N2POWER XL270 AC-DC SERIES
HIGH-EFFICIENCY POWER SUPPLY

- 270W AC-DC
- 2” x 4” footprint
- Up to 92% efficiency
- High power density: Over 24W/cu in.
- Remote enable
- 5W 5V standby supply
- 6W 12V auxiliary supply
- 140W convection cooled rating
- Active PFC (90 – 264 VAC)
- Active inrush current protection
- RoHS compliant
- Active Current Sharing (Optional)
- Power good / Power fail
- No load operation
- PMBus Interface

Power Supply Design Leader

N2Power™ leads the power density race with its small, high efficiency XL270 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.

State-of-the-Art Digital Controller

The XL270 is the first power supply in this class to use two digital signal processors to control the unit’s operation. The DSPs monitor the following values:

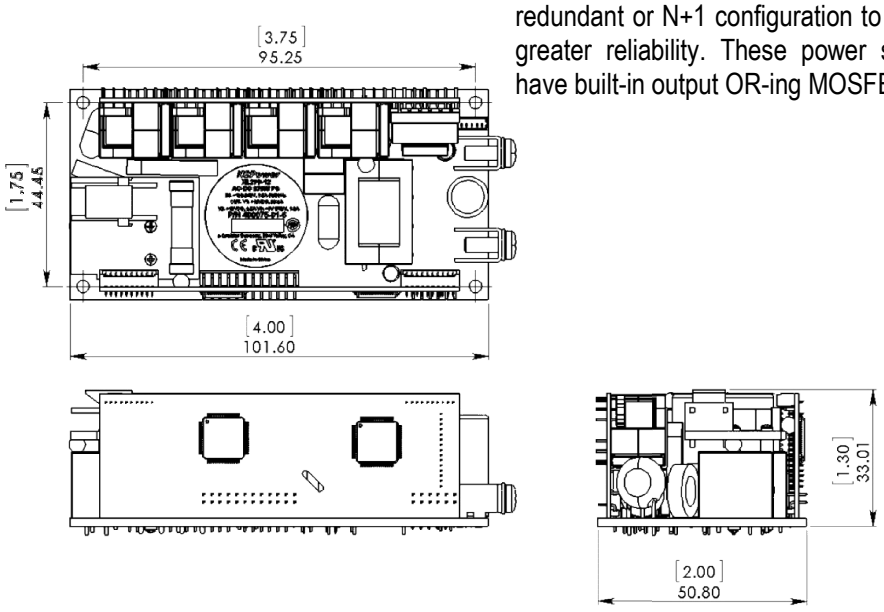
- Output voltage
- Output current
- Auxiliary 12V output voltage
- Self-diagnostic feature
- Transformer temperature
- Auto-optimize feature

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.

Current Share Option

By using the active current-sharing feature from XL270 CS (Current Share) models, the outputs of up to four power supplies can be connected in parallel to provide higher output power.

Multiple XL270 CSs can also be used in redundant or N+1 configuration to provide greater reliability. These power supplies have built-in output OR-ing MOSFETs.



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MODEL	PART NUMBER	OUTPUT	VOLTAGE	REGULATION (%)	MAXIMUM CURRENT (A)	RIPPLE & NOISE (P-P)
XL270-12 / XL270-12 CS	400075-01-6 / 400075-09-9	V_{OUT}	12	±3	22.5	120 mV
		V_{AUX}	12	±5	0.5	120 mV
		V_{SB}	5	±5	1.0	50 mV
XL270-24 / XL270-24 CS	400075-02-4 / 400075-10-7	V_{OUT}	24	±3	11.3	240 mV
		V_{AUX}	12	±5	0.5	120 mV
		V_{SB}	5	±5	1.0	50 mV
XL270-30 / XL270-30 CS	400075-03-2 / 400075-11-5	V_{OUT}	30	±3	9.0	300 mV
		V_{AUX}	12	±5	0.5	120 mV
		V_{SB}	5	±5	1.0	50 mV
XL270-48 / XL270-48 CS	400075-05-7 / 400075-13-1	V_{OUT}	48	±3	5.7	480 mV
		V_{AUX}	12	±5	0.5	120 mV
		V_{SB}	5	±5	1.0	50 mV
XL270-56 / XL270-56 CS	400075-07-3 / 400075-15-6	V_{OUT}	56	±3	4.9	560 mV
		V_{AUX}	12	±5	0.5	120 mV
		V_{SB}	5	±5	1.0	50 mV

Compliance *

USA / Canada	International
Safety:	
UL 60950-1 Second Edition	IEC 60950-1 (2005) Second Edition
UL 62368-1 Second Edition	IEC 62368-1 (2014) Second Edition
CSA 22.2: 60950-1	
EMC:	
FCC part 15, subpart B	EN 61204-3
	EN 61000

* 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.

INPUT SPECIFICATIONS	
Nominal Input Voltage:	100 – 240 VAC
Tested Input Limits:	90 – 264 VAC
Input Frequency Range:	47 – 63 Hz
Input Current:	3.2 A @ 100 VAC
Safety Isolation:	3000 VAC in to out 1500 VAC in to ground
Inrush Current:	35 A @ 240 VAC, 25˚C
Leakage Current:	< 0.7 mA
Power Factor Correction:	Active PFC circuitry, meets or exceeds EN61000-3-2
OUTPUT SPECIFICATIONS	
Total Output:	270 W
Output Voltages:	12 to 56 V
Hold-up Time:	Minimum 22 ms at all input voltages
Efficiency:	Up to 92%
Minimum Load:	No load
Over / Under Shoot:	Max 5% at turn-on
PROTECTION	
Input Overcurrent Protection:	6.3 A fuse
Overvoltage Protection:	V_{OUT} only latch off
Overpower Protection:	Auto-recovery
Short Circuit Protection:	Auto recovery
Thermal Shutdown:	Auto recovery
ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature:	–25 to +50˚C
Temperature Derating:	2.5% / 50˚C to 70˚C
Storage Temperature:	– 40 to +85˚C
Forced Air Cooling:	15 CFM minimum†
Convection Cooling:	140W
MTBF:	504,292 hours @ 25˚C
SIGNALS	
Remote Sense	
Active Current Sharing Option	
Passive Redundancy	
Auxiliary Output	
Standby Output	
Power Good (PG) / Power Fail Output	
Remote Enable	
Onboard LED Indicators	