N2Power™
A Qualstar® Company

ULTRA SMALL, HIGH EFFICIENCY POWER SUPPLIES

XL375 AC-DC Series

- 375 W AC-DC / 3.3" X 5" FOOTPRINT
- AVAILABLE MODELS: 12V – 56V
- UP TO 93% EFFICIENCY
- HIGH POWER DENSITY: OVER 15 W / in³
- ALL OUTPUTS MAY BE PARALLELED
- REMOTE ON / OFF
- 5V STANDBY OUTPUT (1A)
- 12V AUX OUTPUT (1A)
- UNIVERSAL AC INPUT
- ACTIVE PFC (90 – 264 VAC)
- ACTIVE CURRENT SHARING FOR N, N+1 (MAIN OUTPUT)*
- ACTIVE INRUSH CURRENT PROTECTION
- CONVECTION COOLING OPTION
- 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

TWICE THE POWER IN HALF THE SPACE

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

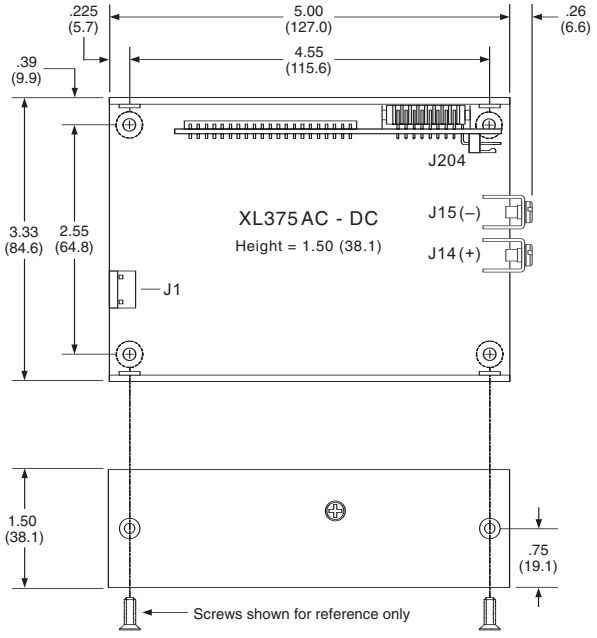
The XL375 Series provides up to 93% efficiency. Our unique design reduces energy consumption and generates less wasted heat. It requires little forced air cooling, decreases AC power consumption, increases reliability and economy of operation. The Convection Cooling Option delivers 260 watts without fans. Comparisons of efficiencies show that our supplies can reduce losses up to 50%.

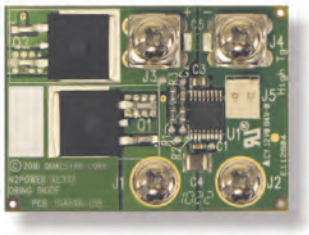
COMPLETE PROTECTION

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 hot-swappable N+1 configurations.

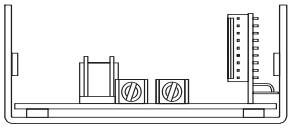
Typical Mechanical Drawing:

Inches (millimeters), refer to XL375 Product Specification for complete information.





OR-ing Board Option



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MODEL	PART NUMBER	OUTPUT	VOLTAGE	REGULATION (%)	MAXIMUM CURRENT (A) CS	CC	RIPPLE & NOISE (P-P)
XL375-12 CS* XL375-12 CS* CC	400040-01-0 400040-04-0	V1	12	±3	30.0	21.6	100 mV
		V2	12	±5	1.0	1.0	80 mV
		V3	5sb	±5	1.0	1.0	50 mV
XL375-24 CS* XL375-24 CS* CC	400041-01-8 400041-05-9	V1	24	±3	15.0	10.8	200 mV
		V2	12	±5	1.0	1.0	80 mV
		V3	5sb	±5	1.0	1.0	50 mV
XL375-28 CS* XL375-28 CS* CC	400052-01-5 400052-03-1	V1	28	±3	12.8	9.2	200 mV
		V2	12	±5	1.0	1.0	80 mV
		V3	5sb	±5	1.0	1.0	50 mV
XL375-36 CS* XL375-36 CS* CC	400046-01-7 400046-03-3	V1	36	±3	10.0	7.2	200 mV
		V2	12	±5	1.0	1.0	80 mV
		V3	5sb	±5	1.0	1.0	50 mV
XL375-40 CS* XL375-40 CS* CC	400045-01-9 400045-03-5	V1	40	±3	9.0	6.5	200 mV
		V2	12	±5	1.0	1.0	80 mV
		V3	5sb	±5	1.0	1.0	50 mV
XL375-48 CS* XL375-48 CS* CC	400042-01-6 400042-04-0	V1	48	±3	7.5	5.4	200 mV
		V2	12	±5	1.0	1.0	80 mV
		V3	5sb	±5	1.0	1.0	50 mV
XL375-54 CS* XL375-54 CS* CC	400044-01-2 400044-03-8	V1	54	±3	6.7	4.8	200 mV
		V2	12	±5	1.0	1.0	80 mV
		V3	5sb	±5	1.0	1.0	50 mV
XL375-56 CS* XL375-56 CS* CC	400043-01-4 400043-03-0	V1	56	±3	6.4	4.6	200 mV
		V2	12	±5	1.0	1.0	80 mV
		V3	5sb	±5	1.0	1.0	50 mV

CS = Current Sharing CC = Convection Cooling * N+1 operation requires optional OR-ing Board, see below

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
Input Protection:	6.3 A fuse
Safety Isolation:	3000 VAC input to output 1500 VAC input to ground
Inrush Current:	14 A @ 240 VAC†
Leakage Current:	0.75mA @ 240 VAC / 60 Hz†
Power Factor Correction:	Active PFC circuitry, meets or exceeds EN61000-3-2†

OR-ING BOARD OPTION†

Output Voltage:	OR-ing Board P/N:
12 V	400040-02-8
24 V	400041-02-6
28 V – 48 V	400052-02-3
54 V – 56 V	400044-02-0

PROTECTION

Overvoltage Protection:	V1 (latches off)
Overpower Protection:	Protected / Auto Recovery
Short Circuit Protection:	Auto recovery of all outputs
Thermal Shutdown:	Auto recovery protection against over temperature conditions

OPERATING SPECIFICATIONS

Operating Temperature:	–25°C to +50°C
Temperature Derating:	2.5% / degree 50°C to 70°C
Storage Temperature:	–40°C to +85°C
Forced Air Cooling:	10 CFM minimum†
Convection Cooling Option:	260W max output†
MTBF:	376,644 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 and LED drive outputs
Remote Enable Input:	Low-true input enables V1 output†
Onboard LED Indicators:	AC On, Power Good
Trim Input:	±5%

OUTPUT SPECIFICATIONS

Total Output:	375 W (260W w/CC Option)
Hold-up Time:	Minimum 22 mS
Efficiency:	Up to 93%†
Minimum Load:	No load
Over / Under Shoot:	Maximum 10% at turn-on

* See MTBF Report for additional temperature values

† See Product Specification

Compliance:[1]

USA / Canada:

Safety: Underwriters Laboratories: UL 60950-1:2007 (2nd Edition) / C22.2 No. 60950-1-07 Safety of Information Technology Equipment (ITE)

EMC: FCC part 15, subpart B

[1]See Product Specification for additional information

Europe:

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

2004/108/EC "Electromagnetic Compatibility (EMC) Directive"
EN 61204-3 Class B

International:

IEC 60950-1:2005 (2nd Edition) Safety of Information Technology Equipment

IEC 61204-3 Class B

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