KEYSIGHT TECHNOLOGIES (AGILENT HP)

N5700 Series - 750W

The Keysight N5700 Series of 750W Programmable DC System Power Supplies offers robust performance in a compact 1U package, featuring universal AC input and multiple remote programming interfaces. Designed for ATE systems and benchtop testing, these supplies provide reliable power with comprehensive protection features.

SPECIFICATIONS

General

Interfaces	GPIB, LAN, USB
Display	Segment LCD with front panel controls
Firmware Upgradability	Yes, via USB or LAN

Physical

Power Supply	85-265 Vac, 47-63 Hz
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	423 mm × 43.7 mm × 432 mm (W×H×D) mm
Weight	8.3 kg kg

General Specifications

Model Series	N5700 Series
Output Power Rating	750 W
Number of Outputs	1

Output Specifications

Output Voltage Range	Model dependent (e.g., 0-6 V, 0-600 V)
Output Current Range	Model dependent (e.g., 0-1.3 A, 0-125 A)
Voltage Programming Accuracy (20-100% of max V)	0.05% + 10 mV
Current Programming Accuracy (20-100% of max I)	0.2% + 20 mA
Voltage Programming Resolution	10 mV
Current Programming Resolution	10 mA
Voltage Regulation (Line)	0.01% + 2 mV
Voltage Regulation (Load)	0.01% + 2 mV
Current Regulation (Line)	0.01% + 500 µA
Current Regulation (Load)	0.01% + 500 µA
Ripple and Noise (Voltage RMS, 20 Hz-20 MHz)	3 mVrms
Ripple and Noise (Voltage Peak-to-Peak, 20 Hz-20 MHz)	30 mVp-p
Ripple and Noise (Current RMS, 20 Hz-20 MHz)	10 mArms
Transient Response Time (Voltage, 50% change)	<1 ms
Remote Sensing Voltage Drop Compensation	Up to 5 V total drop

Input Specifications

AC Input Frequency Range	47-63 Hz
Power Factor	>0.99 at full load, 100 Vac
Efficiency	Up to 88%
Inrush Current	<50 A peak at 230 Vac, cold start

Measurement Specifications

Voltage Readback Accuracy	0.05% + 10 mV
Voltage Readback Resolution	10 mV
Current Readback Accuracy	0.1% + 20 mA
Current Readback Resolution	10 mA

Protection Features

Over-Voltage Protection (OVP)	Adjustable, % of max V
Over-Current Protection (OCP)	Adjustable
Over-Temperature Protection (OTP)	Yes
Remote Sense Protection	Yes
Reverse Voltage Protection	Yes
Output Disable	Yes

Programming and Control

Programming Language	SCPI
Programming Response Time (Voltage)	<50 ms
Programming Response Time (Current)	<50 ms
Analog Control Inputs	0-5 V or 0-10 V for V/I programming
Analog Monitor Outputs	0-5 V or 0-10 V for V/I monitoring

Connectivity and Interfaces

LXI Compliance	Class C

Environmental Conditions

Storage Temperature Range	-40 to 70 °C
Operating Humidity Range	20% to 80% RH, non-condensing
Storage Humidity Range	5% to 90% RH, non-condensing
Operating Altitude	Up to 2000 m
Non-Operating Altitude	Up to 4500 m

Physical Characteristics

Rack Unit Size	1U
Cooling Method	Forced Air
Front Panel Connectors	Output sense, Remote Inhibit, USB (some models)
Rear Panel Connectors	Output terminals, AC input, GPIB, LAN, USB, Remote Sense, Analog Control/Monitor, Interlock

Safety and Compliance

Safety Standards	IEC 61010-1
EMC Standards	IEC 61326-1
CE Mark	Yes
RoHS Compliance	Yes
ISM Group	Group 1
ISM Class	Class A

Ordering Information and Options

Available Options	Variety of voltage/current combinations (e.g., N5741A-N5752A)
Rack Mount Kit	Optional
Calibration Options	Standard
Warranty	3 years

Input Power

AC Input Voltage Range	100-240 VAC

Performance

Output Hold-up Time	>10 ms

Output Performance

Output Isolation (Output to Chassis)	+/- 240 VDC
Output Isolation (Output to Remote Sense)	+/- 240 VDC

Control & Interface

Digital I/O	8-bit digital port (programmable)

Protection

OVP Adjustability	Adjustable 0% to 110% of Vmax
OCP Adjustability	Adjustable 0% to 110% of Imax
Reverse Current Protection	Yes

Environmental & Safety

Vibration (Non-Operating)	MIL-T-28800F, Class 3 (Random)
Shock (Non-Operating)	MIL-T-28800F, Class 3 (30 g, 11 ms, half-sine)

Output Characteristics

Ripple and Noise (Current P-P, 20 Hz-20 MHz)	20 mA
Remote Sense Input Impedance	1.5 kΩ (typical)

Measurements

Readback Rate (Remote Interface)	Up to 10 readings/s

Connectivity / Control

Digital I/O Functionality	8 bits, user-configurable for trigger in/out and status

Physical / Environmental

Acoustic Noise	<48 dBA (at 25 °C, full load)

Compliance

Safety Approvals	UL 61010-1, CAN/CSA-22.2 No. 61010-1, IEC 61010-1
EMC Compliance Details	IEC 61326-1, EN 61326-1, CISPR 11 / EN 55011 Group 1 Class A

Electrical Isolation

Isolation Voltage (Input to Chassis)	240 VAC (120 VAC models), 300 VAC (230 VAC models)
Isolation Voltage (Input to Output)	500 VDC

TECHNOLOGY

Switching Power Supply

APPLICATIONS

ATE systems, benchtop testing, manufacturing test

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