Programmable Power Supplies NGPX

NGPX 35/10:

0 to 35 V/0 to 10 A

NGPX 70/5:

0 to 70 V/0 to 5 A

NGPX 150/2.3:

0 to 150 V/0 to 2.3 A

High-speed power supply for power ramp simulation and high test throughput

Photo 42846

Brief description

Power Supplies NGPX are high-performance programmable laboratory units (350 W) using linear regulation. With their excellent regulation characteristics these 19" units are ideal for use in development labs. Thanks to convenient manual operation and IEC/IEEE-bus control they can readily be integrated into production test systems. A rear trigger input allows fast on/off switching of the output voltage to support current-saving applications.

Main features

- 350 W output power
- Low PARD thanks to linear regulation
- Accurate return signalling of voltage and current values, also via IEC/IEEE bus
- Effective current measurement with dynamic loads
- Fast up and down programming (typ. 10 µs for NGPX35/10)
- Large alphanumeric LCD display for output of nominal and actual values as well as status information
- Nominal value input via numeric keypad; increment and decrement key
- Rear, isolated trigger input
- Rear isolating and polarity reversal relay (optional)
- Current monitor in 3rd current range with 25 µA resolution (optional)
- Nonvolatile storage of 10 complete instrument setups
- Selectable foldback function
- Temperature-controlled cooling fan
- Soft limits for current and voltage
- Hardware overvoltage protection
- Remote sensing
- 19" system unit with IEEE488.2

Specifications in brief

Constant-voltage source	**35/10**	**70/5**	**150/2.3**
Voltage setting	0 to 35.00 V	0 to 70.00 V	0 to 150.00 V
Resolution (mV/steps)	10/3500	20/3500	50/3000
Deviation			
from nominal value (±1 LSB)	<25 mV	<50 mV	<125 mV
with ±10% AC supply variation	<±0.35 mV	<±0.7 mV	<±1.5 mV
with load variation (10 to 90% of fs)	<±1 mV	<±2 mV	<±3.5 mV
Transient recovery time with load variation (10 to 90% of fs) to ±0.15%	<75 µs	<75 µs	<75 µs
Rise/fall time of output voltage (fast mode)	typ. <10 µs	typ. <20 µs	typ. <20 µs
PARD, V_{rms} (C_{ON}/C_{OFF})	<0.25/<0.5 mV	<0.5/<1.0 mV	<1/<2 mV
Voltage measurement	0 to 40.95 V	0 to 81.9 V	0 to 204.75 V
Resolution (mV/steps)	10/4095	20/4095	50/4095
Deviation from measured value (±2 LSB)	<±35 mV	<±70 mV	<±150 mV
Constant-current source			
Current setting	0 to 10.00 A	0 to 5.00 A	0 to 2.30 A
Resolution (mA/steps)	2.5/4000	1.25/4000	1/2300
Deviation from nominal value[1]	<±10 mA±1 LSB	<±10 mA±1 LSB	<±5 mA±1 LSB
with ±10% AC supply variation	<±0.2 mA	<±0.2 mA	<±0.2 mA
with load variation (10 to 90% of fs)	<±1 mA	<±1 mA	<±0.5 mA
PARD, I_{rms} (C_{ON}/C_{OFF})	<0.2/<0.6 mA	<0.1/<0.3 mA	<0.05/0.15 mA
Current measurement in range 1	0 to 10.2375 A	0 to 5.1188 A	0 to 4.095 A
Resolution (mA/steps)	2.5[1]/4095	1.25[1]/4095	1/4095
Deviation from measured value ±2 LSB)	<±20 mA	<±10 mA	<±5 mA
Current measurement in range 2	0 to 1.02375 A	0 to 511.88 mA	0 to 409.5 mA
Resolution (µA/steps)	250/4095	125[2]/4095	100/4095
Deviation from measured value ±2 LSB)	<±2 mA	<±1 mA	<±0.5 mA
Current measurement in range 3 (option)		0 to 102.375 mA	
Resolution (µA/steps)	25[3]/4095	25[3]/4095	25[3]/4095
Deviation from measured value (±2 LSB)	<±30 µA[3]	<±30 µA[3]	<±30 µA[3]
Overvoltage protection			
Operating range	4 to 99.95 V	4 to 99.95 V	4 to 200 V
Resolution	50 mV	50 mV	100 mV
Response accuracy	±4 V	±4 V	±4 V

General data	
Refresh rate of display	3 updates per second
Refresh rate of measured value	update on each query
Setting time (incl. command processing)	typ. 4ms (NGPX mode)
Outputs	floating, max. 250 V DC
AC supply	100/120/220/240 V; 47 to 63 Hz; 1400 VA
Dimensions (WxHxD); Weight	492 mm x 161 mm x 513 mm; 23 kg
Programming	IEC625-2/IEEE488.2

Ordering information

Programmable Power Supply	NGPX35/10	0192.0610.31
	NGPX70/5	0192.0610.71
	NGPX150/2.3	0192.0610.11
Options		
Rear isolating and polarity reversal relay for	NGPX 35/10	0192.0610.32
	NGPX 70/5	0192.0610.72
	NGPX 150/2.3	0192.0610.12
Current monitor in current range 3 for	NGPX 35/10	0192.0610.33
	NGPX 70/5	0192.0610.73
	NGPX 150/2.3	0192.0610.13

1) Readout rounded to full mA

2) Readout rounded to full 100 µA

3) Readout rounded to full 10 µA