

Version
01.00December
2006

R&S®NGPQ32/6 Programmable DC Power Supply

Excellent power supply at a favorable price

- ◆ One channel (48 W) with three supply ranges
 - 0 V to 8 V/0 A to 6 A
 - 0 V to 16 V/0 A to 3 A
 - 0 V to 32 V/0 A to 1.5 A
- ◆ Two measurement ranges
 - 0 A to 6 A with 100 μ A resolution
 - 0 A to 100 mA with 1 μ A resolution
- ◆ Voltage resolution 1 mV
- ◆ Optimized transient response for mobile phones
- ◆ Low ripple and noise: ≤ 0.6 mV
- ◆ Back-lit LCD for settings, readback, and status information
- ◆ Up to 60 nonvolatile system setups
- ◆ Settable overvoltage, overcurrent, and soft limits
- ◆ Constant voltage (CV), constant current (CC), and foldback modes
- ◆ Remote sensing capability
- ◆ Intelligent status indication
- ◆ Convenient manual and remote operation
- ◆ Front and rear panel outputs
- ◆ Electronic calibration
- ◆ IEEE 488.2 and RS-232-C interfaces as standard
- ◆ 1/2 19" rack space; 3 height units (HU)

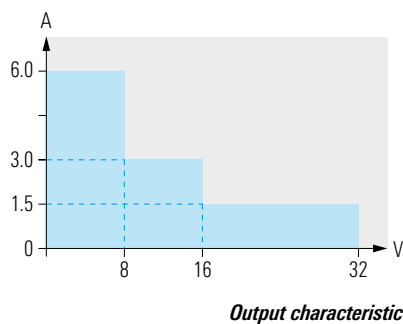


Multirange output power with accurate regulation characteristics

The new R&S®NGPQ32/6 programmable DC power supply is a general-purpose laboratory power supply that can be used in all applications where the quality of the supply voltage plays an important role in proper DUT operation. Due to its excellent output regulation characteristics, the R&S®NGPQ32/6 is suitable as a battery replacement in mobile communications products such as mobile phones. The linear regulation concept and an optimized output circuit offer the lowest possible ripple and noise as well as fast transient load response. But the supply's multirange output characteristic nevertheless means that the available 48 W maximum output power can be used for a wide range of typical applications: higher current at lower supply voltages (8 V/6 A) or lower current at higher supply voltages (32 V/1.5 A).

High resolution

The power supply's clean output signal is the basis for the built-in current measurement capability with a resolution of 1 µA (in the 100 mA range). This high resolution is particularly important when evaluating the total operation time of modern battery-supplied electronic equipment. If you select the 6 A current measurement range, the current measurement resolution is 100 µA. Voltages can be set and read back with 1 mV resolution. This is important because the operating voltage of modern electronic components is continuously decreasing.



Output characteristic

DUT protection

The R&S®NGPQ32/6 includes several features for safely supplying power to sensitive electronic equipment: The programmable overvoltage and overcurrent limits, the programmable soft limits for voltage and current settings, and the output ON/OFF key enable protected operation of the DUT. With the foldback mode activated, the R&S®NGPQ32/6 output will be switched off if the defined current limit is reached.

System and laboratory use

Front panel output connectors for laboratory purposes and rear panel output connectors for system use mean unlimited availability in both cases. For the correct supply of higher currents over longer distances, the sense connectors (on front and rear panels) can compensate for any voltage loss that may occur on the supply wires.

RS-232-C and IEEE 488.2 interfaces are included as standard so that you can easily integrate the R&S®NGPQ32/6 into systems. Two R&S®NGPQ32/6 supplies can be placed side by side in a 19" rack. The R&S®NGPQ32/6 supports electronic calibration so that it can be serviced easily and quickly on production lines.

Convenient operation

You can select all operation and protection parameters by means of a menu-controlled push-function rotary knob or by one of the supply's remote interfaces. After you select the item you want from the menu, you can enter data by using either a numeric keypad or the rotary knob. The supply's selectable intelligent display zoom function enables you to display measurement results and status information in an easy-to-read format.

You can configure the look-and-feel of the R&S®NGPQ32/6 display to meet your individual requirements. The zoomed mode can indicate the following:

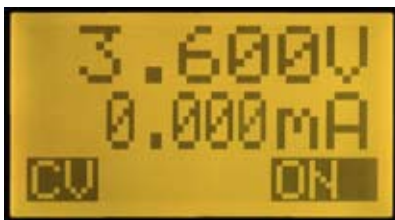
- ◆ The output of the R&S®NGPQ32/6 is switched on
- ◆ The supply is operating in constant voltage mode
- ◆ No fault conditions are present

Thus, you can check the measured V and A values and the output ON/OFF status even from longer distances.

Up to 20 system setups in each of the three supply ranges can be stored in the power supply's nonvolatile memory so that you can easily and quickly re-establish power supply settings for individual DUTs. This is a time-saving feature when you need to output multiple output voltage levels.



Normal display mode



Zoomed display mode

Specifications

Constant voltage source	
Voltage setting	
Range 8 V/6 A	0 V to 8.000 V
Range 16 V/3 A	0 V to 16.000 V
Range 32 V/1.5 A	0 V to 32.000 V
Resolution	1 mV
Deviation of full scale (range)	<0.02 % ±2 mV
With ±10% variation in AC supply	<0.01 %
From 0 °C to +45 °C	<0.01 %/°C
From 10% to 90% rated current	0.01 %
Transient recovery time following load variation	80 µs
PAR	0.6 mV rms
Settling time	<400 µs
Constant current source	
Current setting	
Range 8 V/6 A	0 A to 6 A
Range 16 V/3 A	0 A to 3 A
Range 32 V/1.5 A	0 A to 1.5 A
Resolution	1 mA
Deviation of full scale (range)	<0.02 % ±2 mA
With ±10% variation in AC supply	<0.02 %
From 0 °C to +45 °C	<0.02 %/°C
With 10% to 90% rated voltage	0.1 %
PAR	2 mA rms
Display	
Voltage measurement	0 V to 35.000 V
Resolution	1 mV
Deviation of full scale (range)	<0.03 % ±2 mV
From 0 °C to +45 °C	<0.01 %/°C
Measurement rate	approx. 20/s
Display refresh rate	approx. 3/s
Current measurement in mA range	0 A to 100 mA
Resolution	1 µA
Deviation of full scale (range)	<0.03 % ±2 µA
From 0 °C to +45 °C	<0.02 %/°C
Current measurement in A range	0 A to 6.0 A
Resolution	0.1 mA
Deviation of full scale (range)	<0.05 % ±0.2 mA
From 0 °C to +45 °C	<0.02 %/°C
General data	
Voltage compensation	1 V per line (remote sensing)
Operating temperature range	0 °C to +45 °C
AC supply ±10 %	100/120/220/240 V, 50 Hz to 60 Hz, 300 VA
EMC	in line with EN 55022, class B
Safety	in line with EN 61010, class 1
Output	max. 120 V DC, floating
Remote control	IEEE 488.2 and RS-232-C interfaces included

GPIB command processing time for V/I settings (display disabled)	<4 ms
Dimensions (W x H x D)	211 mm x 132 mm x 350 mm (8.31 in x 5.20 in x 13.78 in)
Weight	7 kg (15.43 lb)

Ordering information

Designation	Type	Order No.
Programmable DC Power Supply	R&S® NGPQ32/6	192.1216.31
Options		
19" Adapter, 3 height units, for 1 supply, 0.5 kg (1.10 lb)	R&S® ZZA-T02	1109.4164.00
19" Adapter, 3 height units, for 2 supplies, side by side	R&S® ZZA-T04	1109.4187.00



More information at
www.rohde-schwarz.com
 (search term: NGPQ32/6)



www.rohde-schwarz.com

Rohde & Schwarz Europe GmbH · Mühlendorfstraße 15 · 81671 München · Germany
 Tel. +4989 41 29 137 11 · Fax +4989 41 29 137 77
 Europe: +49 1805 12 4242, customersupport@rohde-schwarz.com