

ORENSEN (AMETEK)

DCS600-1.7

The Sorensen DCS600-1.7 is a 1000W programmable DC power supply designed to provide highly stable, continuously variable output voltage and current for a broad range of development, system, and burn-in applications. It features high frequency switching technology in a compact 1U form factor.

SPECIFICATIONS

General

Interfaces	Analog (standard); IEEE-488 / GPIB (optional)
Display	Simultaneous 3.5-digit digital LED 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 × 44.4 × 444.5 mm (19 × 1.75 × 17.5 in) mm
Weight	8.6 kg

Output Specifications

Rated Output Voltage Range	0-600 Vdc
Rated Output Current Range	0-1.7 Adc
Maximum Output Power	1020 W
Output Ripple and Noise (RMS)	100 mVrms
Operating Modes	Constant Voltage (CV) and Constant Current (CC) with automatic crossover
Maximum Remote Sense Compensation	1 V per lead
Line Regulation (Voltage)	0.05% of maximum
Load Regulation (Voltage)	0.05% of maximum
Line Regulation (Current)	0.1% of maximum
Load Regulation (Current)	0.1% of maximum
Temperature Coefficient (Voltage)	0.02% of maximum per °C
Temperature Coefficient (Current)	0.03% of maximum per °C
Transient Recovery Time	1 ms typical (to recover within 1% of nominal output for a 50% step load change)

AC Input Specifications

Input Voltage Range	90-132 Vac or 180-250 Vac (selectable)
Input Frequency Range	47-63 Hz
Input Phases	Single phase

Protection and Diagnostics

Over Voltage Protection (OVP) Range	30-660 V
Remote Shutdown Control	External TTL, AC, or DC shutdown

Control and Interface

Voltage Control Type	Ten-turn potentiometer
Current Control Type	Ten-turn potentiometer
Remote Analog Programming Inputs	Selectable 0-5 Vdc, 0-10 Vdc, or 0-5 kOhm / 0-10 kOhm resistance
Remote Analog Monitoring Outputs	0-5 Vdc or 0-10 Vdc (proportional to 0-100% of rated voltage/current)
External Monitoring Indicators	OVP status, local/remote programming status, thermal shutdown, and output voltage/current monitoring
Multi-Unit Configuration Capacity	Multiple units can be connected in series or parallel

Environmental and Safety

Cooling System	Internal fan, rear exhaust
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Physical Characteristics

Form Factor	1U Rackmount
Chassis Width	19 inches (482 mm)
Chassis Height	1.75 inches (44 mm)
Chassis Depth	17.5 inches (444 mm)

Output Performance

Output Ripple and Noise (Peak-to-Peak)	350 mV
Current Ripple and Noise (RMS)	0.8 mA
Rise Time (Typical)	150 ms
Fall Time (Full Load)	100 ms
Fall Time (No Load)	15 s

AC Input

Maximum AC Input Current	15 A @ 115 VAC / 7.5 A @ 230 VAC
Power Factor	0.98 typical
Efficiency	84% typical (at full load)

Protection & Isolation

Output Isolation Voltage (Output to Chassis)	1350 VDC
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Environmental

Storage Temperature Range	-40°C to +85°C
Operating Humidity Range	0% to 90% RH (non-condensing)
Operating Altitude	Up to 2,000 m (6,562 ft)

Analog Programming & Monitoring

Analog Programming Accuracy (Voltage)	0.5% of maximum output voltage
Analog Programming Accuracy (Current)	1.0% of maximum output current
Analog Monitoring Accuracy (Voltage)	0.5% of maximum output voltage
Analog Monitoring Accuracy (Current)	1.0% of maximum output current
Analog Programming Control Range	0-5 VDC, 0-10 VDC, 0-5 kΩ, or 0-10 kΩ (user selectable)

Compliance

Safety Certifications	UL3111-1, CSA 22.2 No. 1010.1
EMC Certifications	FCC Part 15 Class A, CE

Outputs

Output Connector Type	3-pin connector
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Safety & Isolation

Input to Output Isolation	3000 VAC
Input to Chassis Isolation	1500 VAC

Protection

Over Temperature Protection	Automatic thermal shutdown
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Performance

Warm-up Time	30 minutes
Output Voltage Drift (8 hours)	0.03% of maximum rated voltage
Output Current Drift (8 hours)	0.03% of maximum rated current

Interfaces

Optional Digital Interfaces	GPIO (M9G option), RS-232 (M9C option), LXI Ethernet (M130 option)
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TECHNOLOGY

High frequency switching

APPLICATIONS

Development, system integration, and burn-in testing

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.