



Powerstax

N-03751 Series

1U High Ultra Compact AC-DC Power Supply 375W

- 375W AC-DC / 3.3" X 5" FOOTPRINT
- CONVECTION COOLED 260W
- HIGH POWER DENSITY: > 15W/in³
- 93% EFFICIENCY
- ACTIVE CURRENT SHARING
- REMOTE ON / OFF
- 5V STANDBY AND 12V AUX.

POWER SUPPLY DESIGN EXCELLENCE

Powerstax is a leader in the power density race with its high efficiency N-03751 Series AC-DC power supplies. The advanced technology yields a very small footprint, reduces wasted power and offers among the highest power density in its class. This efficient design means reduced energy costs, a greater return on your investment, greater reliability and longer product life.

UNMATCHED POWER DENSITY

With an overall height of 1.5" and a 3.3"x 5" footprint, the N-03751 Series delivers a power density over 15 watts per cubic inch. It is ideally suited for OEMs using the industry standard 1U chassis.



COMPLETE PROTECTION

The main output is enabled whenever all of the required startup conditions are met and is shut down upon command, loss of input power or whenever excessive loads or temperatures are sensed. It provides the host system with advanced warning of an impending shutdown to enable it to perform housekeeping before power is lost. The OR-ing board option allows the main outputs of up to four N-03751s to be operated in parallel. It also provides hot swappable N+1 configurations.

AC-DC SERIES

| MODEL | OUTPUT | VOLTAGE | REGULATION (%) | MAXIMUM CURRENT (A) | | RIPPLE & NOISE (P-P) |
|-----------------------|--------|---------|----------------|---------------------|------|----------------------|
| | | | | CS | CC | |
| N-03751-PFC-120-00CS* | V1 | 12 | ±3 | 30.0 | 21.6 | 100mV |
| | V2 | 12 | ±5 | 1.0 | 1.0 | 80mV |
| N-03751-PFC-120-CCCS* | V3 | 5sb | ±5 | 1.0 | 1.0 | 50mV |
| N-03751-PFC-240-00CS* | V1 | 24 | ±3 | 15 | 10.8 | 200mV |
| | V2 | 12 | ±5 | 1.0 | 1.0 | 80mV |
| | V3 | 5sb | ±5 | 1.0 | 1.0 | 50mV |
| N-03751-PFC-280-00CS* | V1 | 28 | ±3 | 12.8 | 9.2 | 200mV |
| | V2 | 12 | ±5 | 1.0 | 1.0 | 80mV |
| N-03751-PFC-280-CCCS* | V3 | 5sb | ±5 | 1.0 | 1.0 | 50mV |
| N-03751-PFC-360-00CS* | V1 | 36 | ±3 | 10.0 | 7.2 | 200mV |
| | V2 | 12 | ±5 | 1.0 | 1.0 | 80mV |
| N-03751-PFC-360-CCCS* | V3 | 5sb | ±5 | 1.0 | 1.0 | 50mV |
| N-03751-PFC-400-00CS* | V1 | 40 | ±3 | 9.0 | 6.5 | 200mV |
| | V2 | 12 | ±5 | 1.0 | 1.0 | 80mV |
| N-03751-PFC-400-CCCS* | V3 | 5sb | ±5 | 1.0 | 1.0 | 50mV |
| N-03751-PFC-480-00CS* | V1 | 48 | ±3 | 7.5 | 5.4 | 200mV |
| | V2 | 12 | ±5 | 1.0 | 1.0 | 80mV |
| | V3 | 5sb | ±5 | 1.0 | 1.0 | 50mV |
| N-03751-PFC-540-00CS* | V1 | 54 | ±3 | 6.7 | 4.8 | 200mV |
| | V2 | 12 | ±5 | 1.0 | 1.0 | 80mV |
| N-03751-PFC-540-CCCS* | V3 | 5sb | ±5 | 1.0 | 1.0 | 50mV |
| N-03751-PFC-560-00CS* | V1 | 56 | ±3 | 6.4 | 4.6 | 200mV |
| | V2 | 12 | ±5 | 1.0 | 1.0 | 80mV |
| N-03751-PFC-560-CCCS* | V3 | 5sb | ±5 | 1.0 | 1.0 | 50mV |

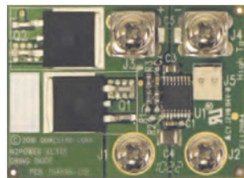
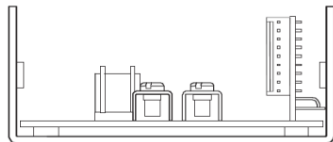
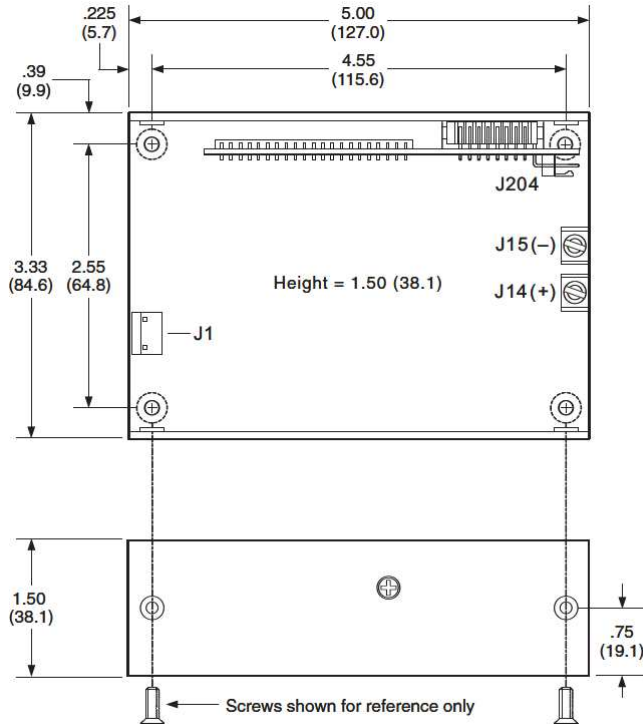
CS = Current Sharing
CC = Convection Cooled

*N+1 operation requires optional OR-ing Board, see below
sb = standby



Typical Mechanical Drawing:

Inches (mm)



Or-ing Board Option

Safety

UL 60950-1:2007 (2nd Edition) / C22.2 No. 60950-1-07 Safety of Information Technology Equipment (ITE)
 2006/95/EC - "Low Voltage (Safety) Directive"
 IEC 60950-1:2005 (2nd Edition) Safety of Information Technology Equipment (ITE)

EMC

FCC part 15, subpart B
 2004/108/EC "Electromagnetic Compatibility (EMC) Directive"
 EN 61204-3 Class B

INPUT SPECIFICATIONS

| | |
|-------------------------|--|
| Nominal Input Voltage | 100 – 240 VAC |
| Input Frequency Range | 47 - 63Hz |
| Input Current | 4.3A @ 100 VAC |
| Input Protection | 6.3A fuse |
| Safety Isolation | 3000 VAC input to output 1500 VAC input to ground |
| Inrush Current | 14A @ 240 VAC |
| Leakage Current | 0.75mA @ 240 VAC/60Hz |
| Power Factor Correction | Active PFC circuitry, meets EN61000-3-2 |

OR-ING BOARD OPTION

| | |
|-----------------|-------------------|
| Output Voltage: | Or-ing Board P/N: |
| 12 V | N-03751-12-ORING |
| 24 V | N-03751-24-ORING |
| 28 V – 48 V | N-03751-28-ORING |
| 54 V – 56 V | N-03751-54-ORING |

PROTECTION

| | |
|------------------|--|
| Overvoltage | V1 (latches off) |
| Overpower | Protected/ Auto recovery |
| Short Circuit | Auto recovery of all outputs |
| Thermal Shutdown | Auto recovery protection against over temperature conditions |

OPERATING SPECIFICATIONS

| | |
|----------------------------------|-------------------------------|
| Operating Temperature | -25°C to +50°C |
| Temperature Derating | 2.5% / degree 50°C to 70°C |
| Storage Temperature | -40°C to +85°C |
| Forced Air Cooling | 10 CFM minimum |
| Convection Cooling Option | 260W maximum output |
| MTBF (Bellcore, SR-332, Issue 2) | 376,644 hours @ 25°C |

SIGNALS

| | |
|------------------------|--|
| Remote Sense | V1 and Return |
| Current Sharing | V1 using active circuitry |
| Passive Redundancy | V2 and V3 outputs may be wire OR-ed |
| Power Good (PG) Output | High-true CMOS logic and LED drive outputs |
| Remote Enable Input | Low-true input enables V1 output |
| Onboard LED Indicators | AC On Power Good |
| Trim Input | ±5% |

OUTPUT SPECIFICATIONS

| | |
|------------------|----------------------------|
| Total Output | 375W (260W with CC Option) |
| Hold-up Time | Minimum 22 ms |
| Efficiency | Up to 93% |
| Min Load | No load |
| Over/Under Shoot | Maximum 10% at turn-on |

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