

Product Datasheet - Technical Specifications



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Triple Output Programmable DC Power Supply Model 9129B



The 9129B is an economical triple output linear programmable DC power supply featuring isolated outputs that can be adjusted independently or combined in series or parallel to output higher voltage or current. Additionally, this supply can operate in tracking mode with user-configurable ratios between channels.

The front panel keys and rotary knob with convenient cursors let users quickly set voltage and current values. Up to 27 different instrument settings can be saved and recalled. The power-on state of the outputs can also be configured. The USB to TTL interface supporting SCPI commands can be used to remotely control the power supply via a PC. Alternatively, users can control the 9129B, execute test sequences or log measurements using the provided PC software application. This software also integrates with Data Dashboard for LabVIEW apps enabling iOS, Android, or Windows 8 compatible tablets or smartphones to remotely monitor select measurement indicators.

This power supply is suitable for a wide range of applications including education, service and electronic design.

Output Rating					
Voltage	0 - 30 V (CH1 & CH2) 0 - 5 V (CH3)				
Current	0-3 A (CH1, CH2 & CH3)				

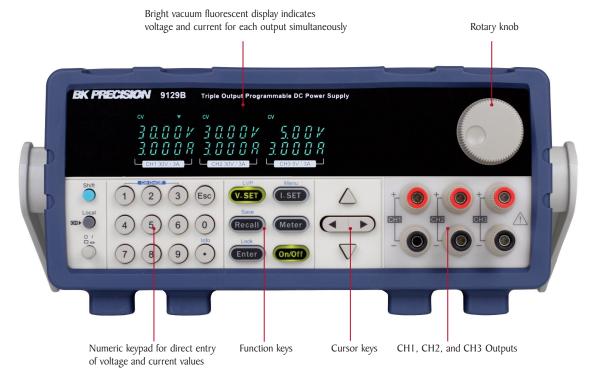
Features

- Three independent and electrically isolated outputs
- Displays voltage and current settings for all three channels simultaneously
- Low noise, linear regulation
- Series and parallel modes combine channels to increase the output voltage or current
- Tracking mode allows users to set up channels to maintain a programmed ratio
- Fully programmable channels with output On/Off control
- Store and recall up to 27 instrument settings
- Communicate via USB interface supporting SCPI commands using the included USB to TTL serial adapter
- Softpanel for remote control, test sequence generation, and datalogging available
- Overvoltage (OVP) and overtemperature (OTP) protection including keylock function
- Compact 19" half-rack form factor allows for side-by-side rack mounting of two units

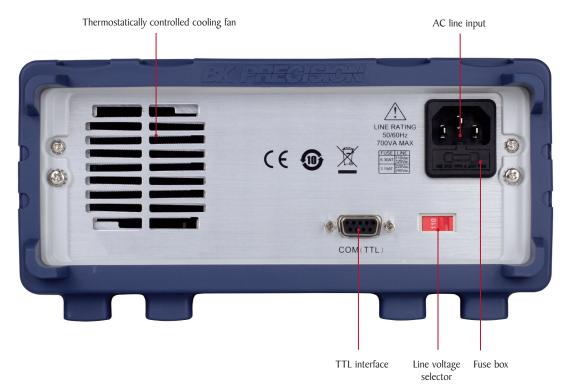


Triple Output Programmable DC Power Supply Model 9129B

Front panel



Rear panel



2

Flexible operation

Combined series mode

▼		
60.00V	SEr	5.00V
3.000R		3.000R

Channels 1 and 2 can be wired in series to increase the voltage. Selecting series combined mode provides convenient metering of the channels connected in series.

Combined parallel mode

▼	
30.00V P8 - 8	5.00V
6.000R	3.000R

Channels I and 2 can be wired in parallel to increase the current. Selecting parallel combined mode provides convenient metering of the channels connected in parallel.

Tracking mode

•		
30.00V	30.00V	5.00V
3.000R		3.000R

Tracking mode can be used to simplify adjustments across multiple channels by maintaining a user-defined ratio between outputs. Tracking mode can be set on channels 1 and 2.

Application software

C	ommunication Channel 1					Channel	2		Channel 3						
ielect	Communication Voltag		oltage 30.75		53	v	Voltage	24.	235 V	Voltage	5.	5.023			
laud Rate															
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Reset				Power	_	31.5		w	Power	25	577 W	Power		943	w
10	onnect	Disco		onei		51.5	33		1 onei	33.	577 **	1 onei		545	
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×	bit			ov	0	v	cc		ov	CV	cc	ov	CV	cc	
Main	Wavelo	rm Record	ing Pa	allel/Serie	/Tracking	Operation	Er	iernal Pr	ogram						
۲	Save Prog	ram) 👔	Load P	margor	Total	Steps 1	•	lepeat	Count 0			Run Program	n		
		Voltage			Current		0.0	put St	ate						
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1	0H1 81.235	CH2 81.235	0H3 81.235	0.000	CH2	0.000	CH1	CH2	CH3 Time(s)		_	-			
1 2	0H1 81.235 0.000	CH2 81.235 0.000	CH3 81.235 0.000	0.000	CH2	0.000	CH1	CH2	CH3 Time(s) 0.05		Remaining Cycle		50	et Time	
1 2 3	0H1 81.235 0.000 0.000	CH2 81.235 0.000 0.000	CH3 81.235 0.000 0.000	0.000	CH2 0.000 0.000 0.000	0.000	CH1	CH2	CH3 Time(s) 0.05 0.05 0.05	0	Remaining Cycle Current Running		50	nt Time d Time	
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1 2 3 4 5	CH1 81.235 0.000 0.000 0.000 0.000	CH2 81.235 0.000 0.000 0.000 0.000	0H3 81.235 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000	CH2 0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000	CH1	CH2	CH3 Time(s)	0	Remaining Cycle Current Running		50	nt Time d Time	u I
1 2 3 4 5 6	CH1 81.235 0.000 0.000 0.000	CH2 81.235 0.000 0.000 0.000	CH3 81.235 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000 0.000	CH2 0.000 0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000	CH1	CH2	CH3 Time(s)	0 0 100 0.50	Remaining Cycle Current Running		50	art Time d Time	
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1 2 3 4 5 6 7	CH1 81.235 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	CH2 0.0000 0.00000 0.00000 0.0000 0.0000 0.0000	0H3 81.235 0.000 0	0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	CH2 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	CH1	CH2	Ots Timela 0 0.05 0.05 0 0.05 0.05 0 0.05 0.05 0 0.05 0.05 0 0.05 0.05 0 0.05 0.05 0 0.05 0.05 0 0.05 0.05 0 0.05 0.05 0 0.05 0.05 0 0.05 0.05	0 100 100 100 100 100 100 100 100	Remaining Cycle Current Running	Step	50 En	at Time d Time V V V V V V V V V V V V V V V V V V V	000000000000000000000000000000000000000

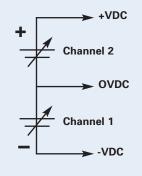


PC software is provided for front panel emulation, generating and executing test sequences or logging measurement data without the need to write source code.

- Remote monitoring on iOS, Android, or Windows 8 compatible tablets or smartphones via NI Data Dashboard for LabVIEW apps.
- Log voltage, current, and power values of each channel as well as timestamp, CV/CC mode, and output status.
- Quickly develop a custom dashboard with indicators, charts, or gauges to monitor your power supply.
- Create an unlimited number of external list files to be executed from PC memory. Save and recall list files to/from the PC.

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.

Specifications

Model	9129B				
Output Rating					
Voltage	0-30 V (CH1 & CH2), 0-5 V (CH3)				
Current	0-3 A (all channels)				
Power	195 W				
Load Regulation					
Voltage	≤ 0.02 % + 4 mV				
Current	≤ 0.2 % + 3 mA				
Line Regulation					
Voltage	≤ 0.02 % + 4 mV				
Current	≤ 0.2 % +3 mA				
Ripple & Noise					
Voltage	≤ 5 mVp-p / ≤1 mVrms				
Current	≤ 6 mArms				
Programming Resolution					
Voltage	10 mV				
Current	I mA				
Readback Resolution					
Voltage	10 mV				
Current	I mA				
Programming Accuracy ± (% output + offset)					
Voltage	≤ 0.06 % + 20 mV				
Current	≤ 0.2 % + 10 mA				
Readback Accuracy ± (% output + offset)					
Voltage	≤ 0.06 % + 20 mV				
Current	≤ 0.2 % + 10 mA				
Series Accuracy (combined mode)					
Voltage	≤ 0.5 % + 30 mV				
Current	≤ 0.2 % + 15 mA				
Parallel Accuracy (combined mode)					
Voltage	≤ 0.2 % + 30 mV				
Current	≤ 0.2 % + 25 mA				
General					
Memory	3 memory groups with 9 locations in each group				
Remote Interface	USB (Virtual COM via included USB to TTL serial adapter)				
AC Input	110/220 VAC (+/- 10 %), 47 Hz - 63 Hz				
Operating Temperature	32 °F to 104 °F (0 °C to 40 °C), relative humidity up to 80%				
Storage Temperature	-4 °F to 158 °F (-20 °C to 70 °C)				
Dimensions (W x H x D)	8.45" x 3.47" x 13.96" (214.5 x 88.2 x 354.6 mm)				
Weight	16.05 lbs. (7.3 kg)				
	Three-Year Warranty				
Standard Accessories	Power cord, IT-E132B (USB to TTL serial adapter plus USB cable), test report, and certificate of calibration				
Ontional Assossarias					
Optional Accessories	IT-EISI rack mount kit				

Note: All specifications apply to the unit after a temperature stabilization time of 15 minutes over an ambient temperature range of 23 $^{\circ}C \pm 5 ^{\circ}C$.