



N2Power XL275 AC-DC Series High-Efficiency Power Supplies

HIGHLIGHTS

- 275 W AC-DC
- High-Efficiency—up to 91%
- High-power density—over 12 W/cu in.
- 3" x 5" footprint
- All outputs may be paralleled
- Remote on/off
- 5 W, 5 V standby supply
- Universal AC input
- Active PFC (90 – 264 VAC)
- Built-in OR-ing MOSFET for N, N+1
- Active inrush current protection
- RoHS compliant
- PMBus™ interface for digital power management (optional)
- Three-Year Warranty

The microcontroller enables the main output whenever all the required startup conditions are met, and shuts it down upon command, loss of input power or whenever excessive temperatures or loads are sensed. It always provides advanced warning of an impending shutdown before output power is lost.

PMBUS™ OPTION

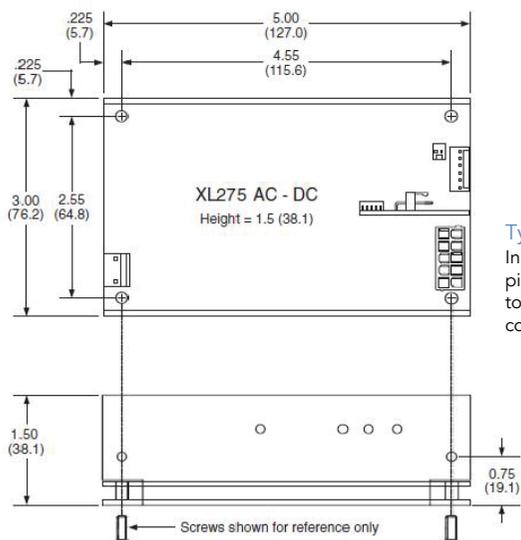
An optional PMBus™ digital communications interface is available to allow up to four XL275s to communicate over the same bus using the PMBus™ protocol. This interface allows routine remote control of the main outputs and the 12V fans. The host can also query the microcontroller for its output voltage and current plus the ambient and transformer temperatures and fan tachometer speed. Because it is programmable, the microcontroller code can be customized to meet unique OEM requirements.

A POWER SUPPLY DESIGN LEADER

ADVANCED DIGITAL CONTROLLER

The XL275 is the first power supply in this class to use a digital microcontroller to supervise the unit's operation. The microcontroller monitors the following parameters:

- DC voltage on the bulk capacitor (supplied by the AC mains)
- Output voltage • Output current
- Auxiliary 12V output voltage • Transformer temperature
- Ambient temperature • Fan tachometer



Typical Mechanical Drawing:
Inches (millimeters), connectors and pinouts may vary with model. Refer to XL275 Product Specification for complete information.

N2Power leads the power density race with its high-efficiency XL275 Series 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.

N2Power™

Call 805.583.7744

N2Power.com

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High-Efficiency Power Supplies

MODEL	PART NUMBER	OUTPUT	VOLTAGE	REGULATION (%)	MAXIMUM CURRENT (A)	RIPPLE & NOISE (P-P)
XL275-12 XL275-12 CS	400029-02-1 400029-01-3	V1	12	±3	22.9	100 mV
		V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV
XL275-15 XL275-15 CS	400029-05-4 400029-03-9	V1	15	±3	18.3	150mV
		V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV
XL275-16 XL275-16 CS	400029-06-2 400029-04-7	V1	16	±3	17.1	150mV
		V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV
XL275-18 XL275-18 CS	400029-07-0 400029-08-8	V1	18	±3	15.3	200mV
		V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV
XL275-24 XL275-24 CS	400030-02-9 400030-01-1	V1	24	±3	11.5	200mV
		V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV
XL275-28 XL275-28 CS	400032-06-6 400032-05-8	V1	28	±3	9.8	200mV
		V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV
XL275-36 XL275-36 CS	400035-02-8 400035-01-0	V1	36	±3	7.6	200mV
		V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV
XL275-48 XL275-48 CS	400031-02-7 400031-01-9	V1	48	±3	5.7	200mV
		V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV
XL275-54 XL275-54 CS	400032-04-1 400032-03-3	V1	54	±3	5.1	200mV
		V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV
XL275-56 XL275-56 CS	400032-02-5 400032-01-7	V1	56	±3	4.9	200mV
		V2	12	±5	1.0	80 mV
		V3	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

Safety

UL 60950-1:2007 (2nd Edition) / C22.2 No. 60950-1-07

UL 62368-1 (Second Edition)

Safety of IT Equipment

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

* 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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Contact us regarding custom and modified standard supplies for unique applications.
For complete specifications on all models, please visit our website at N2Power.com

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 1500 VAC input to ground
Inrush Current:	13 A @ 240 VAC †
Leakage Current:	0.7 mA †
Power Factor Correction:	Active PFC circuitry, meets or exceeds EN61000-3-2
OUTPUT SPECIFICATIONS	
Total Output:	275 W
Output Voltages:	12 to 56 V
Hold-up Time:	Minimum 22 ms at all input voltages
Efficiency:	Up to 91%
Minimum Load:	No load
Over / Under Shoot:	Max 10% at turn-on
PROTECTION	
Input Overcurrent Protection:	5 A fuse
Overvoltage Protection:	V1 and V2 latch off
Overpower Protection:	Protected / Auto-recovery
Short Circuit Protection:	Auto recovery of all outputs protected against short circuit
Thermal Shutdown:	Auto recovery protection against over temperature conditions
ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature:	-25 to +70°C
Temperature Derating:	2.5% / degree, 50°C to 70°C
Storage Temperature:	-40 to +85°C
Forced Air Cooling:	10 CFM minimum †
Convection Cooling:	150W
MTBF:	645,362 hours @ 25°C *
SIGNALS	
Remote Sense	
Active Current Sharing	
Passive Redundancy	
Fan Output 1	
Fan Output 2	
Fan Tachometer Input	
Optional I ² C Data / Clock	
Power Good (PG) Output	
Standby Output	
Remote Enable Input	
Onboard LED Indicators	

† See Product Specification

* See MTBF Report for additional temperature values