Programmable Triple Output DC Power Supplies
9130C Series

USB | RS232

The 9130C Series triple output linear programmable DC power supplies feature isolated outputs that can be adjusted independently or combined in series or parallel to output higher voltage or current. Additionally, these supplies 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 36 different instrument settings can be saved and recalled. The power-on state of the outputs can also be configured.

For remote control, the standard USB (USBTMC-compliant) and RS232 and interfaces supporting SCPI commands can be used to remotely control the power supplies via a PC. Alternatively, users can control the power supply, execute test sequences or log measurements using the provided PC software application.

These power supplies are suitable for a wide range of applications including production testing, telecommunications, R&D, electronic service, and labs.

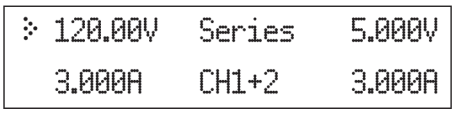
Model	9130C	9131C	9132C
Voltage	0 to 30 V (Ch1 & Ch2) 0 to 5 V (Ch3)	0 to 30 V (Ch1 & Ch2) 0 to 5 V (Ch3)	0 to 60 V (Ch1 & Ch2) 0 to 5 V (Ch3)
Current	0 to 3 A (Ch1, Ch2 & CH3)	0 to 6 A (Ch1 & Ch2) 0 to 3 A (Ch3)	0 to 3 A (Ch1, Ch2 & Ch3)

Features and benefits

- Three independent and electrically isolated outputs
- Displays voltage and current settings for all three channels simultaneously
- Low noise, linear regulation
- High programming and readback resolution of 1 mV / 1 mA
- 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 36 instrument settings
- Remote sense
- Timer-controlled output function adjustable from 0.1 – 99999.9 s
- Standard USB (USBTMC-compliant) and RS232 interfaces supporting SCPI commands for remote control
- NI certified LabVIEW™ driver and 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

Flexible operation

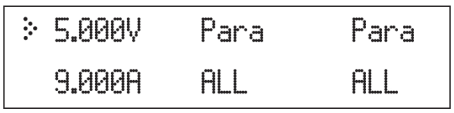
Combined series mode



ChI and Ch2 in Series mode

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.

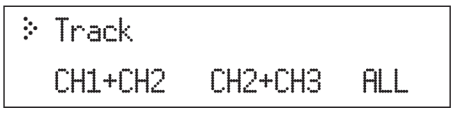
Combined parallel mode



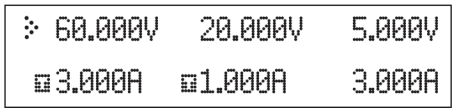
All Channels in Parallel mode

Channels 1 and 2, 2 and 3, or All channels can be wired in parallel to increase the current. Selecting Parallel Combined Mode provides convenient metering of the channels connected in parallel.

Tracking mode



Tracking mode options



ChI and Ch2 in Tracking mode

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, 2 and 3, or All channels.

Remote control and programming

Test system integration

These power supplies offer standard USB and RS232 interfaces to facilitate test system development and integration. The 9130C Series supports SCPI-compliant protocols and come with LabVIEW™ drivers.

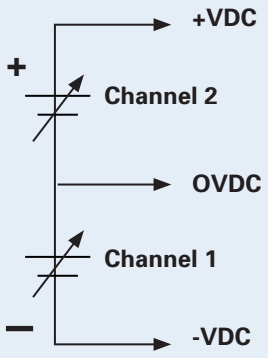
Application software

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

- Log voltage, current, and power values of each channel as well as timestamp, CV/CC mode, and output status.
- Create an unlimited number of external list files to be executed from PC memory. Save and recall list files to/from the PC.

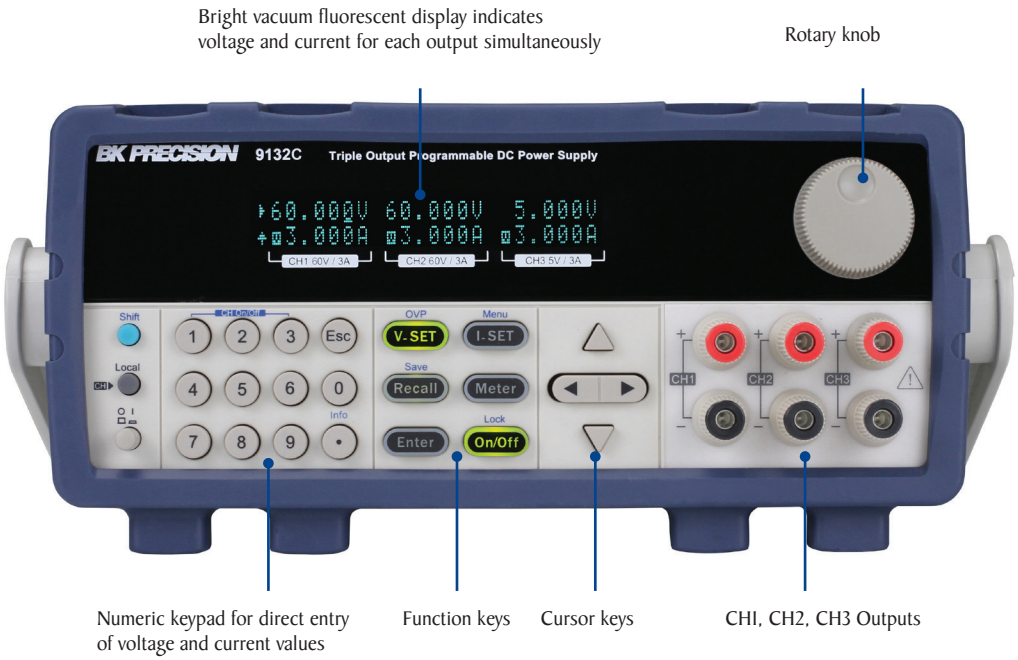
Bipolar output configuration

The independent and isolated outputs can be used to create positive and negative outputs between channels 1 and 2.

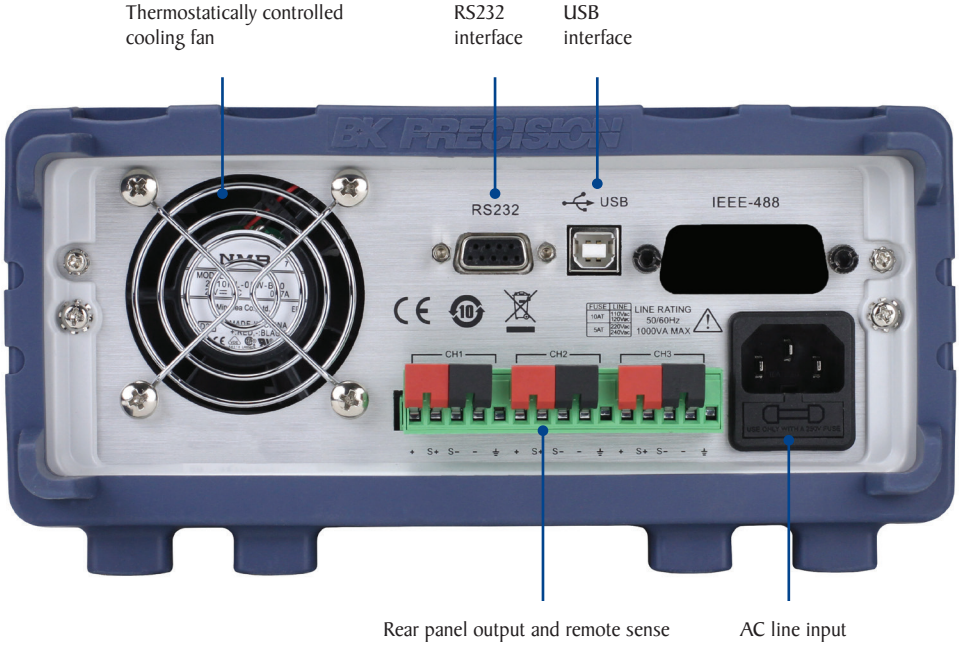


This feature is useful for powering bipolar circuits and devices.

Front panel



Rear panel



Specifications

Note: All specifications apply to the unit after a temperature stabilization time of 15 minutes over an ambient temperature range of 23 °C ± 5 °C.

Model	9130C	9131C	9132C
Output Rating			
Voltage	0 to 30 V (Ch1 & Ch2), 0 to 5 V (Ch3)	0 to 30 V (Ch1 & Ch2), 0 to 5 V (Ch3)	0 to 60 V (Ch1 & Ch2), 0 to 5 V (Ch3)
Current	0 to 3 A (Ch1, Ch2), 0 to 3 A (Ch3)	0 to 6 A (Ch1, Ch2), 0 to 3 A (Ch3)	0 to 3 A (Ch1, Ch2), 0 to 3 A (Ch3)
Power	195 W	375 W	375 W
Load Regulation			
Voltage	≤ 0.01% + 3 mV		
Current	≤ 0.1% + 3 mA		
Line Regulation			
Voltage	≤ 0.01% + 3 mV		
Current	≤ 0.1% + 3 mA		
Ripple and Noise			
Voltage	≤ 1mVrms		
Current	≤ 3mArms	≤ 5 mArms (Ch1 & Ch2), ≤ 4 mArms (Ch3)	≤ 4 mArms
Programming Resolution			
Voltage	1 mV		
Current	1 mA		
Readback Resolution			
Voltage	1 mV		
Current	1 mA		
Programming Accuracy ± (% output + offset)			
Voltage	≤ 0.03% + 10 mV		
Current	≤ 0.1% + 5 mA	≤ 0.1% + 8 mA (Ch1 & Ch2), ≤ 0.1% + 5 mA (Ch3)	≤ 0.1% + 5 mA
Readback Accuracy ± (% output + offset)			
Voltage	≤ 0.03% + 10 mV		
Current	≤ 0.1% + 5 mA	≤ 0.1% + 8 mA (Ch1 & Ch2), ≤ 0.1% + 5 mA (Ch3)	≤ 0.1% + 5 mA
Series Accuracy (combined mode)			
Current	≤ 0.05% + 10 mA		
Parallel Accuracy (combined mode)			
Voltage	≤ 0.02% + 5 mV		
Current	≤ 0.1% + 20 mA		
Temperature Coefficient (0 °C to 40 °C) ± (% output + offset) (typical)			
Voltage	≤ 0.03% + 10 mV		
Current	≤ 0.1% + 5 mA		

General				
Transient Response Time[1]	Ch1, Ch2	≤ 180 µs	≤ 120 µs	≤ 90 µs
	Ch3	≤ 160 µs	≤ 200 µs	≤ 80 µs
Rising Time at Full Load / No Load	Ch1, Ch2	≤ 100 ms	≤ 100 ms	≤ 100 ms
	Ch3	≤ 20 ms	≤ 100 ms	≤ 100 ms
Falling Time at Full Load	Ch1, Ch2	≤ 2.4 ms	≤ 1.5 ms	≤ 5 ms
	Ch3	≤ 1 ms	≤ 1.5 ms	≤ 4.5 ms
Falling Time at No Load	Ch1, Ch2	≤ 4 s	≤ 1 s	≤ 5 s
	Ch3	≤ 300 ms	≤ 1 s	≤ 150 ms
Memory		4 memory groups with 9 locations in each group		
Timer		0.1 to *99999.9* seconds		
Remote Interface		USB (USBTMC-compliant) and RS232		
AC Input		110/220 VAC (±10 %), 47 Hz to 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)	8.45" x 3.47" x 17.52" (214.5 x 88.2 x 445 mm)	
Warranty		3 Years		
Standard Accessories		Power cord, instruction manual, and certificate of calibration		
Optional Accessories		IT-E151 rack mount kit		

(1) Following a change in output current from 10% to 100% load with output recovery to within 15 mV.

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B&K Precision group member Independent service center Service center location

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B&K Precision Corporation is an ISO9001 registered company employing traceable quality management practices for all processes including product development, service, and calibration.

ISO9001:2015

Certification body NSF-ISR
Certificate number 6Z241-IS8

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