KEYSIGHT TECHNOLOGIES (AGILENT HP)

N6763A

The Keysight (Agilent) N6763A is a 300W precision DC power module designed for the N6700 Modular Power System and N6705 DC Power Analyzer. It delivers low noise, highly precise control, and dual-digitizing capabilities for simultaneous voltage and current measurements down to the milliampere and microampere regions.

SPECIFICATIONS

General

Interfaces	GPIB, LAN, USB, LXI Class C (via host mainframe)

Physical

Power Supply	Powered by mainframe slot
Operating Temperature	0 °C to 55 °C (current derated 1% per °C above 40 °C) °C
Dimensions (W×H×D)	68.2 mm × 128.4 mm × 213.0 mm mm
Weight	1.4 kg kg

DC Output Ratings

Maximum Output Voltage	20 V
Maximum Output Current	50 A
Maximum Output Power	300 W
Low Voltage Measurement Range	2 V
Low Current Measurement Range	1.5 A

Programming Accuracy

Voltage Programming Accuracy (High Range)	0.03% + 5 mV
Current Programming Accuracy (High Range)	0.1% + 15 mA

Ripple & Noise

Constant Voltage Ripple and Noise (Peak-to-Peak)	5 mV
Constant Voltage Ripple and Noise (RMS)	1 mV
Constant Current Ripple and Noise (RMS)	10 mA

Load Regulation

Load Regulation (Voltage)	2 mV
Load Regulation (Current)	12 mA

Source Regulation

Line Regulation (Voltage)	0.5 mV
Line Regulation (Current)	5 mA

Programming Range

Voltage Programming Range (High Range)	10 mV - 20.4 V
Current Programming Range (High Range)	50 mA - 51 A

Programming Resolution

Voltage Programming Resolution (High Range)	300 µV
Current Programming Resolution (High Range)	750 µA

Measurement Resolution

Voltage Measurement Resolution (High Range)	250 µV
Voltage Measurement Resolution (Low Range)	25 µV
Current Measurement Resolution (High Range)	500 µA
Current Measurement Resolution (Low Range)	20 µA

Output Protection

Over-Voltage Protection Maximum Setting	22 V

Common Mode Noise

Common Mode Noise (RMS)	500 µA
Common Mode Noise (Peak-to-Peak)	<2 mA

Isolation and Connection

Remote Sense Capability	Up to 1 V drop per load lead
Series Operation	Direct series operation supported (no auto-series)
Parallel Operation	Direct parallel operation supported (no auto-parallel)

Transient Response & Delay

Minimum Output Turn-On Delay (Without relay)	18 ms
Minimum Output Turn-On Delay (With relay option)	44 ms

Measurement and Digitizer Capabilities

Simultaneous Voltage & Current Digitizing	Standard via dual-digitizers
Microampere Measurement Capability	Not supported

Physical and Modular Characteristics

Module Slot Width	Double-wide
Host Mainframe Compatibility	N6700 Low-Profile Modular Power Systems, N6705 DC Power Analyzers

Measurement Accuracy

Voltage Measurement Accuracy (High Range)	0.03% + 6 mV
Current Measurement Accuracy (High Range)	0.085% + 4 mA
Current Measurement Accuracy (Low Range, 100 mA)	0.085% + 15 µA (for 200 mA range)

Output Performance

Transient Response Recovery Time	< 100 µs (to within 75 mV after a 50% to 100% load change)

Safety & Isolation

Maximum Floating Voltage	±240 VDC from chassis ground

Sensing

Remote Sense Compensation	Up to 1 V drop per load lead

Digitizer

Digitizing Sample Rate	50 kHz (20 µs minimum sample interval)
Data Buffer Size	512,000 readings per parameter

Configuration Options

Option 760	Output disconnect relays
Option 761	Output disconnect and polarity reversal relays

Accuracy & Resolution

Voltage Measurement Accuracy (Low Range)	0.016% + 1.5 mV (for 5.5 V range)
Voltage Programming Temperature Coefficient	0.0016% + 0.15 mV per °C
Current Programming Temperature Coefficient	0.005% + 0.2 mA per °C
Voltage Measurement Temperature Coefficient (High Range)	0.0016% + 0.15 mV per °C
Voltage Measurement Temperature Coefficient (Low Range)	0.0016% + 0.15 mV per °C
Current Measurement Temperature Coefficient (High Range)	0.005% + 0.2 mA per °C
Current Measurement Temperature Coefficient (Low Range)	0.005% + 1.5 µA per °C

Output Response

Voltage Up-Programming Rise Time	1.5 ms (under full resistive load or no load)
Voltage Down-Programming Fall Time (Full Load)	1.5 ms
Voltage Down-Programming Fall Time (No Load)	15 ms

Protection

Over-Voltage Protection Accuracy	0.25% + 250 mV
Over-Current Protection Response Time	30 µs

Performance

Command Processing Time	≤ 1 ms

Environmental

Storage Temperature Range	-30 °C to 70 °C
Operating Altitude	Up to 2000 m

Compliance

Safety Compliance	UL 61010-1, CSA C22.2 No. 61010-1, EN 61010-1
EMC Compliance	EN 61326-1, ICES-001, AS/NZS CISPR 11

TECHNOLOGY

Precision Modular DC Power Supply

APPLICATIONS

Automated Test Equipment (ATE) & R&D Bench Characterization