8 mA	10 mV	1 mA	●	-	●	●	●	●	o
9117	3000 W	80 V	120 A	≤ 80 mVpp	0.05 % + 30 mV	0.2 % + 120 mA	2 mV	3 mA	●	●	●	●	●	●	●
PVS60085MR	3000 W	600 V	8.5 A	≤ 100 mVrms / ≤ 500 mVpp	400 mV	0.03% +3.5 mA	10 mV	0.2 mA	●	-	●	●	●	●	o
PVS10005	5000 W	1000 V	5 A	≤ 100 mVrms / ≤ 600 mVpp	700 mV	0.03% +2 mA	0.1 V	0.1 mA	●	-	●	●	●	●	o
PVS60085	5100 W	600 V	8.5 A	≤ 100 mVrms / ≤ 500 mVpp	400 mV	0.03% + 3.5 mA	10 mV	0.2 mA	●	-	●	●	●	●	o

"●" Standard "o" Optional

Basic & Education

These DC power supplies offer the best in simplicity with their easy-to-use functions. All supplies can be controlled from the front panel only, and many models come with analog or digital meters. Ideal for students, hobbyists, service and repair personnel, and other users looking for low-cost options without all the extras.

Model	Max Power	Voltage Range	Current Range	No. of Outputs	Type	Display (Meter)
1513	12 W	3.3/4.5/6/7.5/9/12 V (fixed)	1 A	1	Battery Eliminator	None
1710A	30 W	0 to 30 V	0 to 1 A	1	CV/CC Mode Supply	Dual analog
1514	36 W	3.3/4.5/6/7.5/9/12 V (fixed)	3 A	1	Battery Eliminator	None
1680	55 W	13.8 V (fixed)	4 A	1	Battery Eliminator	None
1621A	90 W	0 to 18 V	0 to 5 A	1	CV/CC Mode Supply	Dual 3-digit LED
1623A	90 W	0 to 60 V	0 to 1.5 A	1	CV/CC Mode Supply	Dual 3-digit LED
1627A	90 W	0 to 30 V	0 to 3 A	1	CV/CC Mode Supply	Dual 3-digit LED
1730A	90 W	0 to 30 V	0 to 3 A	1	CV/CC Mode Supply	Dual analog
1735A	90 W	0 to 30 V	0 to 3 A	1	CV/CC Mode Supply	Dual 4-digit LED
1760A	92 W	0 to 30 V (A&B), 4 to 6.5 V (C)	0 to 2 A (A&B), 5 A (C)	3	CV/CC Mode Supply	Dual 4-digit LED
1670A	98.5 W	0 to 30 V (A), 12 V (B), 5 V (C)	0 to 3 A (A), 500 mA (B), 500 mA (C)	3	CV/CC Mode Supply	Dual 3-digit LCD
9110	100 W	0 to 60 V	0 to 5 A	1	Multi-Ranging CV/CC Mode Supply	Dual 4-digit LED
1550	108 W	1 to 36 V	0 to 3 A	1	CV/CC Mode Supply	LCD
1715A	120 W	0 to 60 V	0 to 2 A	1	CV/CC Mode Supply	Dual 4-digit LED
1671A	158.5 W	0 to 30 V (A), 12 V (B), 5 V (C)	0 to 5 A (A), 500 mA (B), 500 mA (C)	3	CV/CC Mode Supply	Dual 3-digit LCD
1682A	166 W	13.8 V (fixed)	12 A	1	Battery Eliminator	None
1686A	168 W	3 to 14 V	12 A @ 14 V	1	CV Mode Supply	Dual analog
9111	180 W	0 to 60 V	0 to 8 A	1	Multi-Ranging CV/CC Mode Supply	Dual 4-digit LED
1667	198 W	0 to 60 V	0 to 3.3 A	1	CV/CC Mode Supply	Dual 3-digit LED
1665	200 W	0 to 20 V	0 to 10 A	1	CV/CC Mode Supply	Dual 3 1/2-digit LED
1666	200 W	0 to 40 V	0 to 5 A	1	CV/CC Mode Supply	Dual 3-digit LED
1672	207 W	0 to 32 V (A&B), 5 V (C)	0 to 3 A (A&B), 3 A (C)	3	CV/CC Mode Supply	Quad 3-digit LED
1743B	210 W	35 V	0.25	1	CV/CC Mode Supply	Dual 4-digit LED
1761	242 W	0 to 35 V (A&B), 2 to 6.5 V (C)	0 to 3 A (A&B), 5 A (C)	3	CV/CC Mode Supply	Dual 4-digit LED
1762	266 W	0 to 60 V (A&B), 2 to 6.5 V (C)	0 to 2 A (A&B), 5 A (C)	3	CV/CC Mode Supply	Dual 4-digit LED
1745A	350 W	35 V	10 A	1	CV/CC Mode Supply	Dual 4-digit LED
1673	399 W	0 to 32 V (A&B), 5 V (C)	0 to 6 A (A&B), 3 A (C)	3	CV/CC Mode Supply	Quad 3-digit LED
1692	600 W	15 V	40 A	1	CV Mode Supply	Dual 3-digit LED
1693	900 W	15	60	1	CV Mode Supply	Dual 3-digit LED
1694	900 W	30	30	1	CV Mode Supply	Dual 3-digit LED

CV = Constant Voltage
CC = Constant Current

AC Power Sources

Models 9801, 9803, and 9805 offer programmable functions and are suitable for evaluating transformers, TRIACs, SCRs, and passive components as well as production, R&D, service, and pre-compliance testing.

9800 Series Features

- 0 to 300 V, low distortion AC source with models delivering up to 1500 VA, 12 Arms/48 Apeak
- Displays Vrms, Irms, Ipeak, frequency, PF, apparent power, true power, and elapsed output time
- Adjustable phase angle control
- Built-in PLD and dimmer simulation
- Voltage and frequency sweep mode Pre-compliance testing for voltage dips and frequency simulation according to IEC61000-4-11 / 4-14 / 4-2

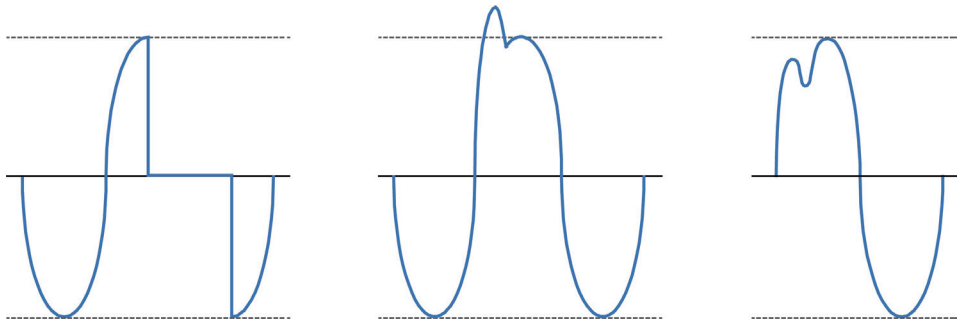
The 9830 Series programmable AC power sources provide high performance and low total harmonic distortion in a 3U form factor. The addition of positive and negative DC offset voltages expands the AC capabilities to operate in DC and AC+DC output coupling modes.

9830 Series Features

- AC, DC and AC+DC power source
- Low total harmonic distortion meets the IEC 61000-3-2 standard
- 0.98 power factor at AC input stage
- Comprehensive measurements Vrms, Arms, Vdc, +Apk, -Apk, inrush current, Hz, power factor, apparent power, reactive power, true power, and crest factor
- Built-in standard waveforms sine, square and clipped sine

Power line disturbance (PLD) simulator

The PLD simulator is an extended feature of list mode that provides the user with more control over the disturbance insertion into the waveform. This can be useful for evaluating a product's immunity performance. For instance, a user could produce common waveform disturbances like surge, sag, spikes, and dropouts at user-defined locations on the waveform.

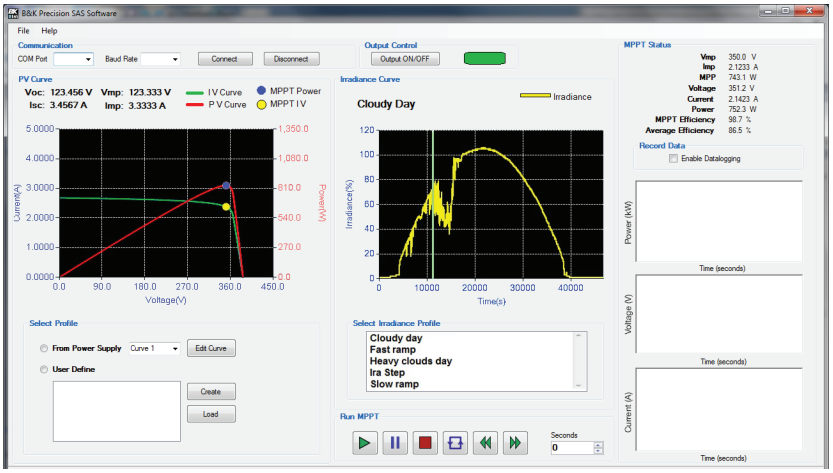


PLD Waveforms

Model	Description	Max Power	Max Voltage (rms)	Max Current (rms)	Frequency	AC Input	Interfaces	Other Features
1604A	Isolation Transformer	155 VA	117 to 124 V	1.25 A	-	110/220 VAC ±10%, 47 to 63 Hz	-	-
9801	Programmable AC Power Source	300 VA	0 to 300 V	3 A at 150 V, 1.5 A at 300 V	45 Hz to 500 Hz	110/220 VAC ±10%, 47 to 63 Hz	USB, RS232, LAN	PLD simulator, list mode, dimmer mode, and sweep function
1655A	Isolated Variable AC Power Supply	150 VA	0 to 150 V	3 A (continuous), 4 A (intermittent)	-	120 VAC, 60 Hz	-	Built-in soldering temperature control and expanded leakage scale
9803	Programmable AC Power Source	750 VA	0 to 300 V	6 A at 150 V, 3 A at 300 V	45 Hz to 500 Hz	120 VAC, 60 Hz	USB, RS232, LAN	PLD simulator, list mode, dimmer mode, and sweep function
9805	Programmable AC Power Source	1500 VA	0 to 300 V	12 A at 150 V, 6 A at 300 V	45 Hz to 500 Hz	120 VAC, 60 Hz	USB, RS232, LAN	PLD simulator, list mode, dimmer mode, and sweep function
9832	Programmable AC Power Source	2000 VA	0 to 300 V	0 to 20 A	45 Hz to 1200 Hz	190 V to 250 V 47 Hz to 63 Hz	USB, RS232, GPIB, LAN	PLD simulator, list mode
9833	Programmable AC Power Source	3000 VA	0 to 300 V	0 to 30 A	45 Hz to 1200 Hz	190 V to 250 V 47 Hz to 63 Hz	USB, RS232, GPIB, LAN	PLD simulator, list mode

PVS Series Solar Array Simulation (SAS) software

The I-V curve of solar cells can be influenced by various weather conditions such as clouds or rain. The SAS control software allows users to set I-V parameters to simulate static and dynamic MPPT efficiencies under different conditions.



- Variety of input parameters (Voc/Isc/Vmp/Imp/FF/FFv/FFi)
- Monitors real-time voltage, current, power, MPPT efficiency, and average MPPT efficiency
- Simulate I-V curve under different weather conditions during a day
- User-definable irradiance profile
- Generate an I-V curve with up to 1024 data points
- Curve generation based on Sandia Labs and EN50530 test standards

Built-in simulations compliant to automotive test standards

In order to ensure electronic systems used in a vehicle are able to function in an automotive environment, automotive component manufacturers test electronic modules to industry standards. The 9115-AT provides automotive power test waveforms compliant to DIN 40839 and ISO 16750-2 standards that can simulate common test conditions for electrical and electronic devices installed in automobiles.

DIN40839 / ISO7637

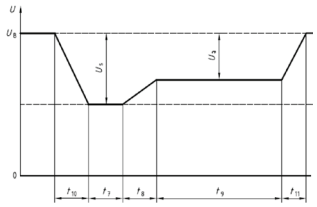


Fig. 1 - Motor startup curve

ISO16750-2

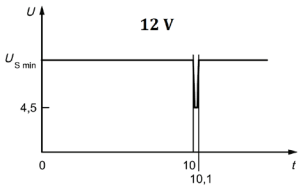


Fig. 2 - Short voltage drop test

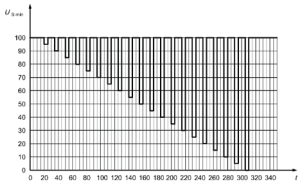


Fig. 3 - Reset behavior voltage drop test

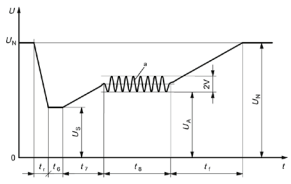
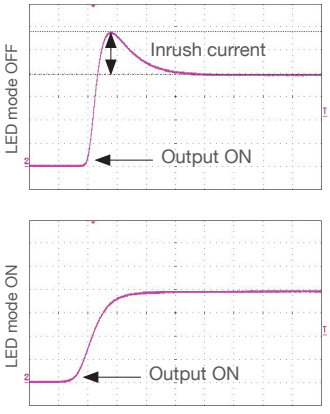


Fig. 4 - Starting profile test

LED mode

With LED mode active, inrush current will be eliminated or minimized to protect the UUT.

9170B Series / 9180B Series



Current flow during power up with LED mode enabled

Remote Communication Tools

For many of B&K Precision's programmable power supplies, the following remote communication tools are available:

- PC applications for front panel emulation, test sequencing, or logging measurement data
- Built-in web server to configure, control, or monitor power supplies via a web browser
- NI-certified LabVIEW drivers

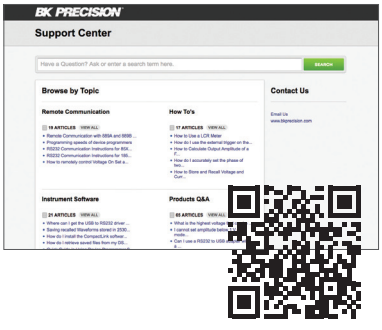
Additional Resources

Power Supply Guide

Download our free Power Supply Guide to learn more about different types of power supplies and the technology behind them. The guide also covers related terms, specifications, and usage examples.
https://www.bkprecision.com/support downloads/power-supply-guide.html

Knowledge Base

Search and find answers to frequently asked questions, plus a wealth of resources: how-to guides, technical notes and other articles.
https://bkprecision.desk.com/



Video Library

View product overviews, demonstrations, and application videos in English, Spanish, and Portuguese.
https://www.youtube.com/user/BKPrecisionVideos/videos

GitHub

Find and share programming examples and join our online community on GitHub.
https://github.com/bkprecisioncorp