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" × 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
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.

Call 805.583.7744
N2Power.com
Rev051520

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 .25" in diameter. A standoff less than .375" high is acceptable when a thin insulator, 0.020mm 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 XR160 AC-DC Series**  
**Ultrasmall, High Efficiency Power Supplies**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>PART NUMBER</th>
<th>OUTPUT</th>
<th>VOLTAGE</th>
<th>REGULATION (%)</th>
<th>MAXIMUM CURRENT (A)</th>
<th>RIPPLE &amp; NOISE (P-P)</th>
</tr>
</thead>
<tbody>
<tr>
<td>XR160-1</td>
<td>400125-01-9</td>
<td>V1</td>
<td>3.3</td>
<td>±3</td>
<td>15.0</td>
<td>50 mV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V2</td>
<td>5</td>
<td>±4</td>
<td>20.0</td>
<td>50 mV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V3</td>
<td>12</td>
<td>±5</td>
<td>6.0</td>
<td>120 mV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V4</td>
<td>-12</td>
<td>±5</td>
<td>1.0</td>
<td>120 mV</td>
</tr>
<tr>
<td>XR160-7</td>
<td>400126-01-7</td>
<td>V1</td>
<td>2.5</td>
<td>±3</td>
<td>15.0</td>
<td>50 mV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V2</td>
<td>5</td>
<td>±4</td>
<td>20.0</td>
<td>50 mV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V3</td>
<td>12</td>
<td>±5</td>
<td>6.0</td>
<td>120 mV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V4</td>
<td>-12</td>
<td>±5</td>
<td>1.0</td>
<td>120 mV</td>
</tr>
<tr>
<td>XR160-8</td>
<td>400127-01-5</td>
<td>V2</td>
<td>5</td>
<td>±5</td>
<td>20.0</td>
<td>50 mV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V3</td>
<td>12</td>
<td>±5</td>
<td>6.0</td>
<td>120 mV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V4</td>
<td>-12</td>
<td>±5</td>
<td>1.0</td>
<td>120 mV</td>
</tr>
<tr>
<td>XR160-05 CS</td>
<td>400140-02-6</td>
<td>V1</td>
<td>5</td>
<td>±3</td>
<td>32.0</td>
<td>50 mV</td>
</tr>
<tr>
<td>XR160-07 CS</td>
<td>400141-01-6</td>
<td>V2</td>
<td>12</td>
<td>±5</td>
<td>1.0</td>
<td>120 mV</td>
</tr>
<tr>
<td>XR160-08 CS</td>
<td>400142-01-4</td>
<td>V2</td>
<td>12</td>
<td>±5</td>
<td>1.0</td>
<td>120 mV</td>
</tr>
<tr>
<td>XR160-12 CS</td>
<td>400130-01-9</td>
<td>V1</td>
<td>12</td>
<td>±3</td>
<td>13.3</td>
<td>120 mV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V2</td>
<td>12</td>
<td>±5</td>
<td>1.0</td>
<td>120 mV</td>
</tr>
<tr>
<td>XR160-15 CS</td>
<td>400131-01-7</td>
<td>V1</td>
<td>15</td>
<td>±3</td>
<td>10.7</td>
<td>150 mV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V2</td>
<td>12</td>
<td>±5</td>
<td>1.0</td>
<td>120 mV</td>
</tr>
<tr>
<td>XR160-19 CS</td>
<td>400132-01-5</td>
<td>V1</td>
<td>19</td>
<td>±3</td>
<td>8.4</td>
<td>190 mV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V2</td>
<td>12</td>
<td>±5</td>
<td>1.0</td>
<td>120 mV</td>
</tr>
<tr>
<td>XR160-24 CS</td>
<td>400133-01-3</td>
<td>V1</td>
<td>24</td>
<td>±3</td>
<td>6.7</td>
<td>240 mV</td>
</tr>
<tr>
<td>XR160-24 CS</td>
<td>400133-02-1</td>
<td>V2</td>
<td>12</td>
<td>±5</td>
<td>1.0</td>
<td>120 mV</td>
</tr>
<tr>
<td>XR160-28 CS</td>
<td>400134-01-1</td>
<td>V1</td>
<td>28</td>
<td>±3</td>
<td>5.7</td>
<td>280 mV</td>
</tr>
<tr>
<td>XR160-28 CS</td>
<td>400134-02-9</td>
<td>V2</td>
<td>12</td>
<td>±5</td>
<td>1.0</td>
<td>120 mV</td>
</tr>
<tr>
<td>XR160-30 CS</td>
<td>400135-01-8</td>
<td>V1</td>
<td>30</td>
<td>±3</td>
<td>5.3</td>
<td>300 mV</td>
</tr>
<tr>
<td>XR160-30 CS</td>
<td>400135-02-6</td>
<td>V2</td>
<td>12</td>
<td>±5</td>
<td>1.0</td>
<td>120 mV</td>
</tr>
<tr>
<td>XR160-48 CS</td>
<td>400136-01-6</td>
<td>V1</td>
<td>48</td>
<td>±3</td>
<td>3.3</td>
<td>480 mV</td>
</tr>
<tr>
<td>XR160-48 CS</td>
<td>400136-02-4</td>
<td>V2</td>
<td>12</td>
<td>±5</td>
<td>1.0</td>
<td>120 mV</td>
</tr>
<tr>
<td>XR160-51 CS</td>
<td>400137-01-4</td>
<td>V2</td>
<td>12</td>
<td>±5</td>
<td>1.0</td>
<td>120 mV</td>
</tr>
<tr>
<td>XR160-54 CS</td>
<td>400138-01-2</td>
<td>V1</td>
<td>54</td>
<td>±3</td>
<td>2.9</td>
<td>540 mV</td>
</tr>
<tr>
<td>XR160-54 CS</td>
<td>400138-02-0</td>
<td>V2</td>
<td>12</td>
<td>±5</td>
<td>1.0</td>
<td>120 mV</td>
</tr>
<tr>
<td>XR160-56 CS</td>
<td>400139-01-0</td>
<td>V1</td>
<td>56</td>
<td>±3</td>
<td>2.8</td>
<td>560 mV</td>
</tr>
<tr>
<td>XR160-56 CS</td>
<td>400139-02-8</td>
<td>V2</td>
<td>12</td>
<td>±5</td>
<td>1.0</td>
<td>120 mV</td>
</tr>
</tbody>
</table>

**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
- Inrush Current: 33 A @ 115 VAC
- Leakage Current: .750 mA
- Power Factor: 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†
- Convection Cooling: See product specification
- MTBF: > 600,000 hours @ 25°C†

**SIGNALS**
- Remote Sense: On main output†
- Current Sharing (Optional): Active current sharing with OR-ing diode or MOSFETs†
- Power Good: Provided
- PS_OK: Output†
- LED (PG): All models†

---

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.

**COMPLIANCE**

**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”
- EN 62368-1:2014 / A11:2017

**International**
- IEC 62368-1:2014
- Safety of Information Technology Equipment
- IEC 61204-3 Class B

---

Contact us regarding custom and modified standard supplies for unique applications. For complete specifications on all models, please visit our website at 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.

© Copyright 2020 | Qualstar Corporation | All rights reserved