DATASHEET

N2Power™

# N2Power XL280 AC-DC Series

## *Ultrasmall, High-Efficiency Power Supplies*

## HIGHLIGHTS

- 280 W AC-DC
- *High-Efficiency*–up to 90%
- High power density: over 13 W / cu in.
- 3″ x 5.3″ footprint
- All outputs may be paralleled
- Remote on/off
- 5 V standby output (1 A)
- 12 V aux output (1 A)
- Universal AC input
- Active PFC (90 - 264 VAC)
- Active current sharing for N, N+1
- Active inrush current protection
- RoHS compliant
- POE compliant (54 V and 56 V models)
- Three-year warranty

## COMPLETE PROTECTION

The main output is enabled whenever all of the required startup conditions are met, and is shut down upon command, loss of input power or whenever excessive loads or temperatures are sensed. When AC input power is lost it provides the host system with advanced warning of an impending shutdown.

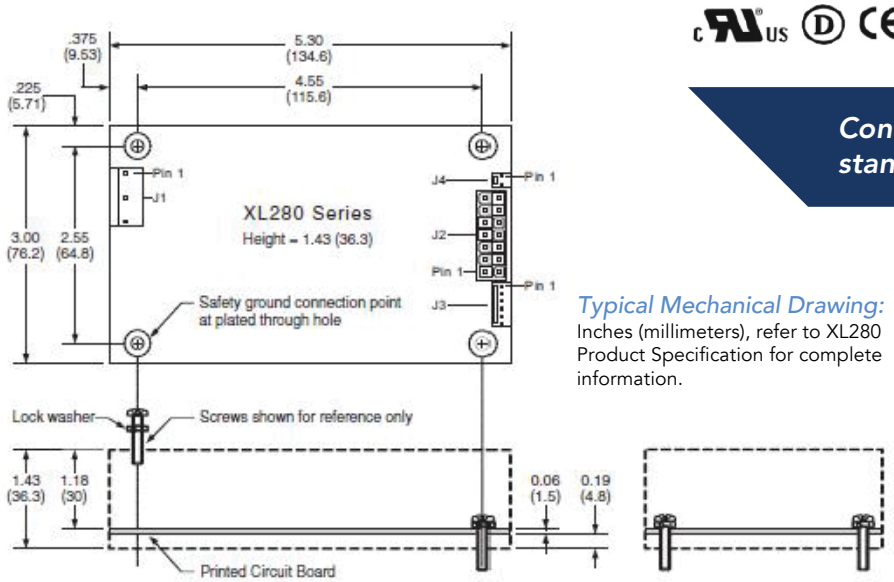
## UNMATCHED POWER DENSITY

With an overall height of 1.43" and a 3" x 5.3" footprint, the XL280 Series boasts a power density over 13 watts per cubic inch. It is ideally suited for OEMs using the industry standard 1U chassis.

# A POWER SUPPLY DESIGN **LEADER**

## HIGH EFFICIENCY IN A SMALL PACKAGE

***N2Power*** leads the power density race with its high-efficiency XL280 Series DC -DC power supplies, which provide up to 90% 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.




*Typical Mechanical Drawing:*
Inches (millimeters), refer to XL280 Product Specification for complete information.

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

N2Power™

***Call 805.583.7744***

N2Power.com

Rev062322

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# N2Power XL280 AC-DC Series

## Ultrasmall, High-Efficiency Power Supplies

| MODEL | PART NUMBER | OUTPUT | VOLTAGE | REGULATION (%) | MAXIMUM CURRENT (A) | RIPPLE & NOISE (P-P) |
|---|---|---|---|---|---|---|
| XL280-12<br>XL280-12 CS | 400082-01-2<br>400081-01-4 | V1 | 12 | ±3 | 23.3 | 120 mV |
| | | V2 | 12 | ±5 | 5.0 | 120 mV |
| | | V3 | 12 | ±5 | 1.0 | 120 mV |
| | | V4 | 5sb | ±5 | 1.0 | 50 mV |
| XL280-24<br>XL280-24 CS | 400082-02-0<br>400081-02-2 | V1 | 24 | ±3 | 11.7 | 240 mV |
| | | V2 | 12 | ±5 | 5.0 | 120 mV |
| | | V3 | 12 | ±5 | 1.0 | 120 mV |
| | | V4 | 5sb | ±5 | 1.0 | 50 mV |
| XL280-48<br>XL280-48 CS | 400082-03-4<br>400081-03-0 | V1 | 48 | ±3 | 5.8 | 480 mV |
| | | V2 | 12 | ±5 | 5.0 | 120 mV |
| | | V3 | 12 | ±5 | 1.0 | 120 mV |
| | | V4 | 5sb | ±5 | 1.0 | 50 mV |
| XL280-54<br>XL280-54 CS | 400082-04-6<br>400081-04-8 | V1 | 54 | ±3 | 5.2 | 540 mV |
| | | V2 | 12 | ±5 | 5.0 | 120 mV |
| | | V3 | 12 | ±5 | 1.0 | 120 mV |
| | | V4 | 5sb | ±5 | 1.0 | 50 mV |
| XL280-56<br>XL280-56 CS | 400082-05-3<br>400081-05-5 | V1 | 56 | ±3 | 5.0 | 560 mV |
| | | V2 | 12 | ±5 | 5.0 | 120 mV |
| | | V3 | 12 | ±5 | 1.0 | 120 mV |
| | | V4 | 5sb | ±5 | 1.0 | 50 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.

**Compliance:**

| | USA/ Canada: | Europe: | International: |
|---|---|---|---|
| **Safety:** | UL 60950-1:2007 (2nd Edition) / C22.2 No. 60950-1-07<br>UL 62368-1 (Second Edition) Safety of Information Technology Equipment (ITE) | 2006/95/EC - "Low Voltage (Safety) Directive"<br>Demko: EN 60950-1:2006 + A11:2009 (2nd Edition)<br>EN 62368-1:2014 / A11:2017 | IEC 60950-1:2005 (2nd Edition)<br>EN 62368-1:2014 / A11:2017<br>Safety of Information Technology Equipment |
| **EMC:** | FCC part 15, subpart B | 2004/108/EC "Electromagnetic Compatibility (EMC) Directive"<br>EN 61204-3 Class B | IEC 61204-3 Class B |

Every effort has been made to keep the information contained in this document current and accurate as of the date of publication or revision. However, no guarantee is given or implied that the document is error-free or that it is accurate with regard to any specification. N2Power reserves the right to change specifications without notice.

| INPUT SPECIFICATIONS | |
|---|---|
| Nominal Input Voltage: | 100 – 240 VAC |
| Tested Input Limits: | 90 – 264 VAC |
| Input Frequency Range: | 47 – 63 Hz |
| Input Current: | 3.5 A @ 100 VAC |
| Safety Isolation: | 3000 VAC input to output<br>1500 VAC input to ground |
| Inrush Current: | 14 A @ 240 VAC |
| Leakage Current: | 0.75 mA @240 VAC/60Hz |
| Power Factor Correction: | Active PFC circuitry, meets or exceeds EN61000-3-2 |
| **OUTPUT SPECIFICATIONS** | |
| Total Output: | 280 W |
| Output Voltages: | 12 to 56 V |
| Hold-up Time: | Minimum 22 ms |
| Efficiency: | Up to 90% |
| Minimum Load: | No load |
| Over / Under Shoot: | Max 10% at turn-on |
| Output Isolation | For POE |
| **PROTECTION** | |
| Input Protection: | 5 A fuse |
| Overvoltage Protection: | V1 (latches off) |
| Overpower Protection: | Auto-recovery |
| Short Circuit Protection: | Auto recovery |
| Thermal Shutdown: | Auto recovery |
| **ENVIRONMENTAL SPECIFICATIONS** | |
| Operating Temperature: | –25 to +70˚C |
| Temperature Derating: | 2.5% / degree<br>50˚C to 70˚C |
| Storage Temperature: | – 40 to +85˚C |
| Forced Air Cooling: | 10 CFM minimum |
| Convection Cooling: | See Specification |
| MTBF: | 546,464 hours @ 25˚C |
| **SIGNALS** | |
| Remote Sense | V1 and Return |
| Current Sharing | V1 using active circuitry |
| Passive Redundancy | V2 and V3 outputs may be wire OR-ed |
| Power Good (PG) Output | High-true CMOS logic |
| Remote Enable Input | Low-true input enables V1, V2, V3 output |

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*For complete specifications on all models, please visit our website at N2Power.com*

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