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Programmable Voltage Source NGPS

For IEC/IEEE-bus systems

2 × ±40 V/±16.38 V,

max. 100 mA

Photo 27335

Brief description

Programmable Voltage Source NGPS has two independent outputs, the output voltages being programmable manually or by a controller. The two outputs can be combined as desired.

Main features

- Maximum current drain 100 mA: any value in excess of this limit will be signalled as a malfunction of the analog section
- Six-digit display for visual monitoring of programmed test runs
- In combined mode (programmed and manual) a digitally set voltage can be varied manually
- Two separate bipolar voltage sources with 0.5 mV or 2 mV resolution
  – 65,536 steps in low range
  – 40,000 in high range
- Programming via IEC/IEEE bus or manual control
- Shortcircuit-proof outputs
- Remote sensing to compensate for voltage drops of up to 0.5 V per lead

Operation

A trigger facility allows fast on/off switching of preset voltages and thus defined timing of test runs. By programming an automatic voltage sweep, the output voltage changes upon a trigger command between a start and a stop value.

Step size (n × count) and duration (n × 700 µs) can be preset. Depending on the trigger command, single-shot or current sweeping or different step size/duration for forward and return sweep can be programmed.

Specifications in brief

Outputs (A and B)	2 separate, floating channels, in parallel with rear outputs
Output voltage per channel	
Low range	–16.3835 to +16.3835 V
High range	–40.00 to +40.00 V
Setting	keypad; variation in steps or continuously within one range or programmed
Resolution (low/high range)	0.5 mV/2 mV
Deviation of fs (low/high range)	±2 mV/±4 mV
Display (with polarity sign)	6 digits for one channel
Output current	max. 100 mA, limiting threshold at approx. 130 mA
Stability, PARD	
Voltage deviation	
with ±10% AC supply variation	$<10^{-5}$
with temperature variation	$<10^{-5}$/K +100 µV/K
with load variation	$<10^{-5}$
Instability (low/high range)	$<4 \times 10^{-6}$/h/$<8 \times 10^{-6}$/h
Capacitive load	≤0.1 µF (80 V step)
PARD at 20 Hz and 1 MHz (low/high range)	<500 µV/<1 mV; V_{rms}
Nonlinearity (low/high range)	<700 µV/<3 mV

Remote control	
Interface	IEC 625-1 (IEEE 488) for ranges and voltage
Functions	SH1, AH1, T2, TE2, L1, LE1, SR1, RL0, PP1, C0, DC1, DT1
Programming response time	<1 µs
Data rate	max. 42 Kbyte/s
Programming time	>183 µs
Transient recovery time	<700 µs (<100 µs for smallest programming step)
Remote sensing	compensation for 0.5 V per lead
General data	
AC supply	110/220 V ±10%, 50 to 60 Hz, 120 VA
Dimensions (W x H x D); weight	492 mm x 116 mm x 392 mm; 6.2 kg

Ordering information

Programmable Voltage Source	NGPS	0192.0061.02

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