

N2Power XL750 AC-DC Series

High-Efficiency Switching Power Supplies



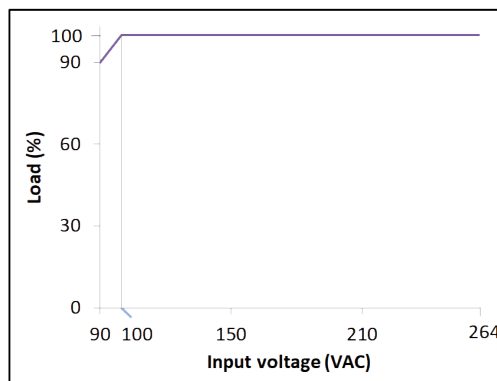
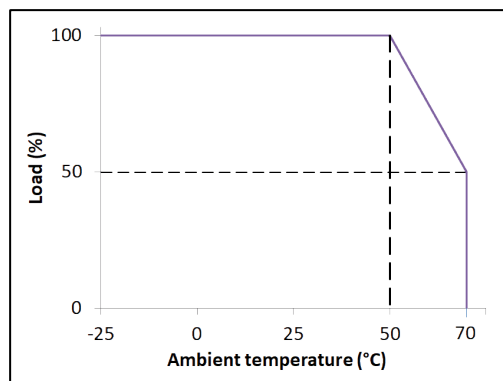
HIGHLIGHTS

- High-Efficiency—up to 94%
- Form factor 4" x 7" x 1.85" (1.91" with top cover)
- With P.F.C. function > 0.95
- 5 V standby 1.0 A supply
- Auxiliary 12 V / 1.0 A fan supply
- I2C / PMBus™ interface for digital power management
- Active current sharing for N, N+1
- Built-in OR-ing MOSFET for N, N+1
- U-Frame, U-Frame with top cover
- Maximum output: 750W with 25 CFM fan or 300W with unobstructed convection cooling⁽¹⁾
- Pending UL / IEC / EN 62368 Safety Approvals
- Three-year warranty

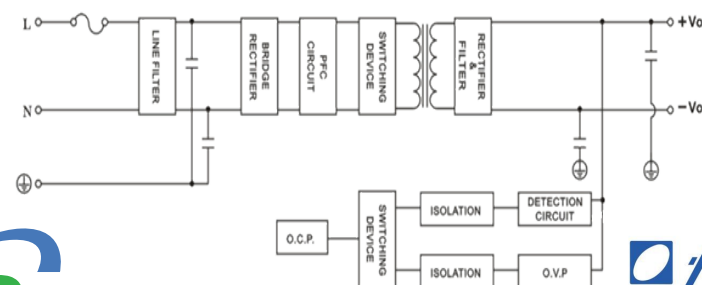
N2Power leads the power density race with its high-efficiency XL750 Series AC -DC power supplies, which provide up to 94% efficiency. In fact, comparisons of efficiencies show that our supplies can reduce energy losses by up to 50%. Our advanced technology yields a very small footprint and offers the 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



A POWER SUPPLY DESIGN LEADER

OPERATING CHARACTERISTICS



BLOCK DIAGRAM OF THE POWER SUPPLY



CE CB  E211115  CB Rev062327

Contact us regarding custom and modified standard supplies for unique applications.

N2Power XL750 AC-DC Series

High-Efficiency Switching Power Supplies

INPUT SPECIFICATIONS	
Nominal Input Voltage ⁽⁵⁾	90 – 264 VAC
Input Frequency Range	47 – 63 Hz
Input Current	< 10.0 A max. @ 100 VAC < 4.0 A max. @ 240 VAC
Safety Isolation	3000 VAC input to output 1500 VAC input to ground
Inrush Current	< 7 A max. @ 120 VAC < 15 A max. @ 240 VAC
Leakage Current	< 0.1mA / 264 VAC (Touch Current)
Power Factor @ 230VAC	> 0.98 at full load
OUTPUT SPECIFICATIONS	
Total Output Power	750 W ⁽²⁾ and 300 W ⁽¹⁾
Output Voltages	12 to 56 V
Voltage Tolerance	±3%
Line Regulation	±1% (115- 264 VAC)
Load Regulation	±1% (0-100%, typical)
Hold-up Time ⁽⁴⁾	Min. 20 ms @ 115VAC
Efficiency	Up to 94%
Minimum Load	0%
PROTECTION	
Over Voltage Protection:	Latches off
Over Power Protection:	Auto recovery, hiccup mode
Over Temperature:	Auto recovery
Short Circuit Protection:	Auto recovery, hiccup mode
Convection Cooling	300 W
MTBF	376,644 hours
ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature:	-30 to +70°C (with derating)
Storage Temperature:	- 30 to +85°C
Relative Humidity:	20% to 90% (non-cond.)
MTBF (full load at 25°C):	> 250,000 hours @ 25°C (MIL-HDBK-217F) 376.644 hours
Vibration:	5~500Hz, 2.4G, 10-min./ 1cycle, 60min. each along X,Y,Z axis. Mil-PRF-2880F 3.8.4.1 (class 3,4)
SIGNALS	
Remote Sense	
Active Current Sharing	
Active Redundancy (OR-ing)	
Fan Output (12V Aux)	
Fan Tachometer Input	
I2C Data / Clock for PMBus™	
Power Good (PG) Output	
Standby Output	
Remote Enable Input	

MODEL	PART NUMBER	OUTPUT	VOLTAGE	REGULATION (%)	MAXIMUM CURRENT (A)	RIPPLE & NOISE (P-P) ⁽³⁾
XL750-12 XL750-12 CS	400749-01-6 400750-01-4	V1	12	±3	62.5	120 mV
		V2	12	±5	1.0	120 mV
		V3	5sb	±5	1.0	50 mV
XL750-15 XL750-15 CS	400749-09-9 400750-09-7	V1	15	±3	50.0	150mV
		V2	12	±5	1.0	120 mV
		V3	5sb	±5	1.0	50 mV
XL750-24 XL750-24 CS	400749-02-4 400750-02-2	V1	24	±3	31.2	240mV
		V2	12	±5	1.0	120 mV
		V3	5sb	±5	1.0	50 mV
XL750-28 XL750-28 CS	400749-03-2 400750-03-0	V1	28	±3	26.8	280mV
		V2	12	±5	1.0	120 mV
		V3	5sb	±5	1.0	50 mV
XL750-36 XL750-36 CS	400749-04-0 400750-04-8	V1	36	±3	20.8	360mV
		V2	12	±5	1.0	120 mV
		V3	5sb	±5	1.0	50 mV
XL750-40 XL750-40 CS	400749-05-7 400750-05-5	V1	40	±3	18.7	400mV
		V2	12	±5	1.0	120 mV
		V3	5sb	±5	1.0	50 mV
XL750-48 XL750-48 CS	400749-06-5 400750-06-3	V1	48	±3	15.6	480mV
		V2	12	±5	1.0	120 mV
		V3	5sb	±5	1.0	50 mV
XL750-54 XL750-54 CS	400749-07-3 400750-07-1	V1	54	±3	13.9	480mV
		V2	12	±5	1.0	120 mV
		V3	5sb	±5	1.0	50 mV
XL750-56 XL750-56 CS	400749-08-1 400750-08-9	V1	56	±3	13.4	480mV
		V2	12	±5	1.0	120 mV
		V3	5sb	±5	1.0	120 mV

Note: when remote sensing is not used, the two sense inputs, (+) and (-), should be connected to V1 output terminals to have V1 output voltage within regulation limits.

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.

All specifications valid at normal input voltage, full load and +25°C after warm-up time, unless otherwise stated.

Compliance*

Safety: UL 62368-1 & CAN/CSA C22.2 No. 62368-1 IEC/EN 62368-1

EMC:

Conducted Emissions: EN 55032/CISPR32 Class B, FCC Part 15 Subpart B Class B
 Harmonic Current: EN 61000-3-2
 Voltage Fluctuations & Flicker: EN 61000-3-3
 Immunity: EN 55035
 Electrostatic Discharge (ESD): EN 61000-4-2
 Radiated Field Immunity: EN 61000-4-3
 Fast Transient/Burst Immunity: EN 61000-4-4
 Surge Immunity: EN 61000-4-5
 Conducted RF Immunity: EN 61000-4-6
 Magnetic Field Immunity: EN 61000-4-8
 Voltage Dips, Interruptions: EN 61000-4-11

Notes

(1) 300 W at Convection cooling with U-Frame, (2) With 25 CFM fan, (3) Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor, (4) Hold-up Time measured at 90% Load, (5) Please check the derating curve (at the first page) for more details.

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