

ORENSEN (AMETEK)

DCS40-25

The Sorensen DCS40-25 is a 1000 W programmable DC power supply designed to provide highly stable, continuously variable output voltage (0-40 V) and current (0-25 A) for a wide range of development, system, and burn-in applications. It features high-frequency switching technology for a high power density, simultaneous digital display of voltage and current, and support for automatic constant voltage (CV) and constant current (CC) crossover modes.

SPECIFICATIONS

General

Interfaces	Optional IEEE-488 (GPIB)
Display	Simultaneous digital display of both voltage and current

Physical

Power Supply	115/230 Vac selectable, 47-63 Hz, single phase
Operating Temperature	0 to 50°C °C
Dimensions (W×H×D)	482.6 x 44.4 x 444.5 mm (19 x 1.75 x 17.5 in) mm
Weight	8.6 kg kg

Output Specifications

Rated Output Voltage Range	0 - 40 V
Rated Output Current Range	0 - 25 A
Maximum Output Power	1000 W
Output Ripple and Noise (RMS)	10 mVrms
Operating Modes	Constant Voltage (CV) and Constant Current (CC)
Mode Crossover	Automatic crossover
Maximum Remote Sense Compensation	Up to 1 V per lead
Output Ripple and Noise (p-p)	50 mV
Output Ripple Current (RMS)	25 mA

Protection and Diagnostics

Over Voltage Protection (OVP) Range	2 - 44 V
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AC Input Specifications

Input Voltage Range	115 / 230 Vac selectable
Input Frequency Range	47 - 63 Hz
Input Phases	Single phase

Control and Interface

Voltage Control Type	Ten-turn potentiometer
Current Control Type	Ten-turn potentiometer
Remote Shutdown	External TTL, AC, or DC shutdown
Remote Programming	Voltage, current limit, and OVP programming with selectable programming constants
Remote Monitoring Status Signals	OVP status, local/remote programming status, thermal shutdown, and output voltage and current indicators
Series/Parallel Configuration Capacity	Multiple units can be connected in parallel or series

Physical Characteristics

Form Factor	1U Rackmount
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Regulation

Line Regulation (Voltage)	0.1% of maximum output voltage (40 mV)
Line Regulation (Current)	0.1% of maximum output current (25 mA)
Load Regulation (Voltage)	0.1% of maximum output voltage (40 mV)
Load Regulation (Current)	0.1% of maximum output current (25 mA)

Performance

Temperature Coefficient (Voltage)	0.02% of maximum output voltage per °C (8 mV/°C)
Temperature Coefficient (Current)	0.03% of maximum output current per °C (7.5 mA/°C)
Transient Response Time	1 ms typical (for 50% load step recovery to within 100 mV of steady-state)

Power Input

AC Input Current	15 A RMS max @ 115 VAC, 8 A RMS max @ 230 VAC
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Programming & Control

Analog Programming Input Ranges	0-5 VDC, 0-10 VDC, or 0-5 kΩ / 0-10 kΩ resistive control
Voltage Programming Accuracy	±0.5% of maximum rated voltage (analog)
Current Programming Accuracy	±0.5% of maximum rated current (analog)

Environmental

Storage Temperature Range	-55 to +85°C
Operating Humidity Range	0% to 90% RH (non-condensing)
Cooling	Forced-air cooling by internal fan, exhaust at rear

Input Specifications

Efficiency	82% (typical)
Power Factor	0.70 (typical)

Safety & Isolation

Output-to-Ground Isolation	±250 VDC
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Regulatory

Certifications & Compliance

CE, UL3111-1, CSA C22.2 No. 1010.1, EN61010-1

TECHNOLOGY

High-frequency switching

APPLICATIONS

Development, system integration, and component burn-in

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