N2POWER XL160 DC-DC SERIES
ULTRA SMALL, HIGH-EFFICIENCY POWER SUPPLIES

POWER SUPPLY DESIGN LEADER

N2Power continues to lead the power density race with its small, high efficiency XL160 DC-DC power supplies. Our state of the art 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

- 160W DC-DC
- Up to 90% Efficiency
- High Power Density: 8.5 W / cu in.
- 36 - 76 VDC
- Active Current Sharing
- Built in OR-ing Diodes for N+1 (Optional)
- 3" X 5" Small Footprint
- <1U High: 1.25"
- No Load Operation
- RoHS Compliant
- Input to Output Isolation

REPEATABLE QUALITY

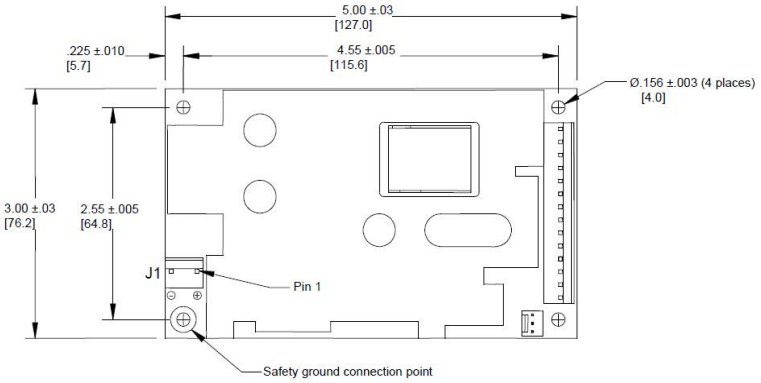
We use advanced PCB technology to deliver the highest density and best performance in the industry. Our packaging design incorporates SMT technology to automate processes, ensure reliability, and reduce cost. Each power supply undergoes a complete functional test and a multi-hour burn-in to insure that every unit meets our stringent quality requirements.

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 XL125/160 DC-DC Product Specification for complete information.



Note: Recommended standoff size is .375" high and all mounting hardware should be less than .28" in diameter. A standoff less than .375" high is acceptable when a thin insulator, 0.4mm thick (polyester, fish paper or equivalent UL rated 94V-2 minimum) is placed between the power supply and the mounting chassis (refer to applicable UL standard for clearance requirements).

HIGH EFFICIENCY IN A SMALL PACKAGE

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

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

QUALSTAR CORPORATION
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MODEL	PART NUMBER	OUTPUT	VOLTAGE	REGULATION (%)	MAXIMUM CURRENT (A)	RIPPLE & NOISE (P-P)
XL160-05DC	400083-02-8	V1	5	±3	32.0	50 mV
XL160-05DC CS	400080-02-4	V2	12	±5	1.0	120 mV
XL160-12DC	400080-03-6	V1	12	±3	13.3	120 mV
XL160-12DC CS	400080-03-2	V2	12	±5	1.0	120 mV
XL160-15DC	400080-04-4	V1	15	±3	10.7	150 mV
XL160-15DC CS	400080-04-0	V2	12	±5	1.0	120 mV
XL160-24DC	400083-05-1	V1	24	±3	6.7	240 mV
XL160-24DC CS	400080-05-7	V2	12	±5	1.0	120 mV
XL160-48DC	400083-06-9	V1	48	±3	3.3	480 mV
XL160-48DC CS	400080-06-5	V2	12	±5	1.0	120 mV
XL160-54DC	400083-07-7	V1	54	±3	2.9	540 mV
XL160-54DC CS	400080-09-9	V2	12	±5	1.0	120 mV
XL160-56DC	400083-08-5	V1	56	±3	2.8	560 mV
XL160-56DC CS	400080-10-7	V2	12	±5	1.0	120 mV
XL160-1DC	400080-01-6	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
XL160-8DC	400080-08-1	V1	5	±4	20.0	50 mV
		V2	12	±5	6.0	120 mV
		V3	-12	±5	1.0	120 mV

CS = Current Sharing

INPUT SPECIFICATIONS	
Nominal Input Voltage:	36 – 76 VDC
Input Current:	5.5 A @ 36 VDC
Input Protection:	8 A fuse
Safety Isolation:	3000 V input to output 1500 V input to ground
OUTPUT SPECIFICATIONS	
Total Power:	160W
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 over-temperature conditions
OPERATING SPECIFICATIONS	
Operating Temperature:	-25°C to +50°C
Temperature Derating:	2.5% / degree C to 70°C
Storage Temperature:	-40°C to +85°C
Forced Air Cooling:	10 CFM
Convection Cooling:	See Product Specification
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 †

† See Product Specification Δ Some Models

Compliance: [1]

	USA / Canada	Europe	International
Safety:	Underwriters Laboratories: 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" Demko: EN 60950-1:2006 (2nd Edition) +A1:2010 +A11:2009 +A12:2011 +A2:2013	IEC 60950-1:2005 (2nd Edition)+ Am1:2009 + Am2:2013 Safety of Information Technology Equipment
EMC:	FCC part 15, subpart B	2004/108/EC "Electromagnetic Compatibility (EMC) Directive" EN 61204-3 Class B	IEC 61204-3 Class B

[1] See Product Specification for additional information

For complete specifications on all models, please visit our website at: www.n2power.com

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