

# N2Power XR160 AC-DC Series

## Ultrasmall, High Efficiency Power Supplies

### HIGHLIGHTS

- 160 W AC-DC
- Up to 91% efficiency
- High power density: 8.5 W / cu in.
- Universal AC input
- Active PFC (90-264 VAC)
- Built in OR-ing diode/MOSFET for N+1 (optional)
- Single-wire current sharing (most models)
- Small footprint: 3" x 5"
- < 1U High: 1.32"
- No load operation
- RoHS compliant
- 3 year warranty

### SAVE ENERGY WITH PFC

All XR160 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%.

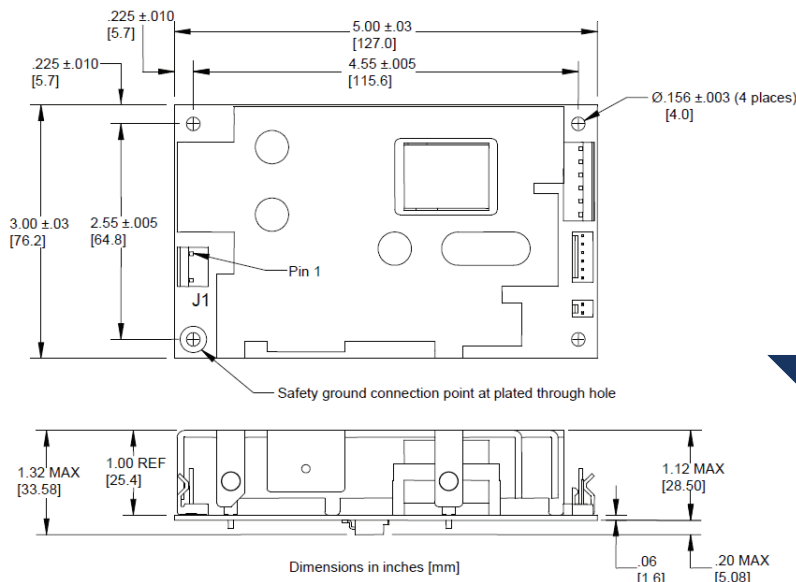
### UNMATCHED POWER DENSITY

With an overall height of 1.32" and a 3" x 5" footprint, the XR160 Series boasts a power density of 8.5 watts per cubic inch. It is ideally suited for OEMs using industry standard 1U chassis. Additionally, most models come standard with market leading built-in technology for active Intelligent current sharing and an Or-ing Diode/Mosfet for N+1 (up to 4).

# A POWER SUPPLY DESIGN LEADER

### TYPICAL MECHANICAL DRAWING:

Inches (millimeters), connectors, and pinouts may vary with model. Refer to XR160 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 XR160 and the mounting chassis (refer to applicable UL standard for clearance requirements).

**N2Power** leads the power density race with its high efficiency XR160 AC-DC power supplies, which provide up to 91% efficiency. In fact, comparisons of efficiencies show that our supplies can reduce energy losses by up to 50%. Our advanced technology yields a very small footprint and offers the highest power density in its class. This unique design also generates less wasted heat—reducing the need for forced air cooling, decreasing AC power consumption, increasing reliability, and maximizing its economy of operation. By building our power supplies with a focus on maximizing efficiency, we can provide our valued customers with reduced energy costs, longer product lifespans, and a greater return on their investment.



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



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MODEL	PART NUMBER	OUTPUT	VOLTAGE	REGULATION (%)	MAXIMUM CURRENT (A)	RIPPLE & NOISE (P-P)
XR160-1	400125-01-9	V1	3.3	±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
XR160-7	400126-01-7	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
XR160-8	400127-01-5	V2	5	±5	20.0	50 mV
		V3	12	±5	6.0	120 mV
		V4	-12	±5	1.0	120 mV
XR160-05 CS	400140-02-6	V1	5	±3	32.0	50 mV
		V2	12	±5	1.0	120 mV
XR160-07 CS	400141-01-6	V1	7	±3	22.8	70 mV
		V2	12	±5	1.0	120 mV
XR160-08 CS	400142-01-4	V1	8	±3	20.0	80 mV
		V2	12	±5	1.0	120 mV
XR160-12	400130-01-9	V1	12	±3	13.3	120 mV
XR160-12 CS	400130-02-7	V2	12	±5	1.0	120 mV
XR160-15	400131-01-7	V1	15	±3	10.7	150 mV
XR160-15 CS	400131-02-5	V2	12	±5	1.0	120 mV
XR160-19 CS	400132-01-5	V1	19	±3	8.4	190 mV
		V2	12	±5	1.0	120 mV
XR160-24	400133-01-3	V1	24	±3	6.7	240 mV
XR160-24 CS	400133-02-1	V2	12	±5	1.0	120 mV
XR160-28	400134-01-1	V1	28	±3	5.7	280 mV
XR160-28 CS	400134-02-9	V2	12	±5	1.0	120 mV
XR160-30	400135-01-8	V1	30	±3	5.3	300 mV
XR160-30 CS	400135-02-6	V2	12	±5	1.0	120 mV
XR160-48	400136-01-6	V1	48	±3	3.3	480 mV
XR160-48 CS	400136-02-4	V2	12	±5	1.0	120 mV
XR160-51 CS	400137-01-4	V1	51	±3	3.1	510 mV
		V2	12	±5	1.0	120 mV
XR160-54	400138-01-2	V1	54	±3	2.9	540 mV
XR160-54 CS	400138-02-0	V2	12	±5	1.0	120 mV
XR160-56	400139-01-0	V1	56	±3	2.8	560 mV
XR160-56 CS	400139-02-8	V2	12	±5	1.0	120 mV

Note: If you can't find your preferred output voltage listed on the table above, please contact a sales representative. We can easily modify standard PSUs to meet client-specific voltage requirements.

CS = Current Sharing, plus an OR-ing diode/MOSFET on V1 output

### Compliance (See Product Spec for additional information):

#### USA / Canada

**Safety:** UL 60950-1:2007 (2nd Edition) / C22.2 No. 60950-1-07  
UL 62368-1 (Second Edition)  
Safety of Information Technology Equipment

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

#### Europe

2006/95/EC - "Low Voltage (Safety) Directive"  
Demko: EN 60950-1:2006 (2nd Edition) +A1:2010  
+A11:2009 +A12:2011 +A2:2013  
EN 62368-1:2014 / A11:2017  
2004/108/EC "Electromagnetic Compatibility (EMC) Directive" EN 61204-3 Class B

#### International

IEC 60950-1:2005 (2nd Edition)+ Am1:2009 + Am2:2013  
IEC 62368-1:2014  
Safety of Information Technology Equipment  
IEC 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:	.750 mA
Power Factor Correction:	Active PFC circuitry, meets or exceeds EN61000-3-2
OUTPUT SPECIFICATIONS	
Total Power:	160W
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 over temperature conditions
OPERATING SPECIFICATIONS	
Operating Temperature:	-25°C to +70°C
Temperature Derating:	2.5% / degree C to 70°C
Storage Temperature:	-40°C to +85°C
Forced Air Cooling:	10 CFM † Δ
Convection Cooling:	See product specification
MTBF:	> 600,000 hours @ 25°C *
SIGNALS	
Remote Sense:	On main output † Δ
Current Sharing (Optional):	Active current sharing with OR-ing diode or MOSFETs † Δ
Power Good:	Provided
PS_OK:	Output †
LED (PG):	All models †

† See product specification      Δ some models

\* See MTBF Report for additional temperature values

Contact us regarding custom and modified standard supplies for unique applications.  
For complete specifications on all models, please visit our website at [N2Power.com](http://N2Power.com)

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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