

**Aumictech**

Test & measurement · bought, sold, repaired, calibrated

Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight RP7963A

Agilent Keysight RP7963A Regenerative Power System 0 to 950 V 0 to plus or minus 20 A 0 to plus or minus 10 kW 400/480 VAC The Agilent/Keysight RP7963A is the 400/480 VAC-input RP7900 Series two-quadrant regenerative DC power system electrically paired with RP7953A. OEM data sheet 5992-2335EN lists 0 to 950 V, 0 to plus or minus 20 A, and 0 to plus or minus 10 kW with autoranging output and SD1000A-class safety disconnect compatibility on 500/950 V models. HEV/EV high-voltage converter test, battery emulation, ATE source/load, and paralleled 950 V regenerative rails. The Agilent/Keysight RP7963A is the 400/480 VAC-input RP7900 Series two-quadrant regenerative DC power system electrically paired with RP7953A. OEM data sheet 5992-2335EN lists 0 to 950 V, 0 to plus or minus 20 A, and 0 to plus or minus 10 kW with autoranging output and SD1000A-class safety disconnect compatibility on 500/950 V models. HEV/EV high-voltage converter test, battery emulation, ATE source/load, and paralleled 950 V regenerative rails. Two-quadrant source and regenerative electronic load in one chassis

**MODEL****Agilent / Keysight
RP7963A****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****RP7963A****LISTING**<https://aumictechlabs.com/products/rp7963a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight RP7963A is a 10 kW single-output bidirectional regenerative DC power supply engineered for electronic test and measurement applications. Operating in two-quadrant mode, it

functions as both a power source and regenerative electronic load, enabling seamless transitions between sourcing and absorption without interruption. This dual capability addresses demanding requirements in energy storage device testing, converter validation, and battery characterization where precise control over power delivery and energy recovery is essential. The RP7963A employs autoranging output characteristics to deliver an expanded power curve across voltage and current combinations beyond traditional rectangular supplies. This flexibility supports accurate emulation of various battery states, internal resistances, and charge conditions for comprehensive battery life characterization and early failure detection. Its regenerative design recovers up to 90% of energy to the grid, reducing operational power consumption and cooling requirements.

Technical Specifications

- Maximum output voltage: 950 V
- Maximum output current: ± 20 A per output
- Maximum power: 10 kW
- Single output configuration
- Input voltage: 400/480 VAC
- Operating mode: Two-quadrant (source and regenerative load)
- Regeneration efficiency: Up to 90% power return to grid
- Output characteristic: Autoranging
- Command processing time: Sub-millisecond
- Form factor: 3U-high package

Key Features

- Battery emulation with programmable resistance and variable charge states
- Sub-millisecond command response for dynamic testing scenarios
- Integrated safety systems protecting users and devices under test
- Compact 3U form factor for space-constrained test environments

Typical Applications

- Energy storage device testing and validation
- DC converter characterization
- Battery state and internal resistance emulation
- Battery operating life assessment
- Early failure detection in power conversion systems

Compatibility & Integration

Interface options include LAN (LXI Core), USB, GPIB, and built-in web interface for remote browser-based control. Keysight PathWave BenchVue software with Advanced Battery Test and Emulation Software (BV9210B) enables full system control. The BV9200B software coordinates operation of up to four RP7900 Series units, integrating into Keysight's HEV/EV Power Converter Test Solutions ecosystem.

Features & description

From manufacturer datasheet

Built-in paralleling so paralleled units share current in the desired CV or CC mode

Technical Specifications Instrument Type: Bidirectional regenerative DC power system Series Family: Keysight RP7900 Rated Voltage: 0 to 950 V Rated Current Source And Sink: 0 to plus or minus 20 A Rated Power: 0 to plus or minus 10 kW AC Input: 3 phase 400 VAC plus or minus 15 percent and 480 VAC plus or minus 10 percent; L1 L2 L3 PE Package Height: 3 U (10 kW class) CV Ripple Peak To Peak: 1000 mV from 20 Hz to 20 MHz CV Ripple RMS: 200 mV from 20 Hz to 10 MHz Load Regulation Voltage: 60 mV Load Regulation Current: 9 mA Voltage Programming Measurement Accuracy: 0.03 percent plus 120 mV programming; 0.03 percent plus 160 mV measurement Current Programming Measurement Accuracy: 0.1 percent plus 12 mA Transient Recovery Time: 500 us Transient Settling Band: 2.375 V CC Ripple RMS Typical: 100 mA Voltage Programming Range: 1.0 to 969 V Voltage Programming Resolution: 21 mV Current Programming Range: minus 20.5 A to 20.5 A Current Programming Resolution: 190 uA Resistance Programming Range: 0 to 50 ohm Resistance Programming Resolution: 280 uOhm Resistance Programming Accuracy: 0.08 percent plus 280 uOhm Voltage Rise Fall High Bandwidth: 1 ms 10 to 90 percent; 6 ms settle to 0.1 percent Voltage Rise Fall Low Bandwidth: 15 ms 10 to 90 percent; 50 ms settle to 0.1 percent

RP7963A Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	Bidirectional regenerative DC power system
Series Family	Keysight RP7900
Rated Voltage	0 to 950 V
Rated Current Source And Sink	0 to plus or minus 20 A
Rated Power	0 to plus or minus 10 kW
AC Input	3 phase 400 VAC plus or minus 15 percent and 480 VAC plus or minus 10 percent; L1 L2 L3 PE
Package Height	3 U (10 kW class)
CV Ripple Peak To Peak	1000 mV from 20 Hz to 20 MHz
CV Ripple RMS	200 mV from 20 Hz to 10 MHz
Load Regulation Voltage	60 mV
Load Regulation Current	9 mA
Voltage Programming Measurement Accuracy	0.03 percent plus 120 mV programming; 0.03 percent plus 160 mV measurement
Current Programming Measurement Accuracy	0.1 percent plus 12 mA
Transient Recovery Time	500 us
Transient Settling Band	2.375 V
CC Ripple RMS Typical	100 mA
Voltage Programming Range	1.0 to 969 V
Voltage Programming Resolution	21 mV
Current Programming Range	minus 20.5 A to 20.5 A
Current Programming Resolution	190 uA
Resistance Programming Range	0 to 50 ohm
Resistance Programming Resolution	280 uOhm
Resistance Programming Accuracy	0.08 percent plus 280 uOhm
Voltage Rise Fall High Bandwidth	1 ms 10 to 90 percent; 6 ms settle to 0.1 percent

PARAMETER	VALUE
Voltage Rise Fall Low Bandwidth	15 ms 10 to 90 percent; 50 ms settle to 0.1 percent
Current Rise Time	2 ms 10 to 90 percent
Output Terminal Isolation	no output terminal more than plus or minus 950 VDC from any other terminal or chassis ground
Command Processing Time	less than or equal to 1 ms from GPIB command to start of output change
Constant Dwell ARB Points	up to 65535 points
ARB Dwell Range	10.24 us to 0.30 s rounded to 10.24 us
List Steps	up to 512 steps; list not supported in primary/secondary on 5 kW and 10 kW RP7931A to RP7963A
AC Input VA	11.5 kVA
AC Input Current Per Phase	17.3 A at 400 VAC
Efficiency At Full Power	91.5 percent
Power Factor	0.99 at nominal input and rated power
Weight Typical	31.8 kg (70 lb)
Autorange Voltage V	950 V
Autorange Current I	10.5 A
Minimum Sink Resistance	0.8 ohm
Bleed Resistor Terminal To Chassis	1 MOhm
Remote Interfaces	GPIB SCPI 1993 IEEE 488.2; USB 2.0 USB-TMC488; LAN 10/100/1000; LXI Core 2011
Spec Temperature Window	warranted 0 to 40 C after 30 minute warm-up; local sense unless noted
Accuracy Conditions	percent of value plus offset at 25 C plus or minus 5 C; NPLC=1; 1 year
Safety Disconnect Accessory	SD1000A for RP795x/RP796× 500 V and 950 V models; disconnect in less than 15 ms
Sink Duration	continuous sink up to 100 percent of rated current
Grid Regeneration THD Typical	2 percent typical at full load
Paired Low Line Model	RP7953A (200/208 VAC input, same 950 V / 20 A / 10 kW DC ratings)
Bandwidth	1 ms 10 to 90 percent; 6 ms settle to 0.1 percent

PARAMETER	VALUE
Rise Time	2 ms 10 to 90 percent

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
Specifications	
PARAMETER	VALUE
Instrument Type	Bidirectional regenerative DC power system
Series Family	Keysight RP7900
Rated Voltage	0 to 950 V
Rated Current Source And Sink	0 to plus or minus 20 A
Rated Power	0 to plus or minus 10 kW
AC Input	3 phase 400 VAC plus or minus 15 percent and 480 VAC plus or minus 10 percent; L1 L2 L3 PE
Package Height	3 U (10 kW class)
CV Ripple Peak To Peak	1000 mV from 20 Hz to 20 MHz
CV Ripple RMS	200 mV from 20 Hz to 10 MHz
Load Regulation Voltage	60 mV
Load Regulation Current	9 mA
Voltage Programming Measurement Accuracy	0.03 percent plus 120 mV programming; 0.03 percent plus 160 mV measurement
Current Programming Measurement Accuracy	0.1 percent plus 12 mA
Transient Recovery Time	500 us
Transient Settling Band	2.375 V
CC Ripple RMS Typical	100 mA
Voltage Programming Range	1.0 to 969 V
Voltage Programming Resolution	21 mV
Current Programming Range	minus 20.5 A to 20.5 A
Current Programming Resolution	190 uA
Resistance Programming Range	0 to 50 ohm
Resistance Programming Resolution	280 u0hm
Resistance Programming Accuracy	0.08 percent plus 280 u0hm
Voltage Rise Fall High Bandwidth	1 ms 10 to 90 percent; 6 ms settle to 0.1 percent
Voltage Rise Fall Low Bandwidth	15 ms 10 to 90 percent; 50 ms settle to 0.1 percent

PARAMETER	VALUE
Current Rise Time	2 ms 10 to 90 percent
Output Terminal Isolation	no output terminal more than plus or minus 950 VDC from any other terminal or chassis ground
Command Processing Time	less than or equal to 1 ms from GPIB command to start of output change
Constant Dwell ARB Points	up to 65535 points
ARB Dwell Range	10.24 us to 0.30 s rounded to 10.24 us
List Steps	up to 512 steps; list not supported in primary/secondary on 5 kW and 10 kW RP7931A to RP7963A
AC Input VA	11.5 kVA
AC Input Current Per Phase	17.3 A at 400 VAC
Efficiency At Full Power	91.5 percent
Power Factor	0.99 at nominal input and rated power
Weight Typical	31.8 kg (70 lb)
Autorange Voltage V1	950 V
Autorange Voltage V2	500 V
Autorange Voltage V3	16 V
Autorange Current I1	20 A
Autorange Current I2	10.5 A
Minimum Sink Resistance	0.8 ohm
Bleed Resistor Terminal To Chassis	1 MOhm
Remote Interfaces	GPIB SCPI 1993 IEEE 488.2; USB 2.0 USB-TMC488; LAN 10/100/1000; LXI Core 2011
Spec Temperature Window	warranted 0 to 40 C after 30 minute warm-up; local sense unless noted
Accuracy Conditions	percent of value plus offset at 25 C plus or minus 5 C; NPLC=1; 1 year
Safety Disconnect Accessory	SD1000A for RP795x/RP796x 500 V and 950 V models; disconnect in less than 15 ms
Sink Duration	continuous sink up to 100 percent of rated current
Grid Regeneration THD Typical	2 percent typical at full load
Paired Low Line Model	RP7953A (200/208 VAC input, same 950 V / 20 A / 10 kW DC ratings)

Notes

Numeric rows from Keysight RP7900 Series Regenerative Power System data sheet 5992-2335EN model column RP7963A (400/480 VAC twin of RP7953A).

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 14, 2026

Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.