

- 275W AC-DC
- 3" x 5" footprint
- Up to 91% efficiency
- High power density: Over 12W/cu in.
- All outputs may be paralleled
- Remote on/off
- 5W 5V 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)



Power Supply Design Leader

N2Power™ leads the power density race with its small, high efficiency XL275 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.

Advanced Digital Controller

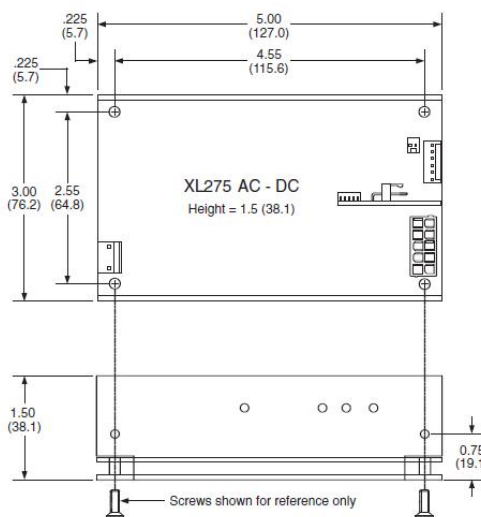
The XL275 is the first power supply in this class to use a digital microcontroller to supervise the unit's operation. The microcontroller monitors the following parameters:

- 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

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.

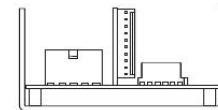
PMBus™ Option

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.



Typical Mechanical Drawing:

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



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

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 in to out 1500 VAC in 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 +50°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	

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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† See Product Specification

* See MTBF Report for additional temperature values