

## POWER SUPPLY DESIGN LEADER

N2Power continues to lead the power density race with its new small, high efficiency XL160 Series AC-DC power supplies. 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. This unique design means reduced energy costs, a greater return on your investment, higher reliability and longer product life.

## HIGHLIGHTS

- 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 (Optional)
- 3" X 5" Small Footprint
- <1U High: 1.25"
- No Load Operation
- RoHS Compliant

## 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%.

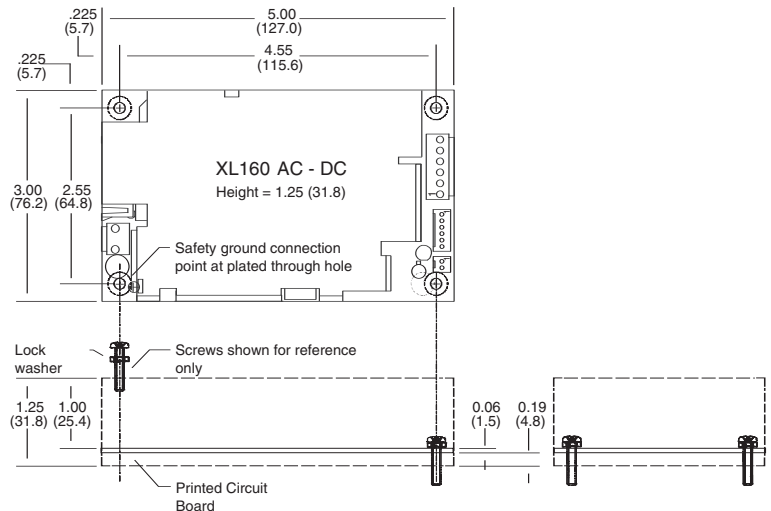
## UNMATCHED POWER DENSITY

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.



### Typical Mechanical Drawing:

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



## 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.

MODEL	PART NUMBER	OUTPUT	VOLTAGE	REGULATION (%)	MAXIMUM CURRENT (A)	RIPPLE & NOISE (P-P)
XL160-05	400012-12-6	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	400012-10-0	V1	8	±3	20.0	80 mV
		V2	12	±5	1.0	120 mV
XL160-11*	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	400017-01-8	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 \*OR-ing diode on V1 / V2 output

#### Compliance:<sup>1</sup> USA / Canada:

**Safety:** Underwriters Laboratories: UL 60950-1:2007 (2nd Edition) / C22.2 No. 60950-1-07 Safety of Information Technology Equipment (ITE)

**EMC:** FCC part 15, subpart B

<sup>1</sup> See Product Specification for additional information

#### Europe:

2006/95/EC - "Low Voltage (Safety) Directive"  
 Demko: EN 60950-1:2006+A11:2009 (2nd Edition)

2004/108/EC "Electromagnetic Compatibility (EMC) Directive"  
 EN 61204-3 Class B

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:	< 0.75 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:	675,333 hours @ 25°C*
SIGNALS	
Remote Sense:	On main output <sup>†A</sup>
Current Sharing:	Active current sharing with OR-ing diode or MOSFETs <sup>†A</sup>
Power Good:	Provided <sup>†</sup>
PS_OK:	Output <sup>†</sup>
LED:	Some models <sup>†</sup>

<sup>†</sup> See Product Specification <sup>Δ</sup> Some Models

\* See MTBF Report for additional temperature values

#### International:

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

IEC 61204-3 Class B

Specifications are subject to change without notice. It is responsibility of each customer to thoroughly test each product and part number under their unique parameters and environments to ensure a product will work properly and reliably.

Click below for more details, to buy on-line or request volume pricing:

<http://power.sager.com/n2power-XL160-power-supply.html>

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<http://power.sager.com>