ROHDE&SCHWARZ
Make ideas real

R&S®NGM200
versus Keysight 66319B

Key features

- ► Fast regulation of output voltage with minimum overshoot and very fast load recovery time
- ► Minimum residual ripple and noise to supply interference-free voltage to sensitive DUTs
- ► Acquisition rate of up to 500,000 samples per second to capture extremely fast variations in voltage or current
- ► High accuracy and readings with up to 6½ digit resolution
- ► Two quadrants: operation as a source or sink
- ► Battery simulation

Your benefit	Features
Optimized load recovery time with minimal overshoot	Featuring optimized load recovery time of < 30 µs, the R&S®NGM200 power supplies can handle abrupt load changes from a few µA to the ampere range without creating voltage drops or overshoots.
Low ripple and noise	Make it possible to supply interference-free voltage to sensitive designs, such as complex semiconductors, and to support the development of power amplifiers and MMICs.
High-speed acquisition (FastLog functionality)	With an acquisition rate of up to 500 ksample/s, voltage and current results are available every 2 µs. On the R&S®NGM202, data acquisition can be performed on both channels in parallel.
Battery simulation	The battery simulator function of the R&S®NGM200 makes it possible to simulate the real battery output performance. Testing can be based on a selected battery model, while battery capacity, SoC and Voc can be set to any state to test the device under specific conditions.

For prices and more information, visit:
www.rohde-schwarz.com/product/NGM200

Parameter	R&S®NGM200	Keysight 66319B
Number of channels	1 / 2	2
Output voltage per channel	0 V to 20 V	0 V to 15 V (channel 2: 12 V)
Max. output power per channel	60 W	45 W (channel 2: 18 W)
Max. output current per channel	≤ 6 V output voltage: 6 A > 6 V output voltage: 3 A	3 A (channel 2: 1.5 A)
Max. sink current per channel	3 A	2 A (channel 2: 0.03 A)
Adjustable output impedance	–50 mΩ to 100 Ω	–40 mΩ to 1 Ω
Voltage ripple and noise (20 Hz to 20 MHz)	< 500 µV (RMS) < 2 mV (peak-to-peak)	< 1 mV (RMS) < 6 mV (peak-to-peak)
Current ripple and noise (20 Hz to 20 MHz)	< 1 mA (RMS)	< 2 mA (RMS)
Load recovery time (20 mV)	< 30 µs	< 35 µs
Programming resolution	1 mV / 0.1 mA	1 mV / 0.1 mA
Max. readback resolution	10 µV / 10 nA	1 mV / 0.1 mA
Readback accuracy, voltage	20 V range: < 0.02 % + 2 mV 5 V range: < 0.02 % + 500 µV	< 0.03 % + 5 mV (< 0.2 % + 15 mV)
Readback accuracy, current	10 A range: < 0.05 % + 250 µA 1 A range: < 0.05 % + 1 mA 100 mA range: < 0.05 % + 100 µA 10 mA range: < 0.05 % + 15 µA	5 A range: < 0.2 % + 0.5 mA 20 mA range: < 0.1 % + 2.5 µA
Max. measurement speed	500,000 sample/s (2 µs)	15 µs (≈ 67,000 sample/s)
Protection functions	OCP / OVP / OPP / OTP	OVP /OTP
Remote control interfaces	standard: USB / LAN optional: IEEE-488 (GPIB)	standard: IEEE-488 (GPIB)
Display	5", 800 × 480 pixel WVGA, capacitive touchscreen	14-character display
Dimensions (W × H × D)	222 mm × 97 mm × 436 mm	213 mm × 88 mm × 435 mm
Weight	7.1 kg / 7.3 kg	9.1 kg

R&S®NGM200 series vs. Keysight 66300 series

R&S®NGM200 series

- Two instruments, one or two channels
- Output power: 60 W per channel
- Output voltage: 0 V to 20 V per channel
- Available worldwide

Keysight 66300 series

- Eight instruments, one or two channels; channel 2 with reduced performance specifications
- Output power: 45 W per channel (66332A: 100 W)
- Output voltage: 0 V to 15 V (66332A: 0 to 20 V)
- Not available in the EU due to lack of compliance with EU RoHS directive 2011/65/EU

Source and sink and 6½ digit resolution

A resolution of up to 6½ digits is perfect for characterizing DUTs that have low power consumption in standby mode and high current in full load operation. The R&S®NGM200 power supplies automatically switch between source and sink mode. A negative current reading indicates that the instrument operates as a load.

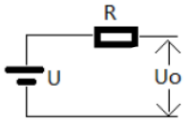
Battery simulation

Capacity, open circuit voltage (Voc) and equivalent series resistance (ESR) are important battery characteristics that are based on the battery's state of charge (SoC). The optional R&S®NGM-K106 battery simulator allows users to simulate battery behavior under different charging conditions, such as when powering a DUT.

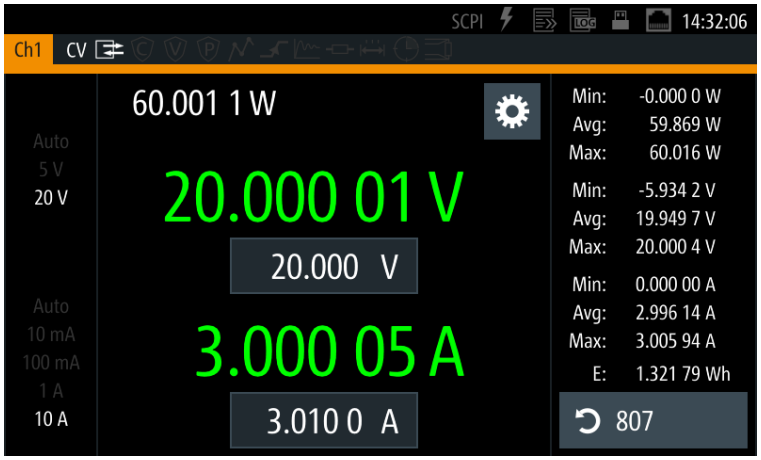
- Discharge behavior testing can be based on a selected battery model, while battery capacity, SoC and Voc can be set to any state to test the DUT-specific conditions.
- The charging behavior of a battery can also be simulated to help design battery chargers. Here, the R&S®NGM200 power supply is in sink mode.
- Both provide dynamic simulation, so Voc, ESR and SoC change in accordance with the charging/discharging conditions of a real battery. The charge status is indicated graphically; all other values are displayed as numbers.

Keysight 66319B

This DC source has only one battery simulation function. It simulates the effects of a battery's internal resistance.



Large touchscreen – new standard for power supplies



The large capacitive touchscreen is the central operating element on the R&S®NGM200. The very high resolution of 800 x 480 pixel makes it easy to read voltage and current values even from a distance. Information such as power values and statistics can be displayed in addition. Icons indicate the status of selected protection and special functions.

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