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R&S®NGE102B
versus Keysight E3646A

Key features

► All channels are galvanically isolated and floating
► All channels are electrically equivalent with the same voltage, current and power
► Parallel and serial operation
► Protective functions to safeguard instrument and DUT
► Tracking and link functions
► Remote control via USB interface and optional LAN
► Simple operation thanks to the 3.5" QVGA display
► Modern device concept – small, compact and quiet
► Save and recall device settings

Your benefit	Features
Straightforward operation	► All basic functions can be performed via dedicated keys on the front panel ► The voltage or current can be adjusted with the rotary knob
Display	► All operating conditions are clearly shown on the 3.5" QVGA display (320 × 240 pixels), including the output power and the status of protective functions ► Colors indicate the different operating states
USB interface	► The device can be controlled via external PCs with the USB interface
Each output channel can work like an individual power supply	► All channels are electrically equivalent, galvanically isolated, floating and can be combined in serial and in parallel to achieve higher voltages or currents
Small, compact and quiet	► Combination of primary transformer, secondary switching regulator and additional linear control reduces weight and size while maintaining robustness and low ripple

Parameter	R&S®NGE102B	Keysight E3646A
Number of channels	2	2
Output voltage per channel	0 V to 32 V	0 V to 20 V
Max. output power per channel	33.6 W	30 W
Max. output current per channel	3 A	< 8 V: 3 A < 20 V: 1.5 A
Programming resolution	10 mV / 1 mA	5 mV / 1 mA
Programming accuracy	< 0.1 % + 30 mV < 0.1 % + 5 mA	< 0.1 % + 25 mV < 0.2 % + 10 mA
Voltage ripple and noise (20 Hz to 20 MHz)	< 1 mV (RMS) < 20 mV (peak to peak)	< 0.5 mV (RMS) < 5 mV (peak to peak)
Current ripple and noise (20 Hz to 20 MHz)	< 2 mA (RMS)	< 4 mA (RMS)
Load recovery time	< 200 µs	< 50 µs
Output ramp function	EasyRamp	no
Arbitrary function	EasyArb	no
Readback resolution	10 mV / 1 mA	2 mV / 1 mA
Readback accuracy, voltage	< 0.1 % + 20mV < 0.1 % + 5 mA	< 0.1 % + 25 mV < 0.15 % + 10 mA
Protective functions	OCP / OVP / OTP / OPP	OVP
Remote control interfaces	standard: USB optional: LAN	standard: GPIB, RS232
Command processing time	< 10 ms	< 90 ms
Measuring functions	current, voltage, power	no
Channels galvanically isolated	yes	no
Display	TFT 3.5" QVGA	14-character display
Dimensions (W × H × D)	222 mm × 97 mm × 310 mm	213 mm x 133 mm x 348.3 mm
Weight	4.9 kg	8.2 kg

For prices and more information, visit
www.rohde-schwarz.com/product/NGE100B

Advantage factors of the R&S®NGE102B versus the Keysight E3646A

9 times
faster command processing time
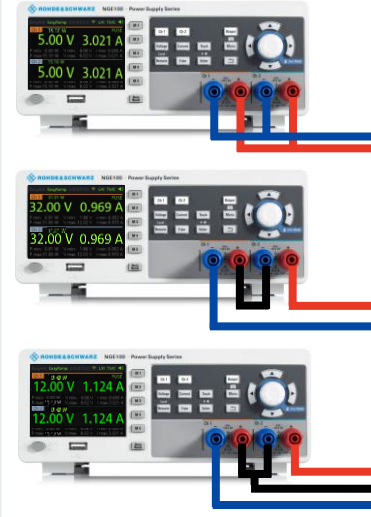
LAN
interface

3.3 kg
lighter

1.3 times
more space saved

USB
interface

1.6 times
larger voltage range

R&S®NGE102B parallel and serial operation

Parallel operation
► Up to 6 A

Serial operation
► Up to 64 V

Supply of a balanced circuit
► You can interconnect channels without getting into ground problems with complex DUTs

Built for production

► Another option for the R&S®NGE100B power supplies is a set of digital inputs/outputs (4-bit), which are used independently as trigger inputs or outputs
► The hardware of the R&S®NGE-K103 is already installed and the function can be activated via a keycode
► Digital I/O option makes production integration a breeze

Comfort features for special applications

EasyArb

EasyArb Mode on Ch 1			Enabled
EasyArb Repetition			1
Number of Data Points			4
N	Voltage	Current	Duration
1	5.00 V	0.900 A	1.00 s
2	10.00 V	0.700 A	5.00 s
3	3.00 V	1.000 A	0.03 s
4	10.00 V	0.800 A	60.00 s
Apply EasyArb Data			Apply
Clear Data Points			Clear

EasyArb allows the user to program time/voltage or time/current sequences.

EasyRamp

Ch 1	Ch 2	Ch 3
Output Ramping		
Enabled	Enabled	Disabled
Ramping Time		
10 ms	300 ms	10 ms

EasyRamp simulates operating conditions with controlled rise of supply voltage to prevent a sudden voltage surge.