

## N2Power XL65 AC-DC Series High Efficiency Power Supplies

### HIGHLIGHTS

- 65 W AC-DC
- High Efficiency—up to 93.5%
- Low standby power consumption  $\leq 0.11$  Watt
- Wide input voltage range 85 to 264 VAC
- Also supports DC-DC (input 120 to 370 VDC)
- Convection cooled full power
- Built-in EMI filter
- Output voltage adjustable ( $\pm 10\%$ )
- Open frame dimensions 2.00" x 3.00" x 1.16"
- 3000VAC input to output reinforced insulation
- Protection type Class I or Class II
- Low leakage current:  $\leq 75 \mu\text{A}$  at 264 VAC ( $33 \mu\text{A}$  at 115 VAC)
- Operating temperature  $-40^\circ\text{C}$  to  $+85^\circ\text{C}$
- Operating altitude 5000 M
- 3 year warranty

### CONNECTOR OPTIONS

Choose from JST, Molex or Terminal Block connectors:



Open Frame (XLO Models)



U-Frame (XLU Models)



DIN Rail (XLD Models)



Enclosed (XLE Models)

### PACKAGING CHOICES

The XL65 is not only one of the smallest 65 Watt power supplies on the market, it is also available in a choice of four different packages to suit diverse application requirements; XLO Open-Frame models, XLU U-Frame models, XLE Enclosed models and XLD DIN Rail models. Despite its small size, the full 65 W output power is delivered with convection cooling only – no need for a fan!

### APPLICATIONS

The excellent operating characteristics of the XL65 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.

## A POWER SUPPLY DESIGN LEADER

N2Power leads the power density race with its high efficiency XL65 Series AC -DC power supplies, which provide up to 93.5% 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.**



**Call 805.583.7744**

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Rev041620

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## High Efficiency Power Supplies

MODEL	PART NUMBER	OUTPUT	VOLTAGE	REGULATION (%) <sup>(4)</sup>	MAXIMUM CURRENT (A)	RIPPLE & NOISE (P-P)
XLO65-05C XLU65-05C XLE65-05C XLD65-05C XLO65-05D XLU65-05D XLE65-05D XLD65-05D	400574-14-3 400573-14-3 400572-14-3 400571-14-3 400574-01-1 400573-01-1 400572-01-1 400571-01-1	V <sub>OUT</sub>	5	±0.7	10	75 mV
XLO65-7P5C XLU65-7P5C XLE65-7P5C XLD65-7P5C XLO65-7P5D XLU65-7P5D XLE65-7P5D XLD65-7P5D	400574-18-5 400573-18-5 400572-18-5 400571-18-5 400574-05-2 400573-05-2 400572-05-2 400571-05-2	V <sub>OUT</sub>	7.5	±0.5	8.67	75 mV
XLO65-09C XLU65-09C XLE65-09C XLD65-09C XLO65-09D XLU65-09D XLE65-09D XLD65-09D	400574-19-3 400573-19-3 400572-19-3 400571-19-3 400574-06-0 400573-06-0 400572-06-0 400571-06-0	V <sub>OUT</sub>	9	±0.5	7.23	75 mV
XLO65-12C XLU65-12C XLE65-12C XLD65-12C XLO65-12D XLU65-12D XLE65-12D XLD65-12D	400574-15-1 400573-15-1 400572-15-1 400571-15-1 400574-02-9 400573-02-9 400572-02-9 400571-02-9	V <sub>OUT</sub>	12	±0.5	5.42	75 mV
XLO65-15C XLU65-15C XLE65-15C XLD65-15C XLO65-15D XLU65-15D XLE65-15D XLD65-15D	400574-20-1 400573-20-1 400572-20-1 400571-20-1 400574-07-8 400573-07-8 400572-07-8 400571-07-8	V <sub>OUT</sub>	15	±0.5	4.34	75 mV
XLO65-18C XLU65-18C XLE65-18C XLD65-18C XLO65-18D XLU65-18D XLE65-18D XLD65-18D	400574-16-9 400573-16-9 400572-16-9 400571-16-9 400574-03-7 400573-03-7 400572-03-7 400571-03-7	V <sub>OUT</sub>	18	±0.5	3.62	75 mV
XLO65-24C XLU65-24C XLE65-24C XLD65-24C XLO65-24D XLU65-24D XLE65-24D XLD65-24D	400574-21-9 400573-21-9 400572-21-9 400571-21-9 400574-08-6 400573-08-6 400572-08-6 400571-08-6	V <sub>OUT</sub>	24	±0.5	2.71	75 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.

INPUT SPECIFICATIONS	
Nominal Input Voltage:	85 – 264 VAC 120 – 370 VDC
Input Frequency Range:	47 – 63 Hz
Input Current:	1.6 A @ 100 VAC 0.9 A @ 240 VAC
Input Protection:	15 A / 250 VAC fuse
Safety Isolation:	3000 VAC input to output 2500 VAC input to ground
Inrush Current:	60 A @ 230 VAC, 25°C
Leakage Current:	75 µA @ 264 VAC 33 µA @ 115 VAC
OUTPUT SPECIFICATIONS	
Total Output:	65 W
Output Voltages:	5 V to 53 V
Voltage adjustability	±10%
Voltage Tolerance <sup>(2)</sup>	±1.0%
Line Regulation <sup>(3)</sup>	±0.2% <sup>(2)</sup>
Setup / Rise Time <sup>(5)</sup>	1 sec / 20ms, at full load
Hold-up Time:	Minimum 16 ms at 115 VAC, full load
Efficiency:	Up to 93.5%
Minimum Load:	No load
Over / Under Shoot:	Max 1% at turn-on
PROTECTION	
Overvoltage Protection:	Latch mode at 125 - 140% of V <sub>OUT</sub>
Overload Protection:	Hiccup mode at 145% of I <sub>OUT</sub> 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
Convection Cooling:	65 W
Relative Humidity:	5% to 95% (non-cond.)
MTBF (full load at 25°C):	1,494,000 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

All information and specifications are based on our knowledge of the products at the time of printing. N2Power reserves the right to change specifications without notice.

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## High Efficiency Power Supplies

MODEL	PART NUMBER	OUTPUT	VOLTAGE	REGULATION (%) (4)	MAXIMUM CURRENT (A)	RIPPLE & NOISE (P-P)
XLO65-28C XLU65-28C XLE65-28C XLD65-28C XLO65-28D XLU65-28D XLE65-28D XLD65-28D	400574-22-7 400573-22-7 400572-22-7 400571-22-7 400574-09-4 400573-09-4 400572-09-4 400571-09-4	V <sub>OUT</sub>	28	±0.5	2.33	75 mV
XLO65-36C XLU65-36C XLE65-36C XLD65-36C XLO65-36D XLU65-36D XLE65-36D XLD65-36D	400574-24-2 400573-24-2 400572-24-2 400571-24-2 400574-11-0 400573-11-0 400572-11-0 400571-11-0	V <sub>OUT</sub>	36	±0.5	1.81	75 mV
XLO65-48C XLU65-48C XLE65-48C XLD65-48C XLO65-48D XLU65-48D XLE65-48D XLD65-48D	400574-25-0 400573-25-0 400572-25-0 400571-25-0 400574-12-8 400573-12-8 400572-12-8 400571-12-8	V <sub>OUT</sub>	48	±0.5	1.36	150 mV
XLO65-53C XLU65-53C XLE65-53C XLD65-53C XLO65-53D XLU65-53D XLE65-53D XLD65-53D	400574-26-8 400573-26-8 400572-26-8 400571-26-8 400574-13-6 400573-13-6 400572-13-6 400571-13-6	V <sub>OUT</sub>	53	±0.5	1.24	150 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 'C' comply with Protection Class I. Those with suffix 'D' comply with Protection Class II.

**Compliance\* Safety:** IEC/EN/UL 60950-1 second edition  
IEC/EN/UL 62368-1

**EMC: Emission:** EN 55032 and FCC Part 15, Class B  
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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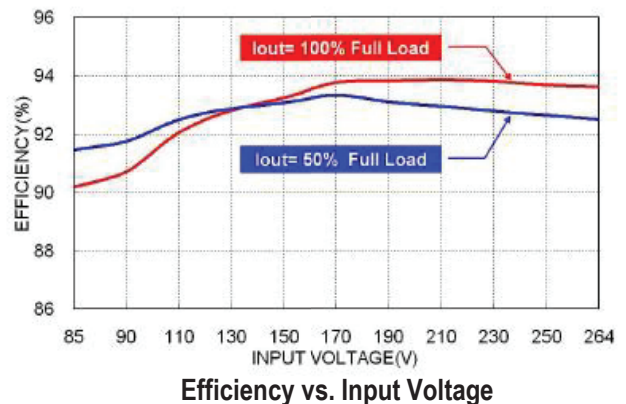
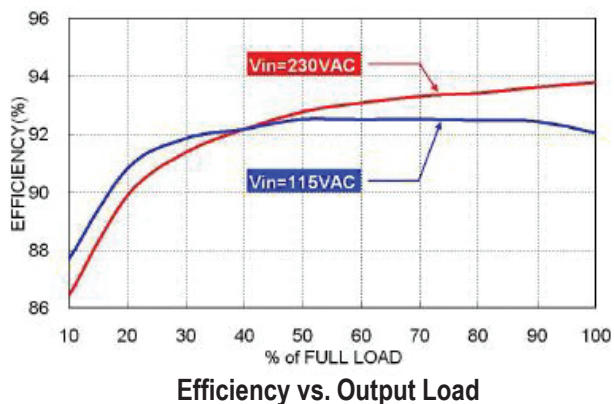
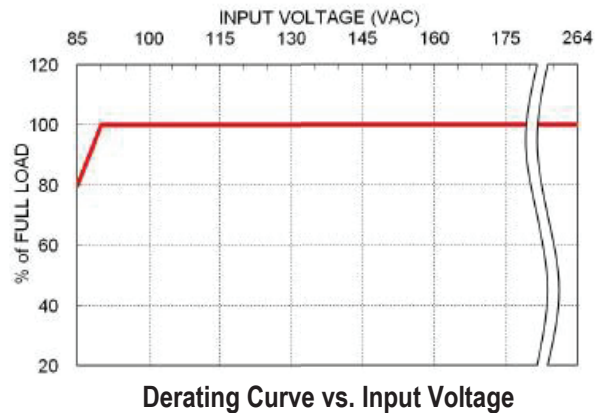
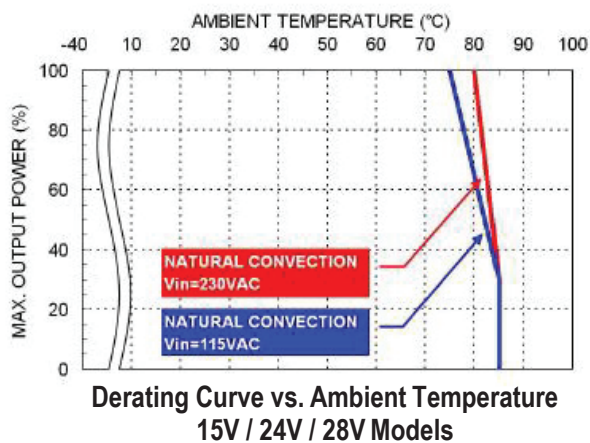
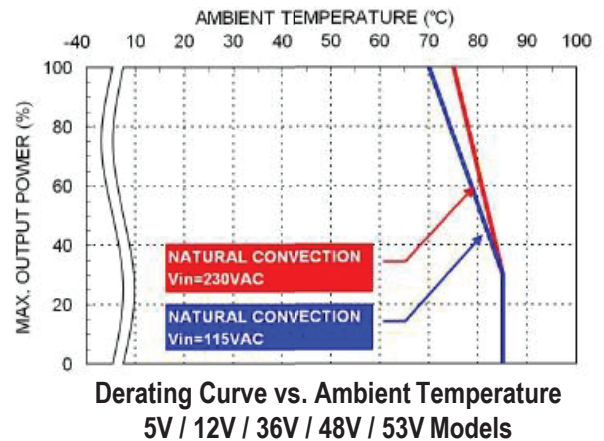
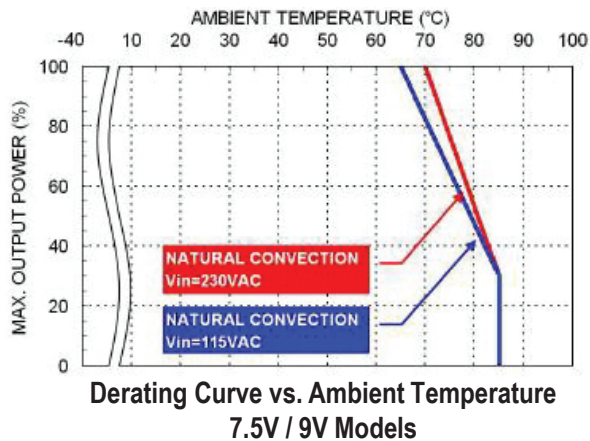
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## MECHANICAL DRAWINGS

### Connector Pin Assignments

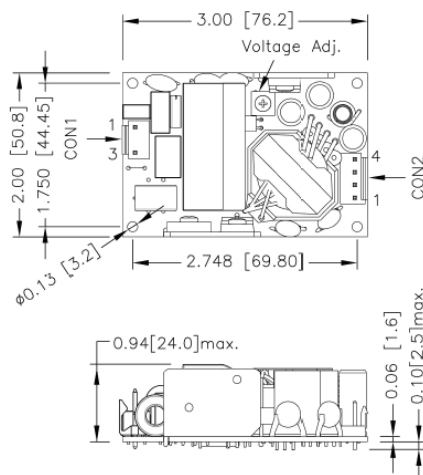
CON1 – Input Connector	
Pin 1	Line
Pin 3	Neutral

CON2 – Output connector	
Pin 1, 2	- V <sub>out</sub>
Pin 3, 4	+V <sub>out</sub>

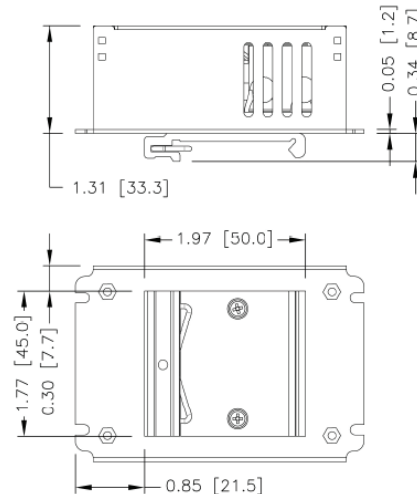
### Notes

1. All dimensions are in inches [mm]
2. Tolerance:  $x.xx \pm 0.02$  ( $x.x \pm 0.5$ )  $x.xxx \pm 0.01$  ( $x.xx \pm 0.25$ )
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.

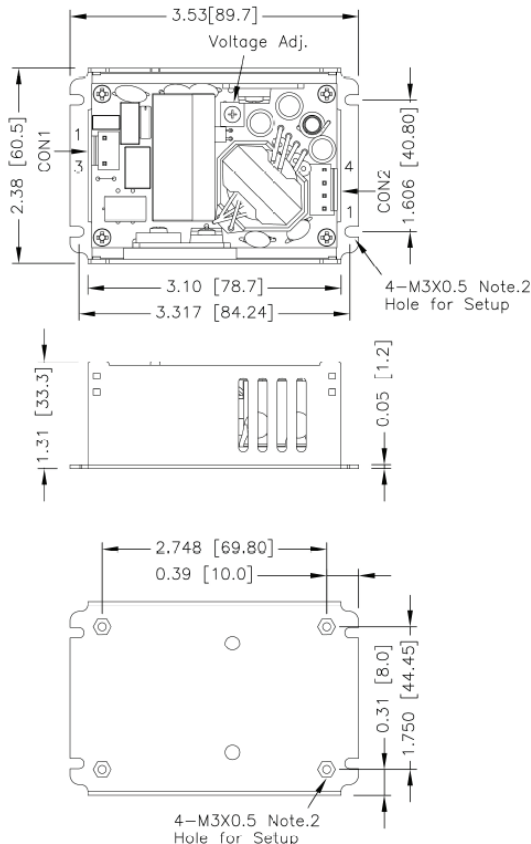
### Open Frame type



### DIN Rail type



### U-Frame type



### Enclosed type

