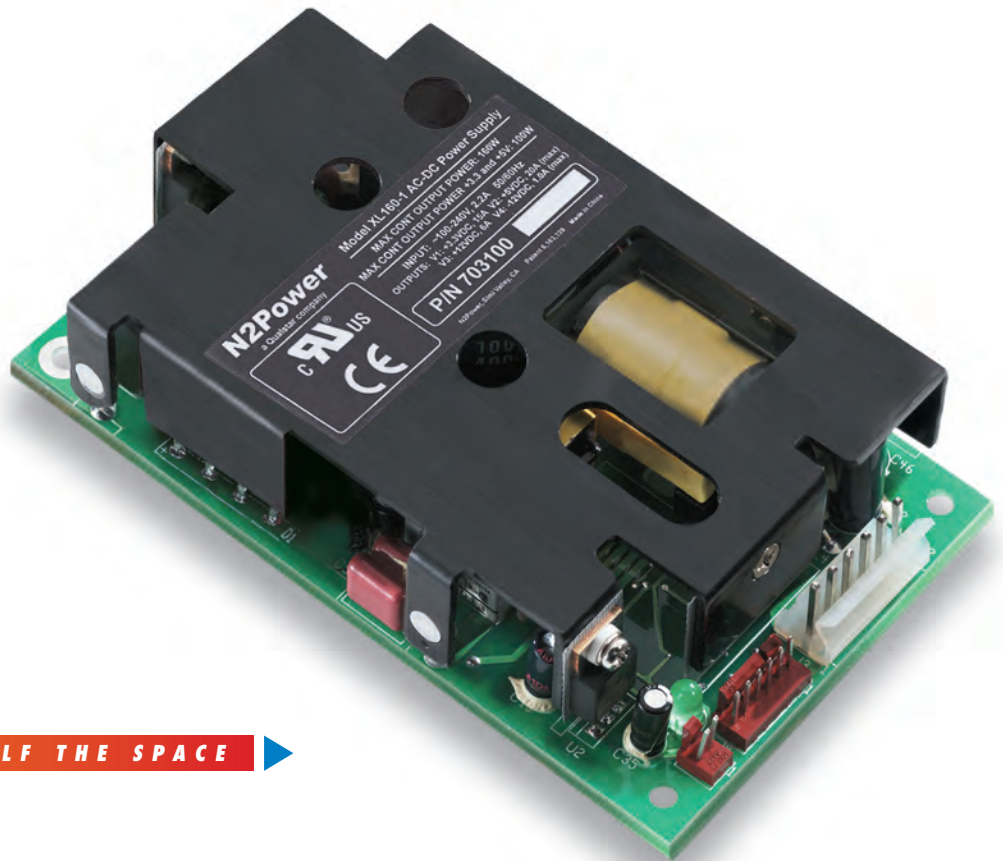


- **160 W AC-DC**
- **UP TO 90% EFFICIENCY**
- **HIGH POWER DENSITY:  
8.5 W / in<sup>3</sup>**
- **UNIVERSAL AC INPUT**
- **ACTIVE PFC (90 – 264 VAC)**
- **BUILT IN OR'ING DIODES  
FOR N+1**
- **3" X 5" SMALL FOOTPRINT**
- **<1U HIGH: 1.25"**
- **NO LOAD OPERATION**
- **RoHS COMPLIANT**



N2Power™ continues to lead the power density race with its new small, high efficiency open frame XL160 Series AC -DC power supplies. Our patented technology yields

**TWICE THE POWER IN HALF THE SPACE**

a very small footprint, reduces wasted power, and offers the highest power density in the market in the 160 watt range. The unique 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 1.25" and a 3" x 5" footprint, the XL160 Series boasts a power density of 8.5 watts per cubic inch. It is ideally suited for OEMs using industry standard 1U chassis.

**HIGH EFFICIENCY IN A SMALL PACKAGE**

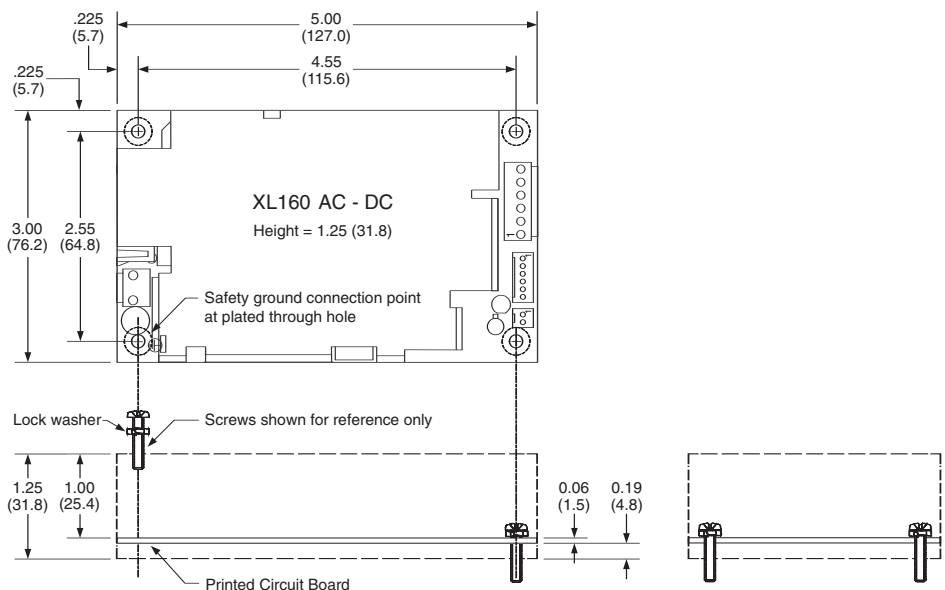
The XL160 Series provides up to 90% efficiency in an AC-DC power supply. Our unique design reduces energy consumption and generates less wasted heat. It requires little forced air cooling, decreases AC loads, increases reliability and economy of operation.

**PFC READY, SAVE ENERGY**

All XL160 products incorporate active PFC technology with universal input to provide superior efficiency in each supply. Comparisons of power loading show that our supplies can reduce consumption up to 50%.

**Typical Mechanical Drawing:**

Inches (millimeters), connectors and pinouts may vary with model. Refer to XL160 Product Specification for complete information.



Contact us regarding custom and modified standard supplies for unique applications.

MODEL	PART NUMBER	OUTPUT	VOLTAGE	REGULATION (%)	MAXIMUM CURRENT (A)	RIPPLE & NOISE (P-P)
XL160-05	400012-06-8	V1	5	±3	32.0	50 mV
XL160-05 CS	400012-01-9	V2	12	±5	1.0	120 mV
XL160-07 CS	400012-05-0	V1	7	±3	22.9	70 mV
		V2	12	±5	1.0	120 mV
XL160-08 CS	400012-07-6	V1	8	±3	20.0	80 mV
		V2	12	±5	1.0	120 mV
XL160-11 CS	400060-01-8	V1	5	±4	20.0	50 mV
		V2	12	±5	6.0	120 mV
		V3	-12	±5	1.0	120 mV
XL160-12	400013-12-4	V1	12	±3	13.3	120 mV
XL160-12 CS	400013-01-7	V2	12	±5	1.0	120 mV
XL160-15	400014-03-1	V1	15	±3	10.7	150 mV
XL160-15 CS	400014-01-5	V2	12	±5	1.0	120 mV
XL160-19 CS	400015-04-6	V1	19	±3	8.4	190 mV
		V2	12	±5	1.0	120 mV
XL160-24	400015-07-9	V1	24	±3	6.7	240 mV
XL160-24 CS	400015-01-2	V2	12	±5	1.0	120 mV
XL160-30 CS	400015-08-7	V1	30	±3	5.3	300 mV
		V2	12	±5	1.0	120 mV
XL160-48	400016-07-7	V1	48	±3	3.3	480 mV
XL160-48 CS	400016-01-0	V2	12	±5	1.0	120 mV
XL160-51	400016-08-5	V1	51	±3	3.1	510 mV
XL160-51 CS	400016-03-6	V2	12	±5	1.0	120 mV
XL160-54	400033-02-3	V1	54	±3	2.9	540 mV
XL160-54 CS	400033-01-5	V2	12	±5	1.0	120 mV
XL160-56	400032-02-1	V1	56	±3	2.8	560 mV
XL160-56 CS	400034-01-3	V2	12	±5	1.0	120 mV
XL160-1	400011-01-1	V1	3.3	±3	15.0	50 mV
		V2	5	±5	20.0	50 mV
		V3	12	±5	6.0	120 mV
		V4	-12	±5	1.0	120 mV
XL160-7	4000017-01-8	V1	2.5	±3	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
XL160-8	400018-01-6	V1	5	±4	20.0	50 mV
		V2	12	±5	6.0	120 mV
		V3	-12	±5	1.0	120 mV
XL160-10	400028-01-5	V1	5.6	±3	24.0	56 mV
		V2	-5.8	±5	1.5	58 mV

CS = Current Sharing

INPUT SPECIFICATIONS	
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:	33 A @ 115 VAC
Leakage Current:	<1.5 mA
Power Factor Correction:	Active PFC circuitry, meets or exceeds EN61000-3-2
OUTPUT SPECIFICATIONS	
Total Power:	160 W
Hold-up Time:	Minimum 22 ms at all input voltages
Efficiency:	Up to 90% <sup>†</sup>
Minimum Load:	No load <sup>†</sup>
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
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 Product Specification
MTBF:	>200,000 hours calculated
SIGNALS	
Remote Sense:	On main output <sup>†Δ</sup>
Current Sharing:	Active current sharing with OR'ing diode or MOSFETs <sup>†Δ</sup>
Power Good:	Provided <sup>†</sup>
PS_OK:	Output <sup>†</sup>
LED:	Some models <sup>†</sup>

† See Product Specification    Δ Some Models

**COMPLIANCE:**

**USA/Canada:**

UL60950-1:2007 (2nd Edition) / C22.2 No. 60950-1-07 (Bi-National Standard) Safety of Information Technology Equipment

**Europe:**

Directive 2006/95/EC - "Low Voltage (Safety) Directive"

IEC 60950-1:2005 (2nd Edition) Safety of Information Technology Equipment. (CB Report)

Directive 2004/108/EC "Electromagnetic Compatibility (EMC) Directive"

EN61204-3:2001 Stabilized Power Supplies, d.c. Outputs EMC Standards Specification

EN61204-3:2001 is a product family EMC standard referencing the following standards:

- EN61000-3-3 Limits of Voltage Fluctuations & Flicker
- EN61000-3-2 Harmonic Current Emissions (Power Factor Correction)
- EN61000-4-3 Radiated Radio Frequency.

Electromagnetic Field Immunity  
EN61000-4-4 Fast Transient / Burst Immunity  
EN61000-4-5 Surge Immunity  
EN61000-4-6 Immunity to Conducted Disturbances  
EN61000-4-11 Voltage Dips, Short Interrupts & Voltage Variations

Directive 2002/95/EC - "Restriction of Hazardous Substances (RoHS)"

Safety Approvals:  
UL, cUL, CB Certificate, CB Report, CE Mark

