

ORENSEN (AMETEK)

DHP 300-6.6

The Sorensen DHP 300-6.6 is a high-performance, programmable DC power supply belonging to the Sorensen DHP (Digital High Power) Series. Delivering up to 300V and 6.6A (1980W), it features a modular design, dual digital displays, comprehensive protection mechanisms, and remote digital and analog control.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488.2), RS-232, Isolated Analog
Display	Vacuum Fluorescent Display (VFD)

Physical

Power Supply	190 - 250 VAC, single-phase or three-phase, 47 - 63 Hz
Operating Temperature	0 to 50 °C °C
Dimensions (W×H×D)	483 x 133 x 559 mm mm
Weight	16 kg kg

Output Specifications

Maximum Output Voltage	300 VDC
Maximum Output Current	6.6 ADC
Maximum Output Power	1980 W
Line Regulation (Voltage)	0.1% of max. voltage
Line Regulation (Current)	0.1% of max. current
Load Regulation (Voltage)	0.1% of max. voltage
Load Regulation (Current)	0.1% of max. current
Ripple & Noise (Vrms, 20MHz)	150 mV

Programming & Readback Resolution and Accuracy

Voltage Programming Accuracy	0.1% of max. voltage
Current Programming Accuracy	0.2% of max. current
Voltage Readback Accuracy	0.1% of max. voltage + 1 count
Current Readback Accuracy	0.2% of max. current + 1 count

Protection Features

Over-Voltage Protection (OVP) Range	0 to 110% of max. voltage
Over-Current Protection (OCP)	Included
Over-Temperature Protection (OTP)	Included
Surge Limit Protection	Included
Soft Start Protection	Included
Brown Out Protection	Included
Short Circuit Protection	Included
Front Panel Lockout	Included

Input Specifications

AC Input Voltage Range	190 - 250 VAC
AC Input Frequency Range	47 - 63 Hz
Number of Phases	Single-phase or three-phase

User Interface & Control

Digital Display Capability	Displays output power, voltage, current, set points, limits, AC input voltage, air inlet temperature, auto-step sequence settings, calibration, diagnostics
Manual Controls	Up/Down arrows, Last Set button, front panel encoder
External Shutdown	External shutdown input to inhibit the output
Power-Off Memory	LAST SET button restores supply settings upon power up

Connectivity & Communication

RS-232 Interface	Standard
GPIB Interface	Standard (IEEE-488.2)
External Analog Control	Isolated analog control standard

Physical & Mechanical

Form Factor	Rackmount
Rack Height (U)	3U
Cooling System	Forced air fan cooling

Environmental & Safety Compliance

Storage Temperature Range	-40 to 85 °C
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Performance

Transient Response Time	< 1 ms to recover within 1% of rated voltage for a 50% to 100% load step
Remote Sense Compensation	Up to 5 V total line drop (2.5 V per line)
Voltage Temperature Coefficient	0.02% of rated output voltage per °C
Current Temperature Coefficient	0.03% of rated output current per °C

Environmental

Operating Altitude	Up to 2000 m (6500 ft)
Operating Humidity	Up to 90% RH, non-condensing
Storage Humidity	Up to 95% RH, non-condensing

Safety & Compliance

Regulatory Compliance	CE, CSA
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AC Input

Input Current (208 VAC, 3-phase)	9 A (typical at full load)
Input Current (220 VAC, 1-phase)	15 A (typical at full load, optional configuration)
Input Current (380 VAC, 3-phase)	5 A (typical at full load, optional configuration)
Input Current (480 VAC, 3-phase)	4 A (typical at full load, optional configuration)
Efficiency	≥ 80% (typical at full load)
Power Factor	0.90 typical (3-phase) / 0.98 typical (1-phase)

Programming & Readback

Voltage Programming Resolution	12-bit (0.024% of full scale)
Current Programming Resolution	12-bit (0.024% of full scale)
Voltage Readback Resolution	12-bit (0.024% of full scale)
Current Readback Resolution	12-bit (0.024% of full scale)

Analog Interface

Analog Programming Ranges	0-5 V, 0-10 V, or 0-5 kΩ, 0-10 kΩ (user-selectable)
Analog Monitoring Ranges	0-5 V or 0-10 V (user-selectable)

Electrical Specifications

Maximum Output Isolation	±1000 VDC (output to chassis)
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Dynamic Response

Output Voltage Rise Time	100 ms (typical, 10% to 90% at full load)
Output Voltage Fall Time (Full Load)	100 ms (typical, 90% to 10% at full load)
Output Voltage Fall Time (No Load)	5 s (typical, 90% to 10% under no-load conditions)

Configuration Options

Parallel Operation	Up to 5 units in master/slave configuration with active current sharing
Series Operation	Up to 2 units (subject to output isolation limits)

TECHNOLOGY

Switch-mode programmable power supply

APPLICATIONS

Industrial ATE, aerospace testing, component burn-in, research and development, and OEM systems applications

