



Open Frame (XSO Models)



U-Frame (XSU Models)



DIN Rail (XSD Models)



Enclosed (XSE Models)

N2Power XS125 AC-DC Series High-Efficiency Power Supplies

HIGHLIGHTS

- 125 W AC-DC
- High-Efficiency—up to 92%
- Low standby power consumption ≤ 0.3 Watt
- Wide input voltage range 85 to 264 VAC
- Also supports DC-DC (input 120 to 370 VDC)
- Built-in EMI filter
- Output voltage adjustable (-10% W, 0.25 W Dummy Load)
- Open frame dimensions 2.00" x 3.00" x 1.16"
- 3000VAC input to output reinforced insulation
- Protection type Class I or Class II
- Leakage current: 300 μ A at 264 VAC
- Operating temperature -40° C to +85° C
- Operating altitude 5000 M
- Conformal Coating Option
- 3-year warranty

PACKAGING CHOICES

The XS125 is not only one of the smallest 125 Watt power supplies on the market, it is also available in a choice of four different packages to suit diverse application requirements; XSO Open-Frame models, XSE U-Channel models, XSE Enclosed models, and XSD DIN Rail models. Despite its small size, the full 125 W output power is delivered with convection cooling only – no need for a fan!

APPLICATIONS

The excellent operating characteristics of the XS125 Series plus its wide range of international compliance certifications make it the ideal choice for use in diverse applications that include personal computers, wireless networking, measurement equipment, telecom/datacom, industrial control systems and automation.

CONNECTOR OPTIONS

Choose from JST, Molex or Terminal Block connectors:



A POWER SUPPLY DESIGN LEADER

N2Power leads the power density race with its high-efficiency XS125 Series AC -DC power supplies, which provide up to 92% 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.



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Rev090922

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N2Power XS125 AC-DC Series

High-Efficiency Power Supplies

MODEL	PART NUMBER	VOLTAGE	REGULATION	MAXIMUM CURRENT (A) with 400LFM	MAXIMUM CURRENT (A) Convection	Ripple Noise (P-P)
XSO125-12	400580-01-5	12	±0.5%	10.42	8.34	140 mV
XSO125-15	400580-02-3	15	±0.5%	8.34	6.67	150 mV
XSO125-18	400580-03-1	18	±0.5%	6.95	5.56	150 mV
XSO125-24	400580-04-9	24	±0.5%	5.21	4.17	160 mV
XSO125-28	400580-05-6	28	±0.5%	4.47	3.58	180 mV
XSO125-36	400580-06-4	36	±0.5%	3.48	2.78	190 mV
XSO125-48	400580-07-2	48	±0.5%	2.61	2.09	340 mV
XSO125-12B	400580-11-4	12	±0.5%	10.42	8.34	140 mV
XSO125-15B	400580-12-2	15	±0.5%	8.34	6.67	150 mV
XSO125-18B	400580-13-0	18	±0.5%	6.95	5.56	150 mV
XSO125-24B	400580-14-8	24	±0.5%	5.21	4.17	160 mV
XSO125-28B	400580-15-5	28	±0.5%	4.47	3.58	180 mV
XSO125-36B	400580-16-3	36	±0.5%	3.48	2.78	190 mV
XSO125-48B	400580-17-1	48	±0.5%	2.61	2.09	340 mV
XSU125-12	400581-01-3	12	±0.5%	10.42	8.34	140 mV
XSU125-15	400581-02-1	15	±0.5%	8.34	6.67	150 mV
XSU125-18	400581-03-9	18	±0.5%	6.95	5.56	150 mV
XSU125-24	400581-04-7	24	±0.5%	5.21	4.17	160 mV
XSU125-28	400581-05-4	28	±0.5%	4.47	3.58	180 mV
XSU125-36	400581-06-2	36	±0.5%	3.48	2.78	190 mV
XSU125-48	400581-07-0	48	±0.5%	2.61	2.09	340 mV
XSU125-12B	400581-11-2	12	±0.5%	10.42	8.34	140 mV
XSU125-15B	400581-12-0	15	±0.5%	8.34	6.67	150 mV
XSU125-18B	400581-13-8	18	±0.5%	6.95	5.56	150 mV
XSU125-24B	400581-14-6	24	±0.5%	5.21	4.17	160 mV
XSU125-28B	400581-15-3	28	±0.5%	4.47	3.58	180 mV
XSU125-36B	400581-16-1	36	±0.5%	3.48	2.78	190 mV
XSU125-48B	400581-17-9	48	±0.5%	2.61	2.09	340 mV
XSE125-12	400582-01-1	12	±0.5%	10.42	8.34	140 mV
XSE125-15	400582-02-9	15	±0.5%	8.34	6.67	150 mV
XSE125-18	400582-03-7	18	±0.5%	6.95	5.56	150 mV
XSE125-24	400582-04-5	24	±0.5%	5.21	4.17	160 mV
XSE125-28	400582-05-2	28	±0.5%	4.47	3.58	180 mV
XSE125-36	400582-06-0	36	±0.5%	3.48	2.78	190 mV
XSE125-48	400582-07-8	48	±0.5%	2.61	2.09	340 mV
XSE125-12B	400582-11-0	12	±0.5%	10.42	8.34	140 mV
XSE125-15B	400582-12-8	15	±0.5%	8.34	6.67	150 mV
XSE125-18B	400582-13-6	18	±0.5%	6.95	5.56	150 mV
XSE125-24B	400582-14-4	24	±0.5%	5.21	4.17	160 mV
XSE125-28B	400582-15-1	28	±0.5%	4.47	3.58	180 mV
XSE125-36B	400582-16-9	36	±0.5%	3.48	2.78	190 mV
XSE125-48B	400582-17-7	48	±0.5%	2.61	2.09	340 mV
XSD125-12	400583-01-9	12	±0.5%	10.42	8.34	140 mV

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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.

INPUT SPECIFICATIONS	
Nominal Input Voltage:	85 – 264 VAC 120 – 370 VDC
Input Frequency Range:	47 – 63 Hz
Input Current:	1.8 A @ 100 VAC 0.7 A @ 240 VAC
Input Protection:	4 A / 250 VAC fuse
Safety Isolation:	4000 VAC input to output 1500 VAC input to ground
Inrush Current:	100 A @ 230 VAC, 25° C
Leakage Current:	300 µA @ 264 VAC
OUTPUT SPECIFICATIONS	
Total Output:	125 W
Output Voltages:	12 V to 48 V
Voltage adjustability	-10%
Voltage Tolerance ⁽²⁾	±1.0%
Line Regulation ⁽³⁾	±0.2% ⁽²⁾
Setup / Rise Time ⁽⁵⁾	1 sec / 15ms, at full load
Hold-up Time:	Minimum 16 ms at 115 VAC, 150 W
Efficiency:	Up to 92%
Minimum Load:	No load
Over / Under Shoot:	Max 1% at turn-on
PROTECTION	
Overvoltage Protection:	Latch mode at 115 - 135% of V _{OUT}
Overload Protection:	Hiccup mode at 120% - 160% of I _{OUT} rated
Short Circuit Protection:	Continuous protection, with auto recovery
Isolation Resistance	500 VDC @ 0.1 GΩ
ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature:	-40 to +85° C
Storage Temperature:	- 40 to +85° C
Operating altitude:	5000 m
Natural Convection Derating:	125 W
Relative Humidity:	5% to 95% (non-cond.)
MTBF (full load at 25° C):	790,000 hours

Notes

- (1) All specifications valid at normal input voltage, full load and +25° C after warm-up time, unless otherwise stated.
- (2) Tolerance includes setup time tolerance, line regulation and load regulation.
- (3) Line regulation is measured from low line to high line at rated load.
- (4) Load regulation is measured from 0% to 100% rated load.
- (5) Length of setup time is measured at first cold start. Turning ON/OFF the power supply continuously may increase the setup time.

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

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High-Efficiency Power Supplies

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MODEL	PART NUMBER	VOLTAGE	REGULATION	MAXIMUM CURRENT (A) with 400LFM	MAXIMUM CURRENT (A) Convection	Ripple Noise (P-P)
XSD125-15	400583-02-7	15	±0.5%	8.34	6.67	150 mV
XSD125-18	400583-03-5	18	±0.5%	6.95	5.56	150 mV
XSD125-24	400583-04-3	24	±0.5%	5.21	4.17	160 mV
XSD125-28	400583-05-0	28	±0.5%	4.47	3.58	180 mV
XSD125-36	400583-06-8	36	±0.5%	3.48	2.78	190 mV
XSD125-48	400583-07-6	48	±0.5%	2.61	2.09	340 mV
XSD125-12B	400583-11-8	12	±0.5%	10.42	8.34	140 mV
XSD125-15B	400583-12-6	15	±0.5%	8.34	6.67	150 mV
XSD125-18B	400583-13-4	18	±0.5%	6.95	5.56	150 mV
XSD125-24B	400583-14-2	24	±0.5%	5.21	4.17	160 mV
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XSD125-36B	400583-16-7	36	±0.5%	3.48	2.78	190 mV
XSD125-48B	400583-17-5	48	±0.5%	2.61	2.09	340 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.

Model numbers with suffix 'Blank' comply with Protection Class I. Those with suffix 'B' comply with Protection Class II.

Compliance* Safety: IEC/EN/UL 62368-1

EMC: Emission: EN 55032 and FCC Part 15: Conducted (Class B)*; Radiated (Class A).
 *External components may be required for Class I application
 EN61000-3-2, EN61000-3-3

EMC: Immunity: EN 55024, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4,
 EN 61000-4-5, EN 61000-4-6, EN 61000-4-8, EN 61000-4-11

*The power supply is considered a component of the final product in which it is integrated. The final product itself must be tested separately for compliance with all applicable standards.

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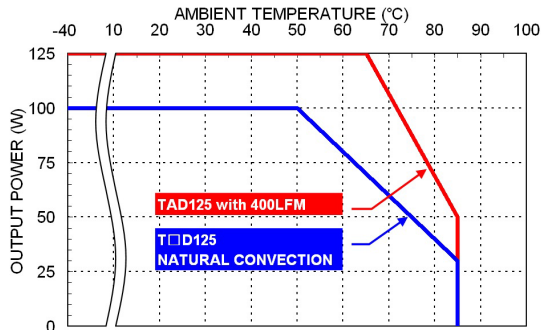
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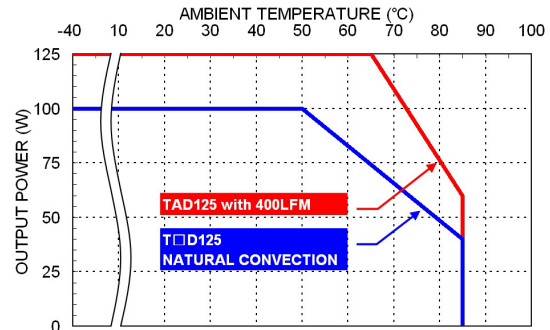
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High-Efficiency Power Supplies

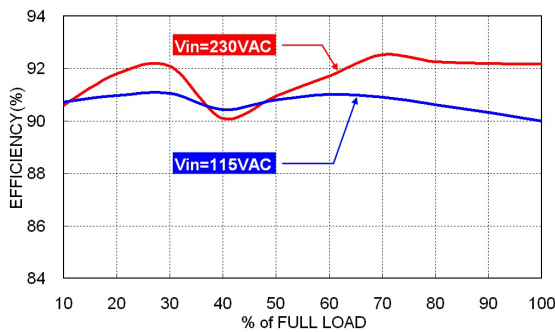
CHARACTERISTIC CURVE



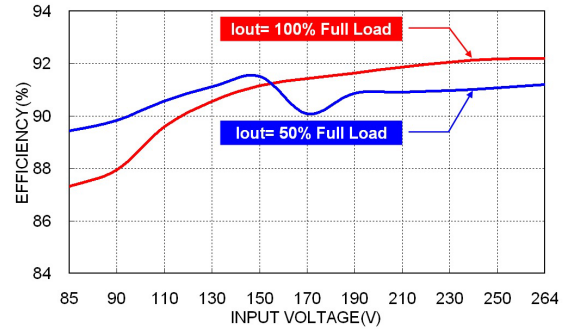
Derating Curve vs. Ambient Temperature
Vin=115VAC



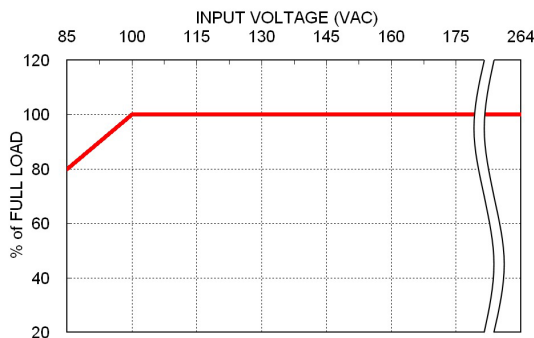
Derating Curve vs. Ambient Temperature
Vin=230VAC



XS125-24B Efficiency vs. Output Load



XS125-24B Efficiency vs. Input Voltage



XS125 Derating Curve vs. Input Voltage
Forced air cooling with 400LFM

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Connector Pin Assignments

CON1 – Input Connector	
Pin 1	Line
Pin 3	Neutral

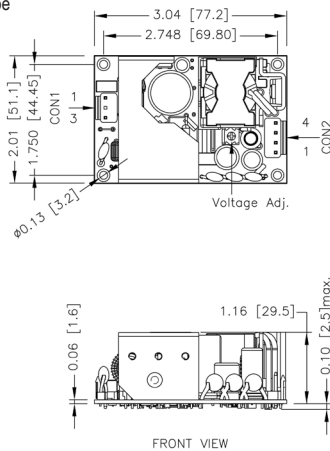
CON2 – Output connector	
Pin 1, 2	- V _{out}
Pin 3, 4	+V _{out}

Notes

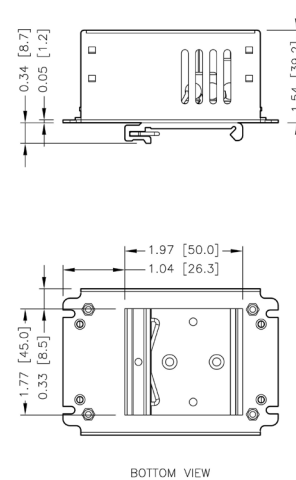
1. All dimensions are in inches [mm]
2. Tolerance: x.xx±0.02 (x.x±0.5) x.xxx±0.01 (x.xx±0.25)
3. M3x0.5 screw locked torque MAX 5Kgf.cm/0.49N.m
4. Any one of the four screw holes of the Open Frame chassis can be used as a PG connection point for CLASS I application.

MECHANICAL DRAWINGS

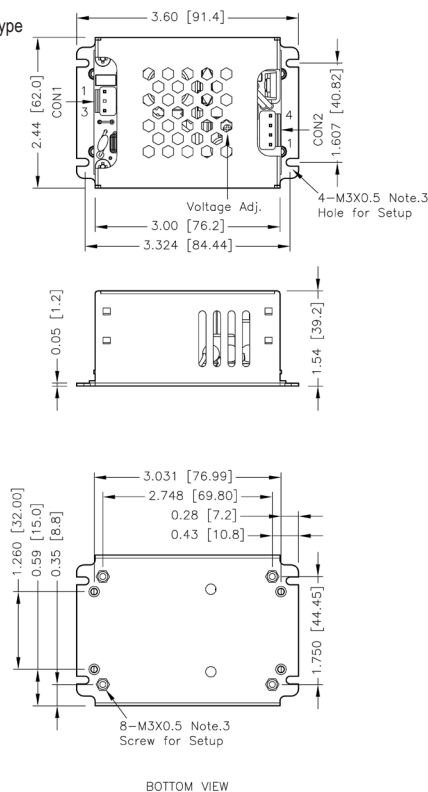
Open type



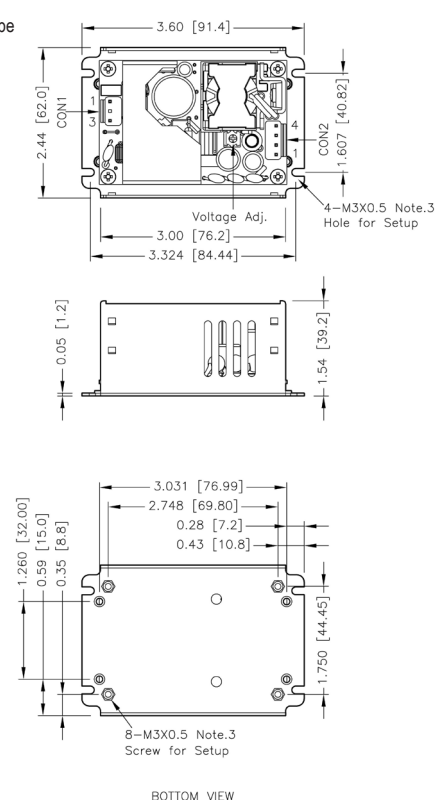
Din rail type



Enclosed type



U chassis type



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