

SPH-1200, Power Factor Corrected Single Output, Hot Swap



FEATURES:

- Diode isolated output for hot swap
- “Zero wire” slope program current sharing for redundancy
- High power density: 5 W/cu. in.
- Industry standard DIN connector
- Universal ac input
- 0.99 typical power factor
- Dc power good and ac power fail signals
- True remote inhibit
- Monotonic turn-on and turn-off The SPH-1200 series provides low cost, highly reliable, N+1 redundant hot swap power for critical applications.

SPECIFICATIONS:

INPUT

Ac Input: 105-264 Vac continuous range, 47 to 63 Hz. Internally fused for 20 A.

Power Factor: 0.99 typical at full load. Meets EN61000-3-2 Class A.

Inrush: Cold start ac current is less than 75 A at 115 Vac and 150 A at 230 Vac for 8 ms typical. Limited by thermistor.

Holdup Time: 16 ms minimum after removal of power at full load.

Efficiency: 80% minimum

Ac Power Fail: Provides TTL “0” 5 ms before output voltage goes out of regulation band upon loss of ac power.

Brownout Protection: Holds regulation to 85 Vac for 30 seconds maximum.

OUTPUT

Adjustability: User adjustable $\pm 5\%$ minimum.

Line Regulation: $\pm 0.2\%$

Load Regulation: $\pm 2\%$ (Slope Program) from 0 to 100% load change.

Turn On Delay: 1 second typical

Output Rise Time: (from 10% to 90%) 20 ms typical.

Ripple & Noise: Less than 1% p-p, measured at 20 MHz bandwidth.

Temperature Coefficient: 0.02% per degree C.

Stability: 0.1% over 8 hours after 30 minutes warm-up.

Transient Response: Output voltage returns to within 1% in less than 500 μ s for a 50% load change. Peak transient does not exceed 3%.

Overload Protection: Electronic current limit, 120% maximum.

Overvoltage Protection: Protects load against power supply induced overvoltage. Trip point is factory set so that output voltage cannot exceed 136% of nominal. Requires ac input to be cycled to reset.

Remote Inhibit: Contact closure or a TTL level “0” turns off dc output.

Dc Power Good: Provides a TTL “0” open collector when output is above 90% of nominal. Maximum pull-up voltage 30 Vdc; maximum sink current, 10 mA.

Redundancy: Built-in OR-ing diode, slope program current sharing, and DIN blade connector provide “hot swap” and “N+1” capabilities. Current sharing remains within 10% of the unit’s full output rating given 0.2% initial accuracy in the output voltage setting.

Status Indicators: Green LED on the front panel indicates normal operation (ACPF high and DCPG low)

ENVIRONMENTAL

Thermal Protection: Shuts down power supply if overheated. Automatic recovery.

Temperature Range: 0° to 50°C at full ratings.

Safety Agencies: Approved to UL1950; CSA 22.2 #950; IEC 950 and TÜV EN60950, Class 1 SELV, CE 73/23/EEC//93/68/EEC (low voltage directive).

Conducted RFI: Meets FCC Part 15, Class A; EN55022 Class B.

Cooling: Self-cooled by internal ball-bearing fan.

OPTIONS

Option “R”, Rack Mount Panel: Special panel is required for rack mounting.

AC INPUT (105-264 VAC Continuous Range)

| LOCATION | 115 VAC | 230 VAC | CONNECTOR |
|----------|---------------|---------------|-----------|
| Z32 | Line | Line 1 | See Below |
| D30 | Neutral | Line 2 | |
| Z28 | Safety Ground | Safety Ground | |

DC OUTPUT

| FUNCTION | LOCATION | NOTES | CONNECTOR |
|----------------|-----------------|-----------------|--|
| Output Voltage | Z12 D14 Z16 D18 | (+) to Polarity | Eurocard connector-male DIN 41 612 Level 1-type H |
| | Z4 D6 Z8 D10 | (-) to Polarity | |

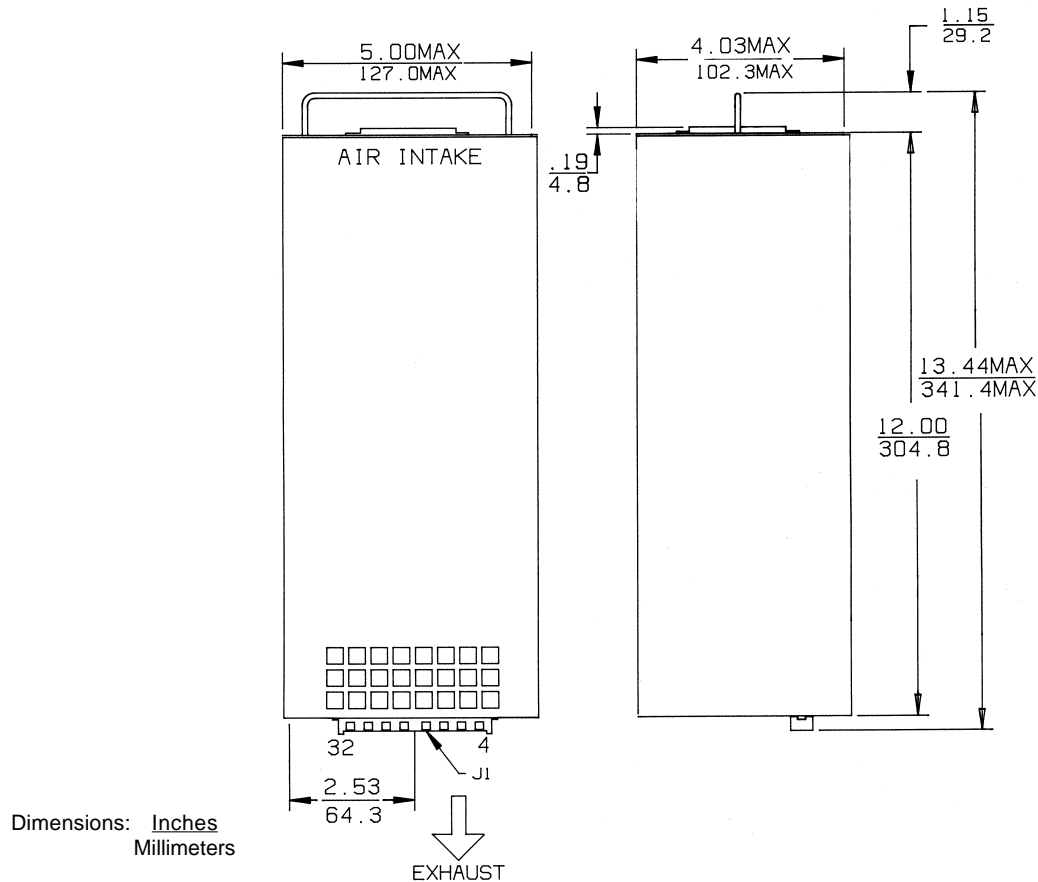
STATUS AND CONTROL

| FUNCTION | LOCATION | NOTES | CONNECTOR |
|---------------|----------|------------------------|-----------|
| Dc Power Good | Z20 | Reference to common | See Above |
| Ac Power Fail | D22 | | |
| Inhibit | Z24 | | |

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| Commercial Model | Power Out | Output No. | Output | Current | Total Regulation |
|------------------|-----------|------------|--------|---------|------------------|
| SPH-1200-24 | 1200 | 1 | 24 V | 50 A | ±2% |
| SPH-1200-28 | 1200 | 1 | 28 V | 42 A | ±2% |
| SPH-1200-48 | 1200 | 1 | 48 V | 25 A | ±2% |

SPH-1200 MECHANICAL SPECIFICATIONS:



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