

- Low standby power consumption ≤ 0.11 Watt
- Wide input voltage range 85 to 264VAC, 47 to 63HZ
- Also supports DC-DC (input 120 to 370VDC)
- Convection cooled
- Built-in EMI filter
- Output voltage adjustable
- Open frame dimensions 2.00" x 3.00" x 1.00"
- 3000VAC input to output reinforced insulation
- Protection type Class I or Class II
- Low leakage current:
 $\leq 75\mu\text{A}$ at 264VAC ($33\mu\text{A}$ at 115VAC)
- Operating temperature -40°C to $+85^{\circ}\text{C}$
- Operating altitude 5000M
- 3 year warranty

Packaging Choices

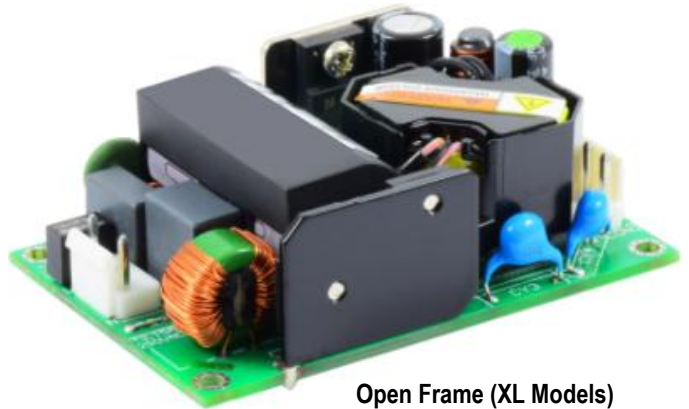
The XL65 is not only one of the smallest 65 Watt power supplies on the market, it is also available in a choice of three different packages to suit diverse application requirements – XL Open Frame models, XLU U-Frame models and XLE Enclosed models. Despite its small size, the full 65W output power is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

Applications

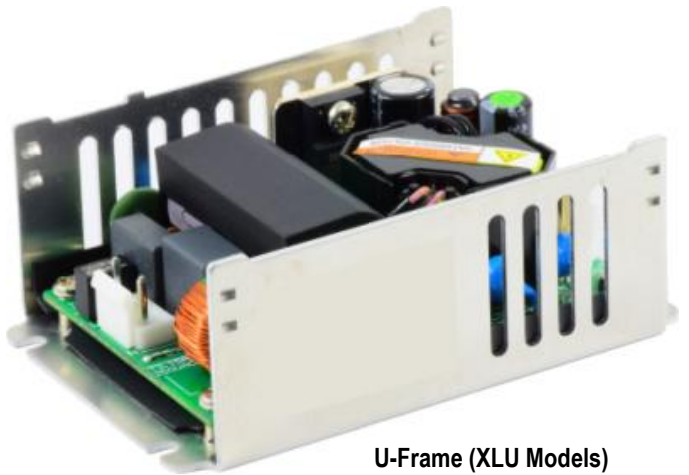
The excellent operating characteristics of the XL65 Series plus its wide range of international compliance certifications make it the ideal choice for use in diverse applications that include personal computers, wireless networking, measurement equipment, telecom/datacom, industrial control systems and automation.

Connector Options

Choose from JST, Molex or Terminal Block connectors:



Open Frame (XL Models)



U-Frame (XLU Models)



Enclosed (XLE Models)

MODEL	PART NUMBER	OUTPUT	VOLTAGE	REGULATION (%) ⁽⁴⁾	MAXIMUM CURRENT (A)	RIPPLE & NOISE (P-P)
XL65-05 XLU65-05 XLE65-05 XL65-05B XLU65-05B XLE65-05B	400574-14-3 400573-14-3 400572-14-3 400574-01-1 400573-01-1 400572-01-1	V _{OUT}	5	±0.7	10	75 mV
XL65-7P5 XLU65-7P5 XLE65-7P5 XL65-7P5B XLU65-7P5B XLE65-7P5B	400574-18-5 400573-18-5 400572-18-5 400574-05-2 400573-05-2 400572-05-2	V _{OUT}	7.5	±0.5	8.67	75 mV
XL65-09 XLU65-09 XLE65-09 XL65-09B XLU65-09B XLE65-09B	400574-19-3 400573-19-3 400572-19-3 400574-06-0 400573-06-0 400572-06-0	V _{OUT}	9	±0.5	7.23	75 mV
XL65-12 XLU65-12 XLE65-12 XL65-12B XLU65-12B XLE65-12B	400574-15-1 400573-15-1 400572-15-1 400574-02-9 400573-02-9 400572-02-9	V _{OUT}	12	±0.5	5.42	75 mV
XL65-15 XLU65-15 XLE65-15 XL65-15B XLU65-15B XLE65-15B	400574-20-1 400573-20-1 400572-20-1 400574-07-8 400573-07-8 400572-07-8	V _{OUT}	15	±0.5	4.34	75 mV
XL65-18 XLU65-18 XLE65-18 XL65-18B XLU65-18B XLE65-18B	400574-16-9 400573-16-9 400572-16-9 400574-03-7 400573-03-7 400572-03-7	V _{OUT}	18	±0.5	3.62	75 mV
XL65-24 XLU65-24 XLE65-24 XL65-24B XLU65-24B XLE65-24B	400574-21-9 400573-21-9 400572-21-9 400574-08-6 400573-08-6 400572-08-6	V _{OUT}	24	±0.5	2.71	75 mV
XL65-28 XLU65-28 XLE65-28 XL65-28B XLU65-28B XLE65-28B	400574-22-7 400573-22-7 400572-22-7 400574-09-4 400573-09-4 400572-09-4	V _{OUT}	28	±0.5	2.33	75 mV

Continued on next page...

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 in to out 2500 VAC in to ground
Inrush Current:	60 A @ 230 VAC, 25°C
Leakage Current:	75µA @ 264 VAC 33 µA @ 115 VAC
OUTPUT SPECIFICATIONS	
Total Output:	65 W
Output Voltages:	5 V to 53 V
Voltage adjustability	±10%
Voltage Tolerance ⁽²⁾	±1.0%
Line Regulation ⁽³⁾	±0.2% ⁽²⁾
Setup / Rise Time ⁽⁵⁾	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 _{OUT}
Overload Protection:	Hiccup mode at 145% 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
Convection Cooling:	65W
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.

MODEL	PART NUMBER	OUTPUT	VOLTAGE	REGULATION (%) (4)	MAXIMUM CURRENT (A)	RIPPLE & NOISE (P-P)
XL65-36 XLU65-36 XLE65-36 XL65-36B XLU65-36B XLE65-36B	400574-24-2 400573-24-2 400572-24-2 400574-11-0 400573-11-0 400572-11-0	V _{OUT}	36	±0.5	1.81	75 mV
XL65-48 XLU65-48 XLE65-48 XL65-48B XLU65-48B XLE65-48B	400574-25-0 400573-25-0 400572-25-0 400574-12-8 400573-12-8 400572-12-8	V _{OUT}	48	±0.5	1.36	150 mV
XL65-53 XLU65-53 XLE65-53 XL65-53B XLU65-53B XLE65-53B	400574-26-8 400573-26-8 400572-26-8 400574-13-6 400573-13-6 400572-13-6	V _{OUT}	53	±0.5	1.24	150 mV

Model numbers without the suffix 'B' comply with Protection Class I. Those with suffix 'B' comply with Protection Class II.

Compliance *

USA / Canada

Safety:

UL 60950-1 second edition

International

IEC 60950-1

EMC:

FCC part 15, subpart B

(Radiative, Class A)

(Conductive, Class B)

EN55011

EN 55032

(Radiative, Class A)

(Conductive, Class B)

* 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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MECHANICAL DRAWINGS

Connector Pin Assignments

CON1 – Input Connector	
Pin 1	Line
Pin 3	Neutral

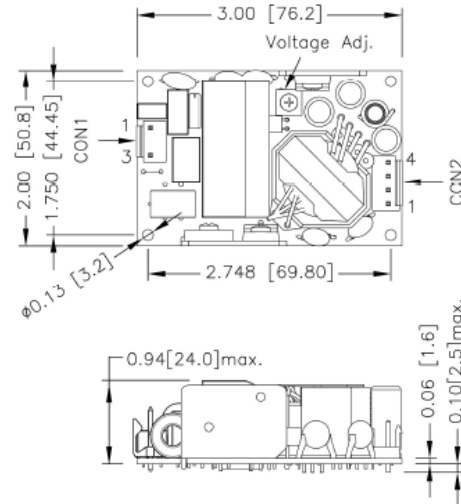
CON2 – Output Connector	
Pin 1, 2	-V _{out}
Pin 3, 4	+V _{out}

Any one of the four screw holes of the Open Frame chassis can be used as a PE connection point for CLASS I application.

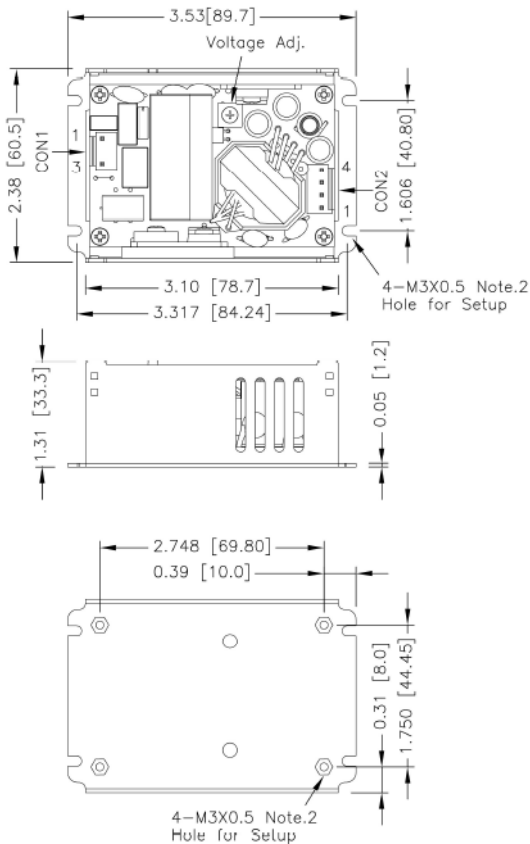
Notes

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

Open Frame type

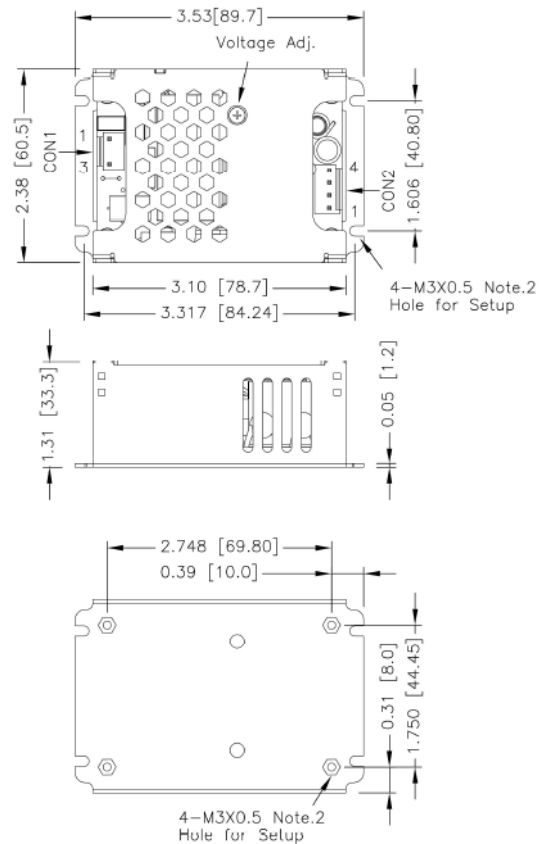


U-Frame type



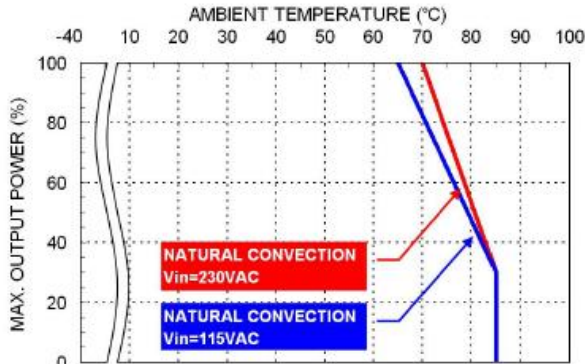
BOTTOM VIEW

Enclosed type

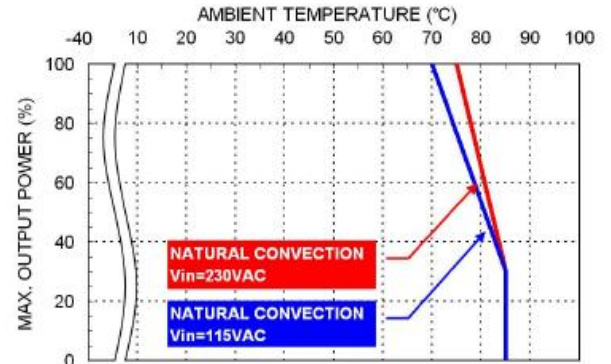


BOTTOM VIEW

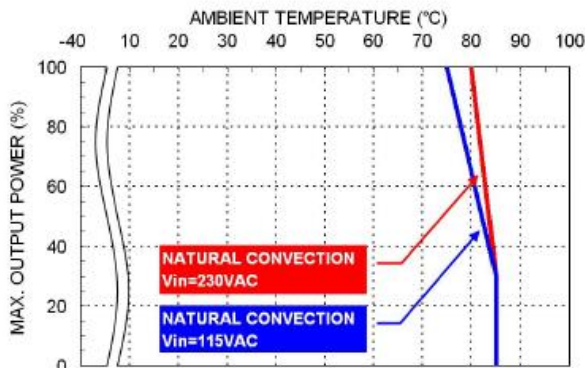
OPERATING CHARACTERISTICS



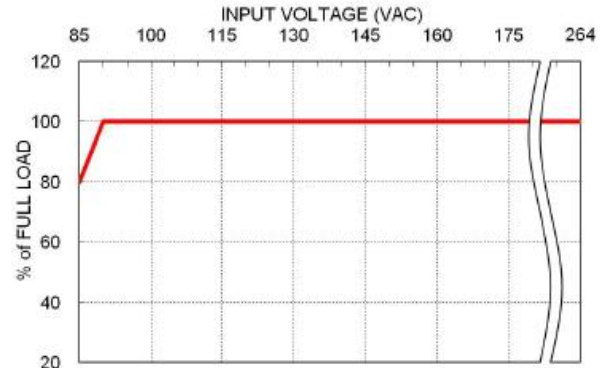
Derating Curve vs. Ambient Temperature
7.5V / 9V Models



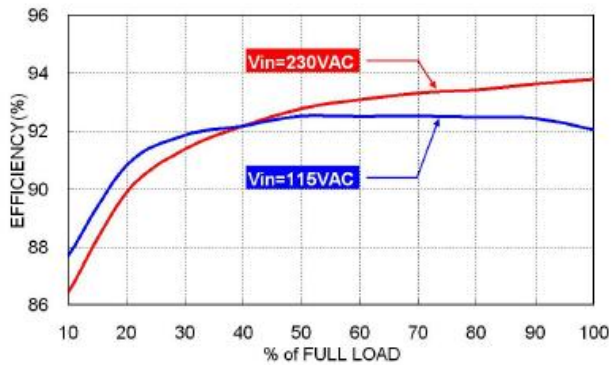
Derating Curve vs. Ambient Temperature
5V / 12V / 36V / 48V / 53V Models



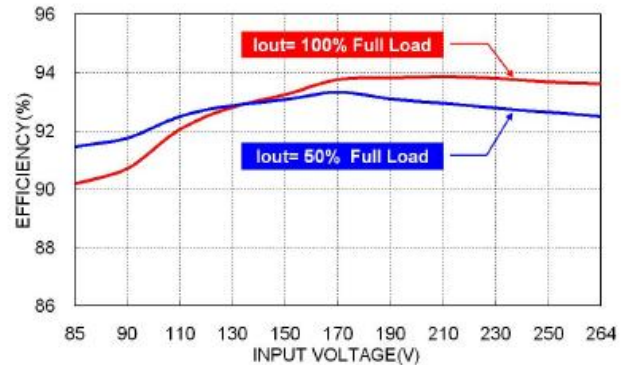
Derating Curve vs. Ambient Temperature
15V / 24V / 28V Models



Derating Curve vs. Input Voltage



Efficiency vs. Output Load



Efficiency vs. Input Voltage