N2Power™
A subsidiary of Qualstar Corporation

Product Specification

XR160 Series

160-Watt AC to DC Power Supplies

Document No. 703590 Rev 03-10-20

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The XR160 will shut down under the following over voltage conditions:

Rated Output Voltage	Minimum OVP Threshold	Nominal OVP Threshold	Maximum OVP Threshold
2.5 V	2.87 V	3.15 V	3.44 V
3.3 V	3.76 V	4.2 V	4.9 V
5.0 V	5.74 V	6.3 V	6.88 V
7 V	7.88 V	8.7 V	9.63 V
8 V	9.00 V	10.0 V	11.0 V
12 V	13.5 V	15.0 V	16.5 V
15 V	16.9 V	18.8 V	20.6 V
19 V	21.4 V	23.8 V	26.1 V
24 V	27.0 V	30.0 V	33.0 V
28 V	31.5 V	35.0 V	33.5 V
30 V	33.8 V	37.5 V	41.3 V
48 V	54.0 V	58.0 V	66.0 V
51 V	57.4 V	63.8 V	70.1 V
54 V	60.8 V	64.8 V	74.3 V
56 V	63.0 V	70.0 V	77.0 V

Table 3-7 Over Voltage Protection Limits by Rated Output Voltage

3.9 Output Rise Time

All output voltages shall rise from 10% to 90% of nominal output voltage (as specified in Table 3-1) within 0.2ms to 20ms. The output voltages waveform must be a monotonic ramp from 10% to 90% of final set-point within the regulation band under any loading conditions specified in the respective load current tables in Section 3.3.

For the purposes of this specification, a monotonic ramp is defined as always having a positive slope of from zero to 10 x Vout volts/millisecond. During any 5-millisecond portion of the ramp, its slope must be greater than 5% of its rated voltage per millisecond.

3.10 Overshoot At Turn On/Turn Off

The output voltage overshoot upon the application or removal of the input mains voltage is less than 10% above the nominal voltage. No opposite polarity voltage is present on any output during turn on or turn off.

3.11 Output Transients

The maximum output voltage transient caused by step load changes will not exceed the output voltage regulation limits by more than 5%. With an AC input as specified in Section 2.1, the power supply will remain stable when subjected to the load transients described below:

- Load changes between 75% and 100% on any output
- Load changing repetition of 50 to 333 cycles per second
- Transient load slew rate = 1.0 A/microsecond
- Capacitive loading per Table 3-8

3.12 Closed Loop Stability

The power supply is unconditionally stable under all line/load/transient load conditions including the capacitive loads specified in Table 3-8. The power supply shall exhibit a minimum of 45-degrees phase margin and 6 dB gain margin.

3.13 Capacitive Loading

The power supply will power up and operate normally with the capacitances listed in Table 3-8 simultaneously present on the outputs. Cap values are the same for [CS] and/or [RE] mode.

XR160-:	-1[ATX], -7[ATX], -8[ATX]	-05 thru -08	-12	-15 thru -19	-24 thru -30	-48 thru -56
Output:	have demonstrated starting and stability with the following capacitive loads					
+3.3 V / +2.5 V	6,000 µF					
+5 V	10,000 µF					
+5 $V_{standby}$ [RE]	100 µF	100 µF	100 µF	100 µF	100 µF	100 µF
+12 V	1,000 µF					
V1 (Main Output)		10,000 µF	4,000 µF	3,000 µF	2,000 µF	500 µF
12 V_{aux}	350 µF	350 µF	350 µF	350 µF	350 µF	350 µF

Table 3-8 XR160 Demonstrated Capacitive Loading

4. General Specifications

4.1 Environmental

The XR160 meets or exceeds the following environmental specifications:

Parameter	Conditions	Specification	Remarks
Temperature	Operating	-25°C to 70°C	See cooling requirements
	Non-Operating	-40°C to 85°C	
Relative Humidity	Operating	95% Maximum	Non-Condensing
	Non-Operating	95% Maximum	Non-Condensing
Altitude	Operating	6,561 feet MSL Max.	2,000 meters
	Non-Operating	50,000 feet MSL Max.	15,240 meters
Vibration	No damage	2.4G RMS Maximum	5-500Hz, 10-min. each axis per MIL-PRF-28800F: 3.8.4.1 (Class 3,4)
Mechanical Shock	No damage	30G half-sine, 11mS	Six shocks each axis per MIL-PRF-28800F: 4.5.5.4.1

Table 4-1 Environmental Specifications

4.2 Mean Time Between Failures

The MTBF for XR160 models are tested under the following conditions: Continuous operation at maximum output loading and worst case input line voltage with forced-air cooling at 25°C.

The XR160-1[ATX] and -7[ATX] models are rated at 609,000 hours while the XR160-8[ATX] is rated at 637,900 hours. The XR160-12 and 15 CS models are rated at 769,900 hours. The XR160-19 thru 56 CS models are rated at 784,100 hours. The XR160-05 thru -08 CS models are rated at 684,000 hours.

N2Power does not warrant the MTBF to be representative of any particular unit. The MTBF of the power supply is calculated with an 80% confidence level in accordance with Bellcore, SR-332, Issue 2. Actual failure rates vary from unit to unit.

4.3 Component Stress

The XR160 design followed these component-derating guidelines: semiconductor junction temperatures shall not exceed ninety (90) percent of manufacturer's rating with an ambient of 50°C. Inductor winding temperatures shall not exceed safety agency requirements. Capacitor case temperatures shall not exceed 95% of rated temperature. Resistor power dissipation derating is greater than 50%. Component voltage and current derating is greater than 10% at 50°C.

4.4 Labeling/Marking

The power supply is marked and labeled with the N2Power logo and part number, model number, input and output specifications, production code, appropriate safety agency logos, CE mark, patent number, and country of origin. A typical label is pictured below.

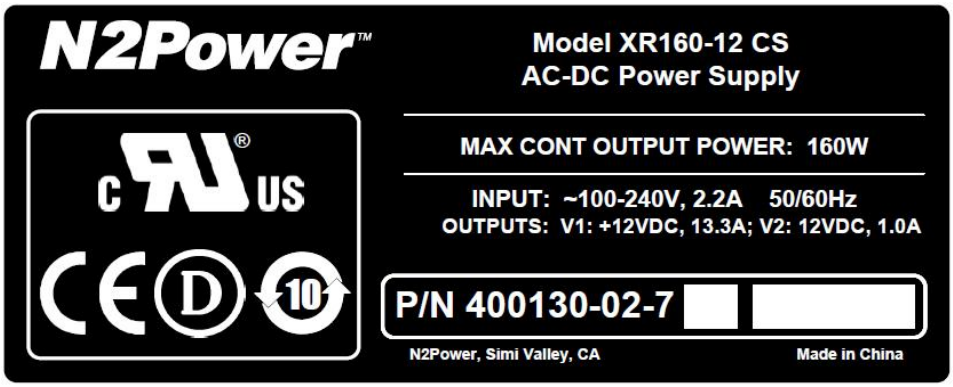


Figure 4-1 Sample XR Series Label

4.5 Weight

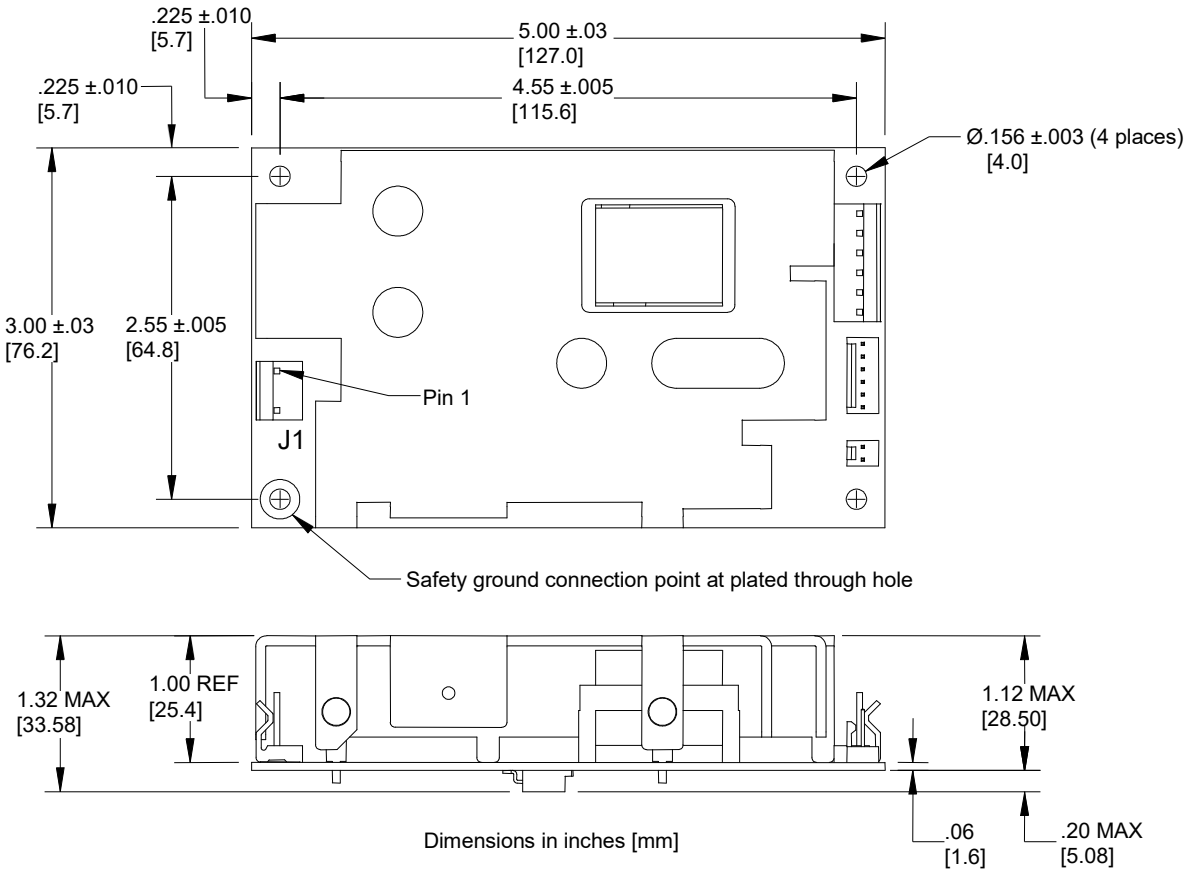
Model	Pounds	Ounces	Kilograms
XR160-1[ATX], -7[ATX]	0.73	11.7	0.331
XR160-8[ATX]	0.69	11.0	0.312
XR160-05 [CS] [RE], -07 CS [RE], -08 CS [RE]	0.69	11.0	0.312
XR160-12 [CS] [RE] thru -56 [CS] [RE]	0.65	10.4	0.295

Table 4-2 XR160 Weights

4.6 Mounting

The XR160 may be mounted in any attitude but must be mounted on all four corners. No. 6 or M3 mounting hardware should not exceed .282-inches (7.16-mm) in diameter for any lock washer, flat washer, standoff, screw head or other mounting hardware to avoid contact and maintain adequate safety agency spacing requirements with components or printed circuit board traces.

4.7 Physical Dimensions



Note: Recommended standoff size is .375" high and all mounting hardware should be less than .28" in diameter. A standoff less than .375" high is acceptable when a thin insulator, 0.4mm thick (polyester, fish paper or equivalent UL rated 94V-2 minimum) is placed between the XR160 and the mounting chassis (refer to applicable UL standard for clearance requirements).

Figure 4-2 XR160 Dimensions

4.8 Mating Connectors

The user must furnish all mating connectors. The mating connectors must meet the requirements of all applicable safety agencies (notably UL). Molex™ (Molex is a trademark of the Molex Corporation) did not change their part numbers when they took the lead out of their contacts. The Molex part numbers in this section should yield RoHS compliant contacts. The largest wire size accepted by each contact should be used for all power connections to help dissipate the heat generated by the resistive connections.

Note that the female contacts that mate to the power supply are only rated for 25-30 mating cycles. Excessive mating cycles causes dramatically increased terminal resistance and heating resulting in the eventual failure of the mating terminal and possibly the header on the power supply.

CAUTION

The pin-1 location differs amongst connector manufacturers. Sometimes pin-1 differs between the header (on the power supply) and the mating housing from the same manufacturer. Disregard the manufacturer's pin-1 location and follow only the pin-1 locations in Figure 4-3.

4.8.1 AC Input Mating Connector (J1)

The AC input connector to the XR160 is a 3-pin Molex™ (Molex is a trademark of the Molex Corporation) KK style header with 0.156" centers. The center pin is omitted to provide adequate insulation spacing. The Molex part numbers for the mating housing and crimp-style snap-in terminals are listed below. There may be equivalent connectors available from other manufacturers. The line side of the input should be connected to the pin closest to the mounting hole (see Figure 4-2).

J1	Molex P/N
Connector Circuits (pins)	2 of 3
Mating Housing	09-50-8031
Rated Contact Current	7.0 A
Crimp Terminal (tin)	08-50-0106
Rated Wire Size	AWG 18 or 20

Table 4-3 J1 Mating Connector

4.8.2 DC Output Connector (J2)

The DC output connector is a Molex KK style header with 0.156" centers. The Molex part numbers for the mating housing and crimp-style snap-in terminals are listed below. There may be equivalent connectors available from other manufacturers.

J2	XR160-1[ATX], -7[ATX], -8[ATX]	XR160-05 [CS] [RE], -07 CS [RE], -08 CS [RE]	XR160-xx [CS] [RE]
Connector Circuits (pins)	14	6 (Terminal Strip)	6
Mating Housing	09-50-8141	Stripped and tinned wire	09-50-8061
Crimp Terminal (tin)	08-52-0071	N/A	08-50-0106
Rated Wire Size	AWG 18 or 20	AWG 12 max.	AWG 18 or 20

Table 4-4 J2 Mating Connectors

4.8.3 Remote Sense / PG Connector (J3)

The Remote Sense/PG connector on the XR160 is a Molex KK style header with 0.100" centers. The Molex part numbers for the mating housing and crimp-style snap-in terminals are listed below. There may be equivalent connectors available from other manufacturers.

J3	XR160-1, -7, -8	XR160-1ATX, -7ATX, -8ATX, XR160-05 [CS], -07 CS, -08 CS	XR160-xx [CS]
Connector Circuits (pins)	3	5	6
Mating Housing	22-01-3037	22-01-3057	22-01-3067
Crimp Terminal (tin, 2.5A)	08-52-0123	08-52-0123	08-52-0123
Rated Wire Size	AWG 22 to 30	AWG 22 to 30	AWG 22 to 30

* For XR160-1, -7, -8 models only, the Molex 22-01-3037 housing is recommended and not an equivalent from another manufacturer.

Table 4-5 J3 Remote Sense/PG Mating Connectors

4.8.4 Remote Enable Connector (J3)

The Remote Enable connector on the XR160 is a Molex KK style header with 0.100" centers. The Molex part numbers for the mating housing and crimp-style snap-in terminals are listed below. There may be equivalent connectors available from other manufacturers.

J3	XR160-05 [CS] RE, -07 CS RE, -08 CS RE	XR160-xx [CS] RE
Connector Circuits (pins)	8	8
Mating Housing	22-01-3087	22-01-3087
Crimp Terminal (tin, 2.5A)	08-52-0123	08-52-0123
Rated Wire Size	AWG 22 to 30	AWG 22 to 30

Table 4-6 J3 Remote Enable Mating Connectors

4.8.5 J4 Connector: 12V Aux or V2 Sense (see Table 4-8 & Table 4-9)

The 12V AUX or V2 Sense connector (see Table 4-7) is a 2-pin header with 0.100" centers. The part numbers for the mating housing and crimp-style snap-in terminals are listed below. There may be equivalent connectors available from other manufacturers.

J4	All Models except ATX
Connector Circuits (pins)	2
Mating Housing	Molex P/N 22-01-3027
Crimp Terminal (tin, 2.5A)	Molex 08-52-0123
Rated Wire Size	AWG 22 to 30

Table 4-7 J4 Mating Connectors

4.9 Output Grounding

The DC RETURN signal may be connected to the power supply chassis ground (safety ground) at the plated through mounting hole near the input connector.

4.10 Signal Pin Definitions

- There are three general output connector configurations for the XR160 Series
- Identical signal names are connected together on all connectors
- The V2 output (12V aux) is floating only on models XR160-12 through –56
- The safety ground connection is provided by the mounting screw near J1
- Refer to Figure 4-3 for connector and pin-1 locations
- Refer to Table 6-1 for signal level definitions

Pin	XR160-1[ATX], -7[ATX]	XR160-8[ATX]
J1-1	AC Neutral	AC Neutral
J1-2	No Pin	No Pin
J1-3	AC Line	AC Line
J2-1	V4 (-12V Output)	V4 (-12V Output)
J2-2	V3 (+12V Output)	V3 (+12V Output)
J2-3	V1 (+2.5/+3.3V Output)	V3 (+12V Output)
J2-4	V1 (+2.5/+3.3V Output)	V3 (+12V Output)
J2-5	V1 (+2.5/+3.3V Output)	V3 (+12V Output)
J2-6	DC RETURN (0V)	DC RETURN (0V)
J2-7	DC RETURN (0V)	DC RETURN (0V)
J2-8	DC RETURN (0V)	DC RETURN (0V)
J2-9	DC RETURN (0V)	DC RETURN (0V)
J2-10	DC RETURN (0V)	DC RETURN (0V)
J2-11	V2 (+5V Output)	V2 (+5V Output)
J2-12	V2 (+5V Output)	V2 (+5V Output)
J2-13	V2 (+5V Output)	V2 (+5V Output)
J2-14	V2 (+5V Output)	V2 (+5V Output)
J3-1	0V Sense (–)	0V Sense (–)
J3-2	V1 Sense (+)	Not Used
J3-3	Power-Good	Power-Good
J3-4	PS_ON/	PS_ON/
J3-5	+5 $V_{standby}$	+5 $V_{standby}$

Table 4-8 XR160 Signal Pin Definitions (Part A)

Pin	XR160-05 [CS], -07 CS, -08 CS	XR160-xx [CS]
J1-1	AC Neutral	AC Neutral
J1-2	No Pin	No Pin
J1-3	AC Line	AC Line
J2-1	V1 (+5V Output)	V1 (+ Output)
J2-2	V1 (+5V Output)	V1 (+ Output)
J2-3	V1 (+5V Output)	V1 (+ Output)
J2-4	DC RETURN (0V)	DC RETURN (0V)
J2-5	DC RETURN (0V)	DC RETURN (0V)
J2-6	DC RETURN (0V)	DC RETURN (0V)
J3-1	Current Share	DC RETURN (0V)
J3-2	0V Sense (–)	0V Sense (–)
J3-3	V1 Sense (+)	V1 Sense (+)
J3-4	PS_OK	Current Share
J3-5	Power-Good	Power-Good
J3-6	No Pin	PS_OK
J4-1	+12V AUX	V2 (+12V AUX)
J4-2	RETURN for 12V AUX	RETURN for V2

Table 4-9 XR160 Signal Pin Definitions (Part B)

Pin	XR160-05 [CS] RE, -07 CS RE, -08 CS RE	XR160-xx [CS] RE
J1-1	AC Neutral	AC Neutral
J1-2	No Pin	No Pin
J1-3	AC Line	AC Line
J2-1	V1 (+5V Output)	V1 (+ Output)
J2-2	V1 (+5V Output)	V1 (+ Output)
J2-3	V1 (+5V Output)	V1 (+ Output)
J2-4	DC RETURN (0V)	DC RETURN (0V)
J2-5	DC RETURN (0V)	DC RETURN (0V)
J2-6	DC RETURN (0V)	DC RETURN (0V)
J3-1	Current Share	DC RETURN (0V)
J3-2	0V Sense (–)	0V Sense (–)
J3-3	V1 Sense (+)	V1 Sense (+)
J3-4	PS_OK	Current Share
J3-5	Power-Good	Power-Good
J3-6	Remote Enable	PS_OK
J3-7	+5 $V_{standby}$	Remote Enable
J3-8	DC RETURN (0V)	+5 $V_{standby}$
J4-1	+12V AUX	V2 (+12V AUX)
J4-2	RETURN for 12V AUX	RETURN for V2

Table 4-10 XR160 Signal Pin Definitions (Part C)

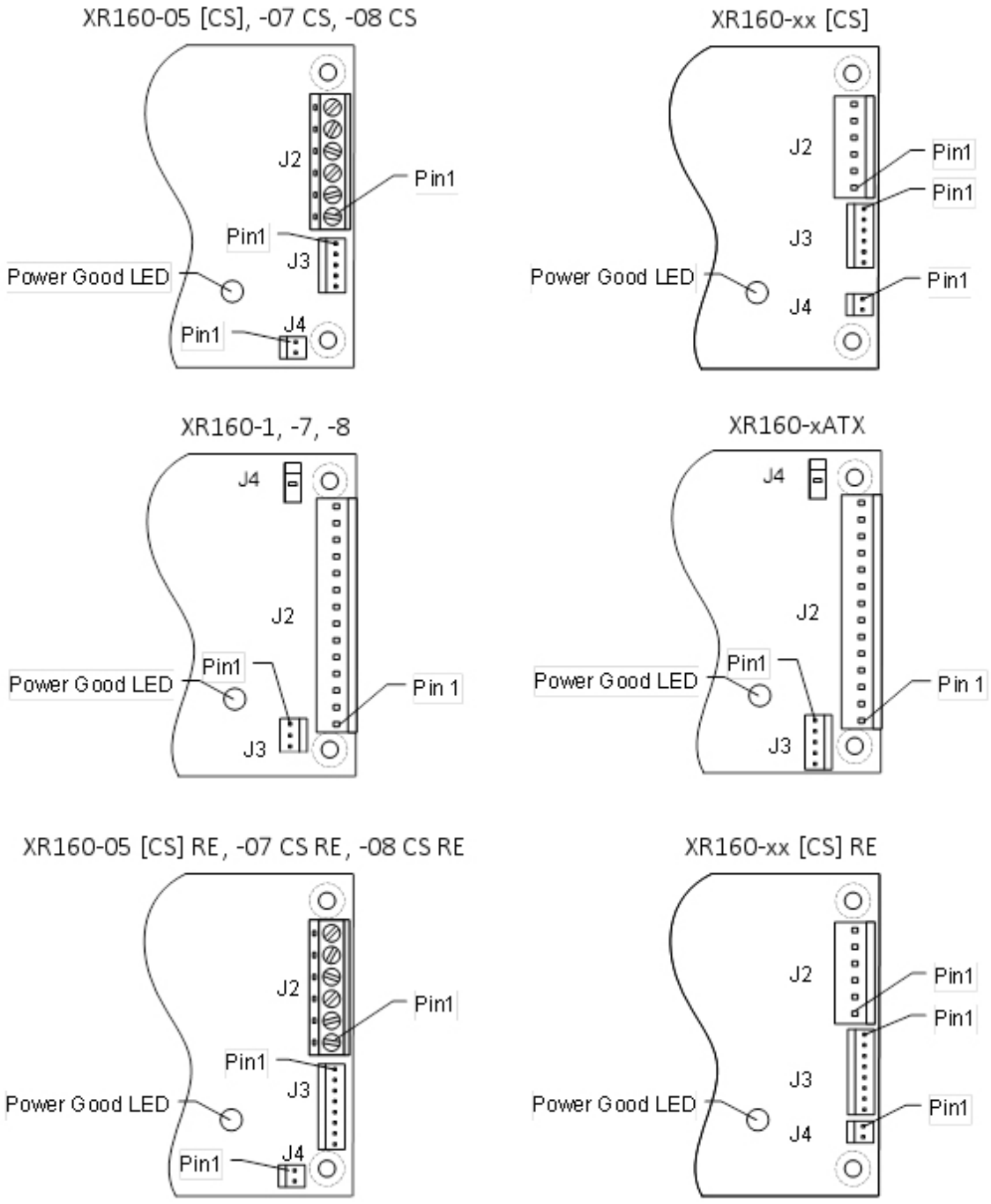


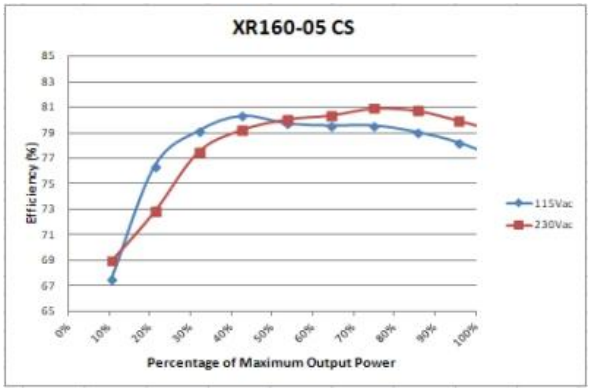
Figure 4-3 XR160 Output Connectors Layouts

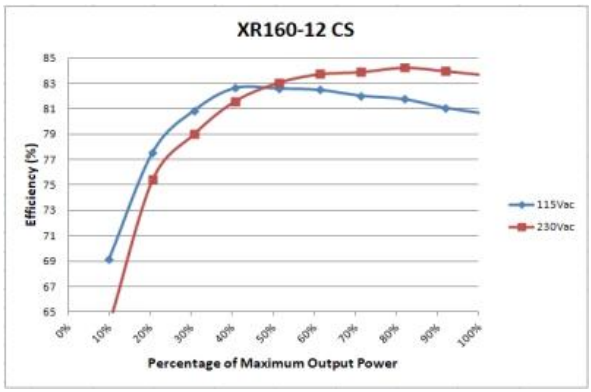
5. Efficiency

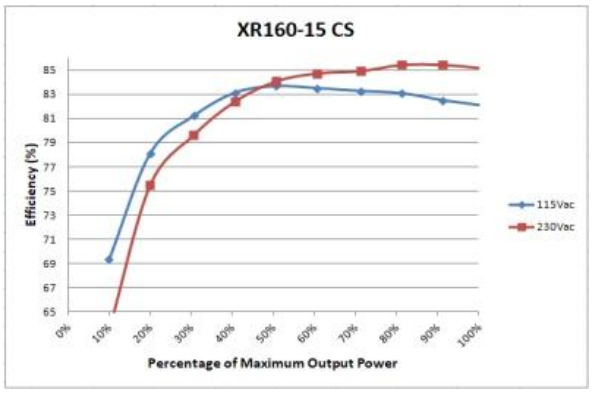
The power supply will meet high efficiencies under defined loading conditions specified in Table 5-1 with a line voltage of 230VAC and 10 CFM of cooling air at 25°C. Efficiency curves are shown in the following diagrams. These charts are for Current Sharing (CS) models, removing the Or-ing diodes will increase the efficiency by approximately 2%. This is available as an option. Note that only some models are shown.

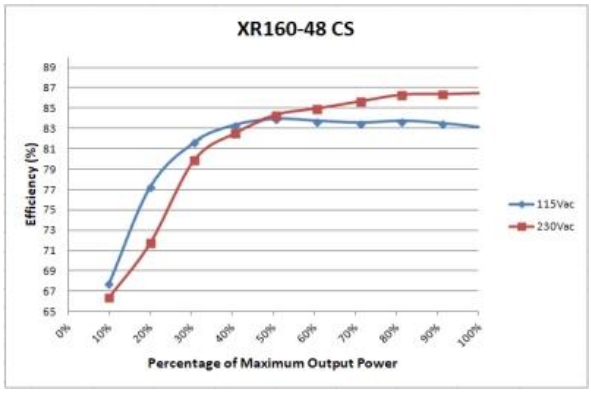
XR160:	-1[ATX], -7[ATX]	-8[ATX]	-05 [CS]	-07 [CS], -08 [CS]	-12 [CS]	-15 [CS]	-24 [CS]	-28 [CS], -30 [CS]	-48 [CS], -56 [CS]
Efficiency	82%	83%	84%	87%	86%	87%	87%	88%	89%
V1	0.10A	-	32 A	22.8 A	13.3 A	10.6A	6.6A	5.7A	3.3A
V2	20 A	15 A	0.0 A	0.0 A	0.0 A	0.0 A	0.0 A	0.0 A	0.0 A
V3	4.0 A	6.0 A	0.0A	0.0A	0.0A	0.0A	0.0 A	0.0 A	0.0A
V4	1.0 A	1.0 A	-	-	-	-	-	-	-
V5	1.0 A	1.0 A							

Table 5-1 XR160 Output Currents at Rated Efficiency (See next page)





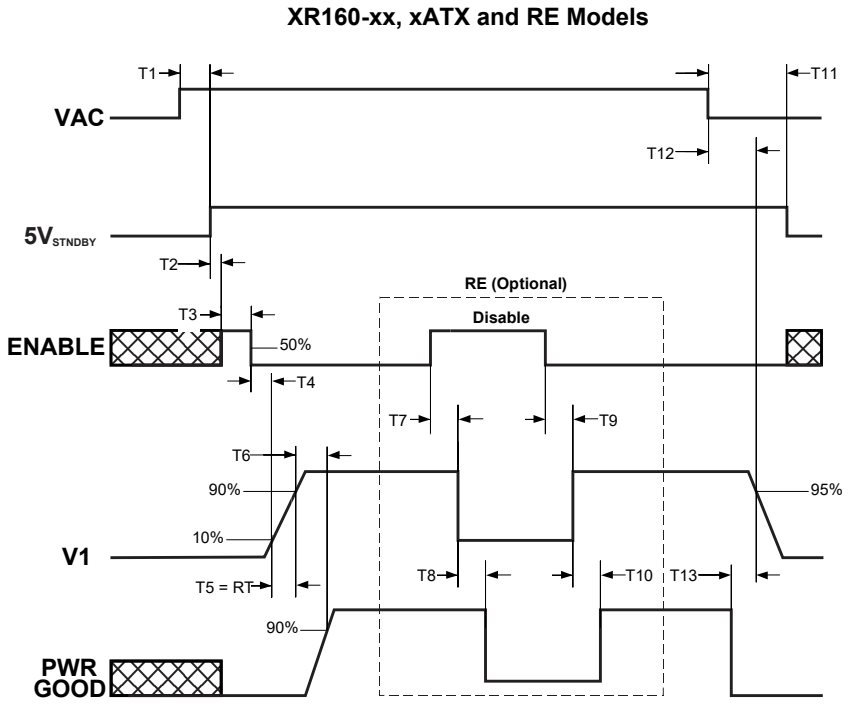

XR160-15 CS
Efficiency (%)
85
83
81
79
77
75
73
71
69
67
65
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percentage of Maximum Output Power
115Vac
230Vac


XR160-48 CS
Efficiency (%)
89
87
85
83
81
79
77
75
73
71
69
67
65
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percentage of Maximum Output Power
115Vac
230Vac


XR160-54, -56 CS
Efficiency (%)
89
87
85
83
81
79
77
75
73
71
69
67
65
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percentage of Maximum Output Power
115Vac
230Vac

6. Timing and Control

6.1 Power Supply Timing



	Min	Max
STBY TURN ON DELAY T1	75mS	800mS
ENABLE DELAY T2		<5mS
ENABLE DELAY T3		<5mS
V1 DELAY T4		<60mS
OUTPUT RISETIME T5	2mS	19mS
PG DELAY T6		200mS
V1 DISABLE DELAY T7	2mS	15mS

	Min	Max	
T8	2mS	15mS	PG OFF DELAY
T9		<3 secs	V1 ENABLE DELAY
T10	2mS	15mS	PG ON DELAY
T11	>35mS		5V STBY HOLD UP
T12	>22mS		OUTPUT HOLDUP
T13	>2mS		EARLY WARNING

Figure 6-1 XR160 Timing Diagram

6.2 Power-Good Signal, PS_OK Signal, PS_ON/Input and Remote Enable Input

6.2.1 Power-Good (PG)

The Power-Good Signal provides a high logic level to indicate that sufficient time has expired for the DC outputs to be within their regulation limits and that sufficient mains energy is stored by the power supply to ensure continuous power operation within specification for the duration of the hold-up time. When the AC mains power is removed for a period longer than 20ms, the Power-Good (PG) Signal transitions to a low logic level. PG Signal is active low with two TL331 outputs in parallel with a single 2.2K resistor tied to 5 $V_{standby}$. The Power-Good signal is driven by open-drain channel MOSFET transistors. XR160-1, -7 and -8 models add a TTL compatible pull-up resistor on just the Power Good output. The electrical specifications for the Power-Good output are described in Table 6-1.

6.2.2 PS_OK

The PS_OK signal is the logical complement of the Power-Good signal and is driven by an open-drain MOSFET transistor. The electrical specifications for the PS_OK output are described in Table 6-1.

6.2.3 PS_ON/

On the ATX versions, the V1 through V4 outputs are enabled whenever the PS_ON/ input (J3 pin-4) is grounded to DC RETURN (or J3 pin-1). Opening the PS_ON/ input will disable the four outputs leaving only the +5Vstandby output and cause the Power-Good output to go false. The PS_ON/ input has an internal 10K-ohm pull-up resistor connected to +5 Vstandby.

6.2.4 Remote Enable

Similar to PS_ON/ input on ATX versions, V1 and V2 outputs of RE versions are enabled whenever Remote Enable pin (J3 pin-6 for XR160-05 [CS] RE,-07 CS RE, -08 CS RE and J3 pin-7 for XR160-xx [CS] RE) is grounded to DC RETURN. Opening the Remote Enable input will disable the two outputs leaving only the +5Vstandby output and cause the Power-Good output to go false. The Remote Enable input has an internal 10K-ohm pull-up resistor connected to +5 Vstandby.

Signal Type	+5VDC, TTL Compatible
Low Logic Levels	<0.4V when sinking 4mA
High Logic Levels	Open Collector Output (see text above)
Power-Good output	High true (open) when conditions described above are met
Power-Good Delay	Less than 200mS after V1 outputs reaches regulation
Power Down Warning	>2 mS before V1 reaches minimum regulated output
Rise Time	<200 µS from 10% to 90% point.
PS_OK Output	Logical complement of Power-Good signal. Open drain MOSFET output with a 2.2K pull-up resistor
PS_ON/ (input)	Operate < 0.8V, Standby > 2.0V, Load: 10 K pull-up to +5 V
Remote Enable (input)	Operate < 0.8V, Standby > 2.0V, Load: 10 K pull-up to +5 V

Table 6-1 XR160 Status Signal Specifications

6.3 Power-Good LED

A green LED on all models illuminates whenever the Power-Good signal is true (high). See Figure 4-3 for the LED location near the output connector. At turn off, V2 is clamped via a diode to +5V output to insure 2.5 / 3.3V never exceed 5V output by 0.6V during turn-off.

6.4 Power Sequencing: XR160-1[ATX] and XR160-7[ATX]

The +12V and +5V output voltages are equal to or greater than the V1 (+2.5V or +3.3V) output voltage at all times during power up and normal operation. The time between the +5V output reaching minimum in-regulation voltage and the V1 output reaching minimum in-regulation voltage shall be less than 20 milliseconds. At turnoff, V1 is clamped via a diode to +5V output and not to exceed 0.6V.

6.5 Voltage Hold-Up Time

The power supply will maintain output regulation per Table 3-1 despite a loss of input power at 100VAC/50Hz and 230VAC/47Hz at maximum continuous output load for a minimum of 22 milliseconds. The Power-Good and PS_OK signals provide a minimum 2mS early warning of impending loss of output power.

7. Ordering Information

The following table provides the N2Power part numbers that should appear on your purchase order and will appear on any N2Power correspondence:

XR160 Models without active current sharing		
Model Number	**V1**	**P/N**
XR160-1ATX	3.3	400125-02-7
XR160-7ATX	2.5	400126-02-5
XR160-8ATX	N/A	400127-02-3
XR160-1	3.3	400125-01-9
XR160-7	2.5	400126-01-7
XR160-8	N/A	400127-01-5
XR160-05	5	400140-01-8
XR160-12	12	400130-01-9
XR160-15	15	400131-01-7
XR160-24	24	400133-01-3
XR160-28	28	400134-01-1
XR160-30	30	400135-01-8
XR160-48	48	400136-01-6
XR160-54	54	400138-01-2
XR160-56	56	400139-01-0

XR160 Models with active current sharing		
Model Number	**V1**	**P/N**
XR160-05 CS	5	400140-02-6
XR160-07 CS	7	400141-01-6
XR160-08 CS	8	400142-01-4
XR160-12 CS	12	400130-02-7
XR160-15 CS	15	400131-02-5
XR160-19 CS	19	400132-01-5
XR160-24 CS	24	400133-02-1
XR160-28 CS	28	400134-02-9
XR160-30 CS	30	400135-02-6
XR160-48 CS	48	400136-02-4
XR160-51 CS	51	400137-01-4
XR160-54 CS	54	400138-02-0
XR160-56 CS	56	400139-02-8

Table 7-1 XR160 Model and Part Numbers

XR160 RE Models without active current sharing		
Model Number	**V1**	**P/N**
XR160-05 RE	5	400140-03-4
XR160-12 RE	12	400130-03-5
XR160-15 RE	15	400131-03-3
XR160-24 RE	24	400133-03-9
XR160-28 RE	28	400134-03-7
XR160-30 RE	30	400135-03-4
XR160-48 RE	48	400136-03-2
XR160-54 RE	54	400138-03-8
XR160-56 RE	56	400139-03-6

XR160 RE Models with active current sharing		
Model Number	**V1**	**P/N**
XR160-05 CS RE	5	400140-04-2
XR160-07 CS RE	7	400141-02-4
XR160-08 CS RE	8	400142-02-2
XR160-12 CS RE	12	400130-04-3
XR160-15 CS RE	15	400131-04-1
XR160-19 CS RE	19	400132-02-3
XR160-24 CS RE	24	400133-04-7
XR160-28 CS RE	28	400134-04-5
XR160-30 CS RE	30	400135-04-2
XR160-48 CS RE	48	400136-04-0
XR160-51 CS RE	51	400137-02-2
XR160-54 CS RE	54	400138-04-6
XR160-56 CS RE	56	400139-04-4

Table 7-2 XR160 RE Model and Part Numbers

For warranty information refer to www.n2power.com

All XR160 power supplies are RoHS compliant.

Direct all questions, orders or requests for quotation as follows:

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Sales:	sales@n2power.com
	805-583-7744 x122
Technical Support	techsupport@n2power.com
	805-583-7744 x119
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