



# POWERSTAX N-0160 Series 1U High Ultra Compact AC-DC Power Supply 160W

## Outline Product Specification

### FEATURES

- ❑ 160W AC-DC
- ❑ UP TO 90% EFFICIENCY
- ❑ HIGH POWER DENSITY: 8.5 W / in<sup>3</sup>
- ❑ UNIVERSAL AC INPUT
- ❑ ACTIVE PFC (90 – 264 VAC)
- ❑ BUILT IN OR'ING DIODES FOR N+1
- ❑ 3" X 5" (76.2 x 127mm) SMALL FOOTPRINT
- ❑ <1U HIGH: 1.25" (31.75mm)
- ❑ NO LOAD OPERATION
- ❑ RoHS COMPLIANT

Powerstax continues to lead the power density race with its new small, high efficiency open frame N-0160 Series AC-DC power supplies.

The N-0160 Series provides greater than 90% efficiency and the very small footprint reduces wasted power. This offers the highest power density in the market in the 160W power range.

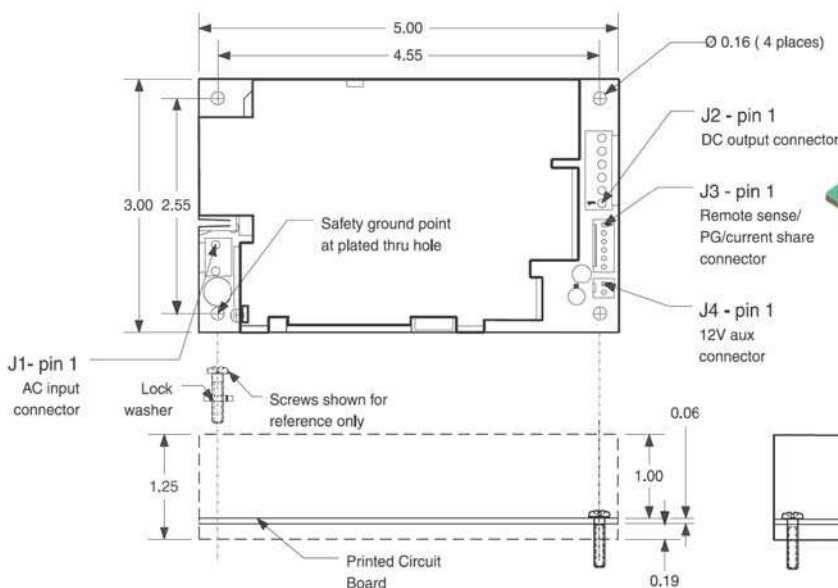
The unique design reduces energy consumption and generates less waste heat. It requires little forced air cooling, decreases AC loads and increases reliability and economy of operation.

The ultra low 1U high profile and compact package make it ideal for applications using industry standard 1U chassis and releases additional "real estate" for more functionality inside your product.

Contact Powerstax regarding custom or modified standard power supplies for unique applications.



Safety Approvals: UL, cUL, DEMKO, CE Mark  
Emissions: FCC Class B



Connectors and pinouts may vary based on model. Refer to Powerstax N-0160 engineering specifications for complete information.



# Outline Product Specification

INPUT SPECIFICATION	
Nominal Input Voltage:	100 - 240 VAC
Maximum AC Input:	90 - 264 VAC
Input Frequency Range:	47 - 63 Hz
Input Current:	2.2 A @ 100 VAC
Input Protection:	3.15 A fuse
Safety Isolation:	3000 VAC input to output 1500 VAC input to ground
Inrush Current:	32 A @ 115 VAC
Power Factor Correction:	active PFC circuitry, meets or exceeds EN61000-3-2

OPERATING SPECIFICATIONS	
Operating Temperature:	-25 to +50°C
Temperature Derating:	2.5% / degree C to 70°C
Storage Temperature:	-40 to +85°C
Forced Air Cooling:	10 CFM
Convection Cooling:	See Engineering Specification
Leakage Current:	< 1.5 mA
MTBF:	>200,000 hours calculated

SIGNALS	
Remote Sense:	on main output†Δ
Current Sharing:	active current sharing with or'ing diode†Δ
Power Good:	provided†
PS_OK:	output†
LED:	some models†

OUTPUT SPECIFICATION	
Power:	160 W
Hold-up Time:	minimum 22 mS at all input voltages
Efficiency:	up to 90%†
Minimum Load:	no load†
Over / Under Shoot:	maximum 10% at turn-on

PROTECTION	
Overvoltage Protection:	on all main outputs
Overpower Protection:	protected / auto-recovery
Short Circuit Protection:	all outputs protected against short circuit
Thermal Shutdown:	protected against overtemperature conditions

† See Engineering Specification      Δ Some Models

### COMPLIANCE:

**USA/Canada:**  
UL60950 / C22.2, 60950 (Bi-National Standard) Safety of Information Technology Equipment

**Europe:**  
73/23/EEC "Low Voltage Directive" (Safety)  
IEC 60950 Third Edition (1999) Safety of Information Technology Equipment. CB certificate and report available.  
EN60950 (2000) Safety of Information Technology Equipment  
89/336/EEC "Electromagnetic Compatibility Directive" (EMC)  
EN61000-3-3 (1995) Limits of Voltage Fluctuations & Flicker  
EN61000-3-2 (2000) Harmonic Current Emissions (Power Factor Correction)  
EN61204-3 (2001) Stabilized Power Supplies, d.c. Outputs  
EMC Standards Specification EN61204 (2001) is a product family EMC standard which references the following specifications:  
EN61000-4-2 (1995) ESD  
EN61000-4-3 (1996) +A1 (1998) Radiated Radio Frequency, Electromagnetic Field Immunity  
EN61000-4-4 (1995) Fast Transient / Burst Immunity  
EN61000-4-5 (1995) Surge Immunity  
EN61000-4-6 (1996) Immunity to Conducted Disturbances  
EN61000-4-11 (1994) Voltage Dips, Short Interrupts & Voltage Variations

MODEL	OUTPUT	VOLTAGE	REGULATION (%)	MAXIMUM CURRENT ( A )	RIPPLE & NOISE (P-P)
N-01604-PFC-033-0000	V1	+3.3	±2	15.0	50 mV
	V2	+5	±4	20.0	50 mV
	V3	+12	±5	6.0	120 mV
	V4	-12	±5	1.0	120 mV
N-01601-PFC-050-0000	V1*	5	±3	32.0	50 mV
	V2	+12	±5	1.0	120 mV
N-01601-PFC-120-0000	V1*	12	±3	13.3	120 mV
	V2 ‡	12	±5	1.0	120 mV
N-01601-PFC-150-0000	V1*	15	±3	10.7	150 mV
	V2 ‡	12	±5	1.0	120 mV
N-01601-PFC-240-0000	V1*	24	±3	6.7	240 mV
	V2 ‡	12	±5	1.0	120 mV
N-01601-PFC-480-0000	V1*	48	±3	3.3	480 mV
	V2 ‡	12	±5	1.0	120 mV
N-01604-PFC-025-0000	V1	+2.5	±2	15.0	50 mV
	V2	+5	±4	20.0	50 mV
	V3	+12	±5	6.0	120 mV
	V4	-12	±5	1.0	120 mV
N-01603-PFC-050-0000	V1	+5	±4	20.0	50 mV
	V2	+12	±5	6.0	120 mV
	V3	-12	±5	1.0	120 mV

\* Specify "Rev. S" for RoHS compliant products

\* Isolated outputs for + / - use

‡ Isolated from main output

Exceeding absolute maximum ratings may cause permanent damage and may reduce reliability. Information and specifications contained in this data sheet are believed to be correct at the time of publication. However, Powerstax accept no responsibility for consequences arising from printing errors or inaccuracies. Specifications are subject to change without notice.



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