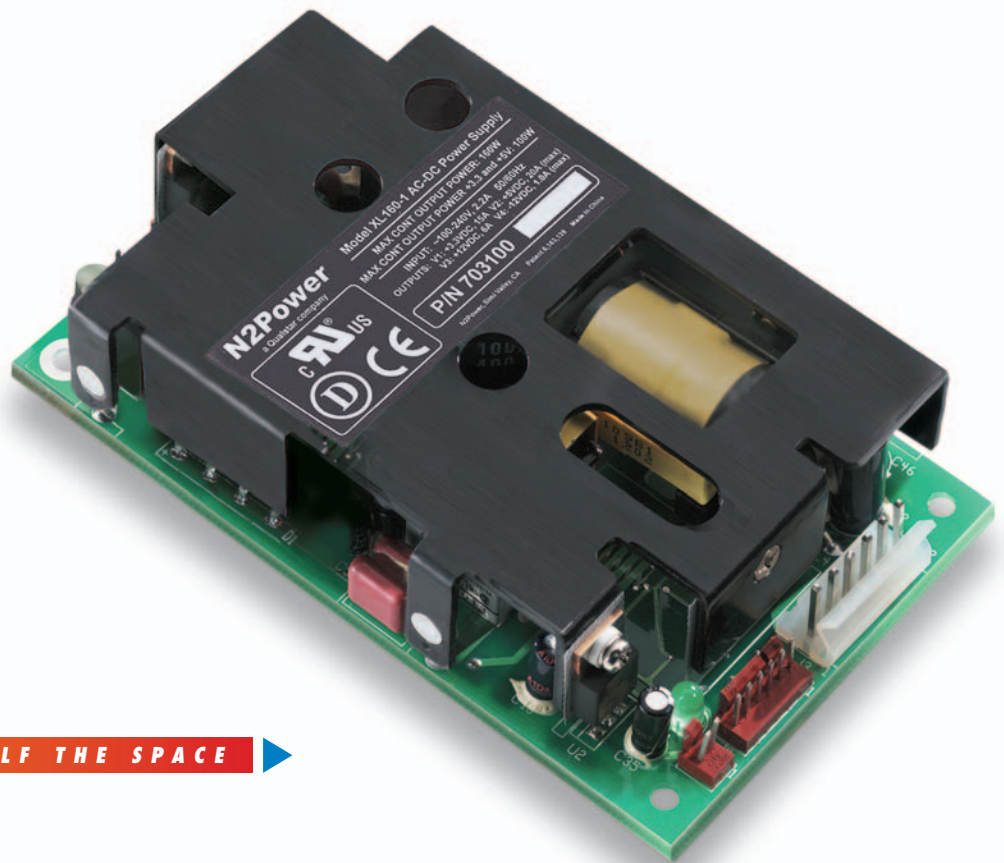


- **160 W AC-DC**
- **UP TO 90% EFFICIENCY**
- **HIGH POWER DENSITY:  
8.5 W / in<sup>3</sup>**
- **UNIVERSAL AC INPUT**
- **ACTIVE PFC (90 – 264 VAC)**
- **BUILT IN OR'ING DIODES  
FOR N+1**
- **3" X 5" SMALL FOOTPRINT**
- **<1U HIGH: 1.25"**
- **NO LOAD OPERATION**
- **RoHS COMPLIANT**



**POWER SUPPLY DESIGN LEADER**

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

**TWICE THE POWER IN HALF THE SPACE**

Our patented technology yields 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. N2Power's small form factor power supplies allow you to work with additional "real estate" for more functionality inside your product. Increased space, reduced thermal loads and lower costs will increase your competitive edge in the market.

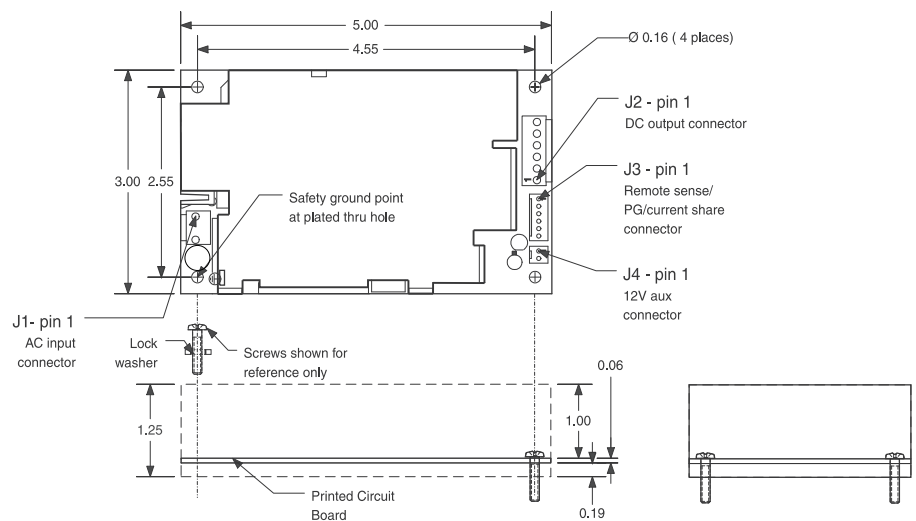
**HIGH EFFICIENCY IN A SMALL PACKAGE**

Reduced heat generation and greater reliability are key design requirements. 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.

**Typical Mechanical Drawing:**

Connectors and pinouts may vary based on model.

Refer to XL160 engineering specifications for complete information.



**PFC READY, SAVE ENERGY**

Many countries already require Power Factor Corrected (PFC) power supplies, which lessen loads at generating stations. 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%.

**REPEATABLE QUALITY**

We use advanced PCB technology to deliver the highest density and best performance in the industry. Our packaging design incorporates SMT technology to automate processes, ensure reliability, and reduce cost. Each power supply undergoes a complete functional test and a multi-hour burn-in to insure that every unit meets our stringent quality requirements. Detailed statistical production records are maintained and rigid quality and AVL control insures the highest quality product available. Each power supply design is also rigorously tested by UL, DEMKO, and European agencies, with scheduled factory audits to ensure ongoing compliance.

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

MODEL	OUTPUT	VOLTAGE	REGULATION (%)	MAXIMUM CURRENT (A)	RIPPLE & NOISE (P-P)
XL160-1 <sup>s</sup> ATX Version Available	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
XL160-2 <sup>s</sup>	V1*	5	±3	32.0	50 mV
	V2	+12	±5	1.0	120 mV
XL160-3 <sup>s</sup>	V1*	12	±3	13.3	120 mV
	V2‡	12	±5	1.0	120 mV
XL160-4 <sup>s</sup>	V1*	15	±3	10.7	150 mV
	V2‡	12	±5	1.0	120 mV
XL160-5 <sup>s</sup>	V1*	24	±3	6.7	240 mV
	V2‡	12	±5	1.0	120 mV
XL160-6 <sup>s</sup>	V1*	48	±3	3.3	480 mV
	V2‡	12	±5	1.0	120 mV
XL160-7 <sup>s</sup>	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
XL160-8 <sup>s</sup>	V1	+5	±4	20.0	50 mV
	V2	+12	±5	6.0	120 mV
	V3	-12	±5	1.0	120 mV

<sup>s</sup> Specify "Rev. S" for RoHS compliant products    \* Isolated outputs for + / - use    ‡ Isolated from main output

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:	32 A @ 115 VAC
Power Factor Correction:	active PFC circuitry, meets or exceeds EN61000-3-2

OUTPUT SPECIFICATIONS	
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 Engineering Specification
Leakage Current:	< 1.5 mA
MTBF:	> 200,000 hours calculated
SIGNALS	
Remote Sense:	on main output <sup>†Δ</sup>
Current Sharing:	active current sharing with or'ing diode <sup>† Δ</sup>
Power Good:	provided <sup>†</sup>
PS_OK:	output <sup>†</sup>
LED:	some models <sup>†</sup>

<sup>†</sup> See Engineering Specification  
<sup>Δ</sup> 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 Intermitts & Voltage Variations

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



For complete specifications on all models, please visit our website at: [www.N2Power.com](http://www.N2Power.com)

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All information and specifications are based on our knowledge of the products at the time of printing. N2Power reserves the right to change specifications without notice.

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