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R&amp;S Addresses



## Programmable DC Power Supplies R&S®NGPE35/40 and R&S®NGPE70/20

0 V to 35 V/0 A to 40 A

0 V to 70 V/0 A to 20 A

1400 W output power

IEEE 488 interface

**New**



*Programmable DC Power Supplies R&S®NGPE35/40*

### Brief description

R&S®NGPE35/40 and R&S®NGPE70/20 are programmable power supplies with max. 1400 W permanent output power. The requested values for voltage and power can be set either manually (with help of a 10 button keyboard) or through an IEEE488 interface. Also the measured values of voltage and current can not only be digitally read out on the front panel, but also through the IEEE488 interface.

The monitoring functions are e.g. alarms for low mains voltage, for failure of the power unit, for thermal overload and the case, that the output power is beyond the max. permitted value. The status of the regulator (voltage or current regulation) can also be obtained through the IEEE488 interface. Therefore, a sufficient integration in automatic test systems is possible.

Because of the technical concept as a switched-mode regulator, the R&S®NGPE35/40 and R&S®NGPE70/20 have a good efficiency (depending on the mains voltage between 85% and 90%). The active power factor correction enables a power factor between 0.99 to 0.98 at 100% to 50% output power. The use of remote-sensing connectors facilitates the compensation of voltage losses between power supply force connectors and D.U.T. of up to 1 V per load line.

The temperature controlled fan keeps the noise low, so that the R&S®NGPE35/40 and R&S®NGPE70/20 also pleasantly can be used in a lab.

### Main features

- ◆ High output power
- ◆ High efficiency
- ◆ Switched-mode regulator with active power factor correction
- ◆ Comfortably manual operation
- ◆ IEEE488 remote control
- ◆ Read out of current and voltage values
- ◆ Low noise fan (temperature controlled)
- ◆ Extensive monitoring functions



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## Programmable DC Power Supplies R&S®NGPE35/40 and R&S®NGPE70/20

### Specifications

Voltage	
Output voltage	
R&S®NGPE35/40	0 V to 35.00 V in 3500 steps
R&S®NGPE70/20	0 V to 70.00 V in 3500 steps
Setting resolution	
R&S®NGPE35/40	10 mV = 1 LSB
R&S®NGPE70/20	20 mV = 1 LSB
Deviation of the setted value	<2 LSB
Voltage measurement	
R&S®NGPE35/40	0 V to 35.00 V in 3500 steps
R&S®NGPE70/20	0 V to 70.00 V in 3500 steps
Measurement resolution	
R&S®NGPE35/40	10 mV
R&S®NGPE70/20	20 mV
Deviation of measured value	≤ ±4 LSB
Deviation at mains fluctuations from 95 V to 265 V (constant-voltage mode)	
R&S®NGPE35/40	<1 mV
R&S®NGPE70/20	<2 mV
Deviation at load variations 10% to 90%	
R&S®NGPE35/40	<5 mV
R&S®NGPE70/20	<10 mV
Ripple and noise (at 35 V, 39.9 A load and constant-voltage mode)	
R&S®NGPE35/40	<2 mV (RMS, bandwidth 0 to 1 MHz)
R&S®NGPE70/20	<10 mV (peak, bandwidth 0 to 50 MHz)
Ripple and noise (at 70 V, 19.9 A load and constant-voltage mode)	
R&S®NGPE35/40	<6 mV (RMS, bandwidth 0 to 1 MHz)
R&S®NGPE70/20	<25 mV (peak, bandwidth 0 to 50 MHz)
Load regulation time at load changes	
10% to 90% of the rated current	<10 ms
90% to 10% of the rated current	<10 ms
Setting time at voltage changes from 0 V to maximum	
R&S®NGPE35/40 (load current 36 A)	<13 ms
R&S®NGPE70/20 (load current 18 A)	<13 ms
R&S®NGPE35/40 (load current 4 A)	<8 ms
R&S®NGPE70/20 (load current 2 A)	<8 ms
Settling time at voltage changes from maximum to 0 V	
R&S®NGPE35/40 (load current 36 A)	<15 ms
R&S®NGPE70/20 (load current 18 A)	<15 ms
R&S®NGPE35/40 (load current 4 A)	<150 ms
R&S®NGPE70/20 (load current 2 A)	<150 ms

Current	
Output current	
R&S®NGPE35/40	0 A to 40 A in 4000 steps
R&S®NGPE70/20	0 A to 20 A in 4000 steps
Setting resolution	
R&S®NGPE35/40	10 mA = 1 LSB
R&S®NGPE70/20	5 mA = 1 LSB
Deviation of the setted value	<5 LSB
Current measurement	
R&S®NGPE35/40	0 A to 40.00 A in 4000 steps
R&S®NGPE70/20	0 A to 20.00 A in 4000 steps
Deviation of measured value	≤ ±4 LSB
Deviation at mains fluctuations from 95 V to 265 V at maximum load current (constant-current mode)	< 2 mA
Ripple and noise (at 1 V and maximum load current in constant current mode)	
R&S®NGPE35/40	<15 mA (RMS, bandwidth 0 to 50 MHz)
R&S®NGPE70/20	<10 mA (RMS, bandwidth 0 to 1 MHz)
	<15 mA (peak, bandwidth 0 to 50 MHz)
General data	
Efficiency at 1400 W output power and 230 V mains voltage	90%
Power factor	0.99 at 1400 W output power
Max. voltage compensation by help of sense lines	1 V per line
Isolation test voltage at output terminals	
vs. mains connectors	2500 V DC
vs. housing	500 V DC
mains connectors vs. housing	2500 V DC
Nominal temperature range	0°C to +40°C
Mains voltage range	95 V to 265 V
Space needed in a 19" system	1/1 (19") 3 HU
Dimensions (W × H × D)	442 mm × 131 mm × 442 mm
Weight	14 kg

### Ordering information

Programmable DC Power Supply	NGPE35/40	192.1116.31
	NGPE70/20	192.1116.71



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