

N2POWER XL375 AC-DC SERIES HIGH-EFFICIENCY POWER SUPPLY

- 375W AC-DC
- 3.3" x 5" footprint
- Up to 93% efficiency
- High power density: Over 15W/cu in.
- All outputs may be paralleled
- Remote on/off
- 5V Standby output (1amp)
- 12V Aux output (1amp)
- Universal AC input
- Active PFC (90 264 VAC)
- Active current sharing for N, N+1 (main output)*
- Active inrush current protection
- Convection cooling
- RoHS compliant
- OR-ing MOSFET board (optional)

Power Supply Design Leader

N2Power[™] leads the power density race with its high efficiency XL375 Series AC-DC power supplies. Our advanced technology yields a very small footprint, reduces wasted power and offers the highest power density in its class. This efficient design means reduced energy costs, a greater return on your investment, greater reliability and longer product life.

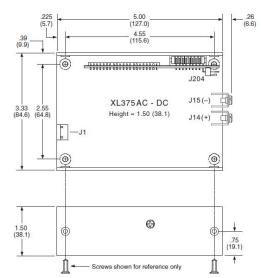
Unmatched Power Density

With an overall height of 1.5" and a 3.3" x 5" footprint, the XL375 Series boasts a power density over 15 watts per cubic inch. It is ideally suited for OEMs using the industry standard 1U chassis.

High Efficiency in a Small Package

The XL375 Series provides up to 93% efficiency. Our unique design reduces energy consumption and generates less wasted heat.

It requires little forced air cooling, decreases AC power consumption, increases reliability and economy of operation. You can use the XL375 Series in convection operations up to 260watts (w/o fans). Comparisons of efficiencies show that our supplies can reduce losses up to 50%.



Typical Mechanical Drawing:

Inches (millimeters), connectors and pinouts may vary with model. Refer to XL375 Product Specification for complete information.

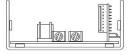
Complete Protection

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. It always provides the host system with advanced warning of an impending shutdown to enable it to perform housekeeping before power is lost. The OR-ing board option allows the main outputs of up to four XL375s to be operated in parallel. It also provides hotswappable N+1 configurations.



OR-ing Board Option

e



RoHS

CE



QUALSTAR CORPORATION www.n2power.com Tel: 805-583-7744

NASDAQ: QBAK

Rev: 08-01-19



MODEL	PART NUMBER	OUTPUT	VOLTAGE	REGULATION (%)	MAXIMUM CURRENT (A)	RIPPLE & NOISE (P-P)
		V1	12	±3	30.0	100 mV
XL375-12 CS	-12 CS 400040-01-0	V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV
	-24 CS 400041-01-8	V1	24	±3	15.0	200mV
XL375-24 CS		V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV
	400052-01-5	V1	28	±3	12.8	200mV
XL375-28 CS		V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV
		V1	36	±3	10.0	200mV
XL375-36 CS 400046-01-7	400046-01-7	V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV
		V1	40	±3	9.0	200mV
XL375-40 CS	400045-01-9	V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV
		V1	48	±3	7.5	200mV
XL375-48 CS	400042-01-6	V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV
		V1	54	±3	6.7	200mV
XL375-54 CS	400044-01-2	V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV
	400043-01-4	V1	56	±3	6.4	200mV
XL375-56 CS		V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV

Compliance ¹

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 (ITE)

EMC

FCC part 15, subpart B

Europe Safety

2006/95/EC - "Low Voltage (Safety) Directive" Demko: EN 60950-1:2006+A11:2009 (2nd Edition) EN 62368-1:2014 / A11:2017

EMC

2004/108/EC "Electromagnetic Compatibility (EMC) Directive" EN 61204-3 Class B International Safety EC 60950-1:2005 (2nd

Edition) IEC 62368-1:2014 Safety of Information Technology Equipment

EMC

IEC 61204-3 Class B

¹ See Product Specification for additional information. The power supply is considered a component of the final product in which it is being used. The final product itself must be tested separately for compliance with all applicable standards.

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INPUT SPECIFICATIONS				
Nominal Input Voltage:	100 – 240 VAC			
Tested Input Limits:	90 – 264 VAC			
Input Frequency Range:	47 – 63 Hz			
Input Current:	4.3 A @ 100 VAC			
Safety Isolation:	3000 VAC in to out 1500 VAC in to ground			
Inrush Current:	14 A @ 240 VAC [†]			
Leakage Current:	0.75 mA @ 240 VAC / 60 Hz [†]			
Power Factor	Active PFC circuitry, meets or			
Correction:	exceeds EN61000-3-2 [†]			
OR-ING BOARD OPTION †				
Output Voltage:	OR-ing Board P/N:			
12V	400040-02-8			
24V	400041-02-6			
28 – 48V	400052-02-3			
54 – 56V	400044-02-0			
OUTPUT SPECIFICATIONS				
Total Output:	375W (260W with convection			
	cooling option)			
Hold-up Time:	Minimum 22 ms			
	at all input voltages			
Efficiency:	Up to 93%			
Minimum Load:	No load			
Over / Under Shoot:	Max 10% at turn-on			
PROTECTION				
Input Overcurrent Protection				
Overvoltage Protection:	V1 (latches off)			
Overpower Protection:	Protected / Auto-recovery			
Overpower Protection: Short Circuit Protection:	Auto recovery of all outputs			
	Auto recovery of all outputs protected against short circuit Auto recovery protection against over temperature			
Short Circuit Protection: Thermal Shutdown:	Auto recovery of all outputs protected against short circuit Auto recovery protection against over temperature conditions			
Short Circuit Protection: Thermal Shutdown: ENVIRONMENTAL SPECIFI	Auto recovery of all outputs protected against short circuit Auto recovery protection against over temperature conditions CATIONS			
Short Circuit Protection: Thermal Shutdown: ENVIRONMENTAL SPECIFI Operating Temperature:	Auto recovery of all outputs protected against short circuit Auto recovery protection against over temperature conditions CATIONS -25 to +50°C			
Short Circuit Protection: Thermal Shutdown: ENVIRONMENTAL SPECIFI Operating Temperature: Temperature Derating:	Auto recovery of all outputs protected against short circuit Auto recovery protection against over temperature conditions CATIONS -25 to +50°C 2.5% / degree, 50°C to 70°C			
Short Circuit Protection: Thermal Shutdown: ENVIRONMENTAL SPECIFI Operating Temperature: Temperature Derating: Storage Temperature:	Auto recovery of all outputs protected against short circuit Auto recovery protection against over temperature conditions CATIONS -25 to +50°C 2.5% / degree, 50°C to 70°C -40 to +85°C			
Short Circuit Protection: Thermal Shutdown: ENVIRONMENTAL SPECIFI Operating Temperature: Temperature Derating: Storage Temperature: Forced Air Cooling:	Auto recovery of all outputs protected against short circuit Auto recovery protection against over temperature conditions CATIONS -25 to +50°C 2.5% / degree, 50°C to 70°C - 40 to +85°C 10 CFM minimum [†]			
Short Circuit Protection: Thermal Shutdown: ENVIRONMENTAL SPECIFI Operating Temperature: Temperature Derating: Storage Temperature: Forced Air Cooling: Convection Cooling:	Auto recovery of all outputs protected against short circuit Auto recovery protection against over temperature conditions CATIONS -25 to +50°C 2.5% / degree, 50°C to 70°C - 40 to +85°C 10 CFM minimum [†] 260W			
Short Circuit Protection: Thermal Shutdown: ENVIRONMENTAL SPECIFI Operating Temperature: Temperature Derating: Storage Temperature: Forced Air Cooling: Convection Cooling: MTBF:	Auto recovery of all outputs protected against short circuit Auto recovery protection against over temperature conditions CATIONS -25 to +50°C 2.5% / degree, 50°C to 70°C - 40 to +85°C 10 CFM minimum [†]			
Short Circuit Protection: Thermal Shutdown: ENVIRONMENTAL SPECIFI Operating Temperature: Temperature Derating: Storage Temperature: Forced Air Cooling: Convection Cooling: MTBF: SIGNALS	Auto recovery of all outputs protected against short circuit Auto recovery protection against over temperature conditions CATIONS -25 to +50°C 2.5% / degree, 50°C to 70°C -40 to +85°C 10 CFM minimum [†] 260W 376,644 hours @ 25°C *			
Short Circuit Protection: Thermal Shutdown: ENVIRONMENTAL SPECIFI Operating Temperature: Temperature Derating: Storage Temperature: Forced Air Cooling: Convection Cooling: MTBF: SIGNALS Remote Sense	Auto recovery of all outputs protected against short circuit Auto recovery protection against over temperature conditions CATIONS -25 to +50°C 2.5% / degree, 50°C to 70°C -40 to +85°C 10 CFM minimum [†] 260W 376,644 hours @ 25°C * V1 and Return			
Short Circuit Protection: Thermal Shutdown: ENVIRONMENTAL SPECIFI Operating Temperature: Temperature Derating: Storage Temperature: Forced Air Cooling: Convection Cooling: MTBF: SIGNALS Remote Sense Current Sharing	Auto recovery of all outputs protected against short circuit Auto recovery protection against over temperature conditions CATIONS -25 to +50°C 2.5% / degree, 50°C to 70°C - 40 to +85°C 10 CFM minimum [†] 260W 376,644 hours @ 25°C * V1 and Return V1 using active circuitry			
Short Circuit Protection: Thermal Shutdown: ENVIRONMENTAL SPECIFI Operating Temperature: Temperature Derating: Storage Temperature: Forced Air Cooling: Convection Cooling: MTBF: SIGNALS Remote Sense	Auto recovery of all outputs protected against short circuit Auto recovery protection against over temperature conditions CATIONS -25 to +50°C 2.5% / degree, 50°C to 70°C -40 to +85°C 10 CFM minimum [†] 260W 376,644 hours @ 25°C * V1 and Return V1 using active circuitry V2 and V3 outputs may be wire OR-ed			
Short Circuit Protection: Thermal Shutdown: ENVIRONMENTAL SPECIFI Operating Temperature: Temperature Derating: Storage Temperature: Forced Air Cooling: Convection Cooling: MTBF: SIGNALS Remote Sense Current Sharing	Auto recovery of all outputs protected against short circuit Auto recovery protection against over temperature conditions CATIONS -25 to +50°C 2.5% / degree, 50°C to 70°C - 40 to +85°C 10 CFM minimum [†] 260W 376,644 hours @ 25°C * V1 and Return V1 using active circuitry V2 and V3 outputs may be wire OR-ed High-true CMOS logic and LED drive outputs			
Short Circuit Protection: Thermal Shutdown: ENVIRONMENTAL SPECIFI Operating Temperature: Temperature Derating: Storage Temperature: Forced Air Cooling: Convection Cooling: MTBF: SIGNALS Remote Sense Current Sharing Passive Redundancy	Auto recovery of all outputs protected against short circuit Auto recovery protection against over temperature conditions CATIONS -25 to +50°C 2.5% / degree, 50°C to 70°C - 40 to +85°C 10 CFM minimum [†] 260W 376,644 hours @ 25°C * V1 and Return V1 using active circuitry V2 and V3 outputs may be wire OR-ed High-true CMOS logic and			
Short Circuit Protection: Thermal Shutdown: ENVIRONMENTAL SPECIFI Operating Temperature: Temperature Derating: Storage Temperature: Forced Air Cooling: Convection Cooling: MTBF: SIGNALS Remote Sense Current Sharing Passive Redundancy Power Good (PG) Output	Auto recovery of all outputs protected against short circuit Auto recovery protection against over temperature conditions CATIONS -25 to +50°C 2.5% / degree, 50°C to 70°C -40 to +85°C 10 CFM minimum [†] 260W 376,644 hours @ 25°C * V1 and Return V1 using active circuitry V2 and V3 outputs may be wire OR-ed High-true CMOS logic and LED drive outputs Low-true input enables V1			
Short Circuit Protection: Thermal Shutdown: ENVIRONMENTAL SPECIFI Operating Temperature: Temperature Derating: Storage Temperature: Forced Air Cooling: MTBF: SIGNALS Remote Sense Current Sharing Passive Redundancy Power Good (PG) Output Remote Enable Input	Auto recovery of all outputs protected against short circuit Auto recovery protection against over temperature conditions CATIONS -25 to +50°C 2.5% / degree, 50°C to 70°C - 40 to +85°C 10 CFM minimum [†] 260W 376,644 hours @ 25°C * V1 and Return V1 using active circuitry V2 and V3 outputs may be wire OR-ed High-true CMOS logic and LED drive outputs Low-true input enables V1 output [†]			

[†] See Product Specification

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* See MTBF Report for additional temperature values



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