Product Fact Sheet

Keysight Advanced Power System (APS) Family

Overcome your power test challenges with the Advanced Power System family

- N6900 Series DC Power Supplies
  - for ATE applications where high performance is critical
- N7900 Series Dynamic DC Power Supplies
  - for ATE applications where high-speed dynamic sourcing and measurement is needed

1. 1 kW models have a 1U full-rack footprint
2. 2 kW models have a 2U full-rack footprint

Note: Built-in paralleling capability up to 10 kW

VersaPower architecture delivers the fastest, most accurate, integrated power system

- Accelerate test-system throughput with industry-leading speed
  - 100x test speeds compared to standard system power supplies
  - Command processing speed < 2 ms
  - Up/down programming speeds 500 µs
  - Transient response time 100 µs
  - Adjustable measurement rate to balance speed and accuracy
- Capture your DUT's current profile with accurate measurements
  - Dual voltage and current measurement capability with DMM-like accuracy
  - Current and voltage high-resolution digitizers for making dynamic measurements
  - Power, peak power, watt hour, and amp hour measurements
- Reduce your ATE development time and cost with highly integrated capabilities
  - Continuously source and sink power for power storage test applications
  - Smart triggering to increase throughput, protect your DUT, and reduce test complexity
  - Generate voltage or current waveforms with arbitrary waveform capability
  - Built-in paralleling capability up to 10 kW

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N6900A 1 kW/2 kW N7900A 1 kW/2 kW	N6950A/70A N7950A/70A	N6951A/71A N7951A/71A	N6952A/72A N7952A/72A	N6953A/73A N7953A/73A	N6954A/74A N7954A/74A	N6976A N7976A	N6977A N7977A
DC ratings							
Voltage range	0 to 9 V	0 to 20 V	0 to 40 V	0 to 60 V	0 to 80 V	0 to 120 V	0 to 160 V
Current max	100 A/200 A	50 A/100 A	25 A/50 A	16.7 A/33.3 A	12.5 A/25 A	16.7 A	12.5 A
Current sink @10%	–10 A/–20 A	–5 A/–10 A	–2.5 A/–5 A	–1.67 A/–3.33 A	–1.25 A/–2.5 A	–1.67 A	–1.25 A
Current sink @100%	–100 A/–200 A	–50 A/–100 A	–25 A/–50 A	–16.7 A/–33.3 A	–12.5 A/–25 A	–16.7 A	–12.5 A
Power	900 W/1.8 kW	1 kW/2 kW	1 kW/2 kW	1 kW/2 kW	1 kW/2 kW	2 kW	2 kW

Differences between the APS N6900 Series and the N7900 Series

This table compares performance specifications and features of the N6900A Series DC power supplies and the N7900A Series dynamic DC power supplies.

Feature	N6900 1 kW and 2 kW models	N7900 1 kW and 2 kW models
Voltage and current programming	14-bit precision (16-bit with Option 303)	16-bit precision
Voltage and current measurements	18-bit precision	18-bit precision
Voltage up/down programming time[1]	3 ms/3 ms (0.5 ms/0.35 ms with Option 303)	0.5 ms/0.35 ms
Transient response time (recovery time)[1]	100 µs	100 µs
Two-quadrant operation (10% standard, 100% optional)	Yes	Yes
Smart triggering	Yes	Yes
Power storage and efficiency measurements	Yes	Yes
Output sequencing/adjustable slew rate	Yes	Yes
Parallel operation	Yes	Yes
Low current measurement range	Yes with option 301	Yes
Seamless current measurements	Yes with option 301	Yes
V and I digitizers with programmable sample rates	Yes with option 302	Yes
External measurement logging	Yes with option 302	Yes
Output list capability	Yes with option 303	Yes
Arbitrary waveform generation	Yes with option 303	Yes
Output relays (disconnect and polarity reversal)	Yes[2] with option 760/761	Yes[2]

1. For detailed specifications refer to APS User Guide
2. N6950A/N7950A and N6970A/N7970A only have output disconnect relays, no polarity reversal relays

APS options and accessories

Model	Description
N7909A	Power dissipater unit adds current sinking or two-quadrant operation
N7908A	Black box recorder runs continually in the background
N7907A	Rack mount kit for both 1 kW and 2 kW units
N7906A	Power assistant software

Use the APS to help you overcome power-related test challenges like these:

- Increasing test system throughput
- Building a continuous source and load
- Protecting against power-related damage
- Characterizing dynamic current profiles
- Maintaining output integrity under dynamic load conditions
- Characterizing inrush current
- Tracking power events for root-cause analysis
- Generating power transients
- Properly powering on/off a DUT

www.keysight.com/find/TestChallenges

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Unlocking Measurement Insights

Published in USA, December 5, 2017
5991-2488EN
www.keysight.com