

# NMX-1000, Power Factor Corrected Multiple Output, Forced Current Sharing



## FEATURES:

- Forced current sharing for N +1 redundancy
- Remote sense on outputs #1, 2, and 3
- Universal ac input
- 0.99 typical power factor
- “Zero wire” slope program current sharing on outputs #2 and 3 for redundancy
- Mag-Amp regulators eliminate interaction between logic and auxiliary outputs
- Compact, low-profile package, only 12" x 8" x 3.38"
- Dc power good and ac power fail signals
- True remote inhibit

## SPECIFICATIONS:

### INPUT

**Ac Input:** 90-264 Vac continuous range, 47 to 63 Hz. Internally fused for 20 A.

**Power Factor:** 0.99 typical at full load. Meets EN61000-3-2 Class A.

**Inrush:** Cold start ac current is less than 90 A at 115 Vac and 180 A at 230 Vac. Limited by thermistor.

**Brownout Protection:** Holds regulation to 85 Vac.

**Holdup Time:** 20 ms minimum after removal of power at full load.

**Efficiency:** 75% typical.

**Ac Power Fail:** Provides TTL “0” 5 ms before output voltage goes out of regulation band upon loss of ac power.

### OUTPUT

**Adjustability:** All outputs user adjustable  $\pm 5\%$  minimum. Outputs #2 and 3 have factory adjustable preprogrammed slope.

**Line & Load Reg:** Outputs #1 and 4 hold  $\pm 1\%$  over ac input range and 0 to 100% load change. Output #2 and 3 hold  $\pm 2\%$  (preprogrammed slope). Output #1 requires minimum load of 10%.

**Ripple & Noise:** Less than 1% p-p or 100 mV, whichever is greater.

**Remote Sense (Outputs #1, 2, and 3):** Compensates for 250 mV total line drop. Open sense lead protection.

**Temperature Coefficient:** 0.02% per degree C.

**Stability:** 0.1% over 8 hours after 30 minutes warm-up.

**Transient Response (Outputs #1):** Output voltage returns to within 1% in less than 500  $\mu$ s for a 50% load change. Peak transient does not exceed 5%.

**Overload Protection:** All outputs are protected against overload and short circuit. Automatic recovery upon removal of fault.

**Oversupply Protection (Outputs #1, 2 and 3):** Protects load against power supply induced oversupply. Trip point is factory set so that output voltage cannot exceed 136% of nominal.

**Peak Output Current:** Dual current ratings define continuous and peak currents. The peak current shown can be delivered for a maximum period of 30 seconds.

**Remote Inhibit:** Contact closure to the negative sense line or a TTL level “0” turns off dc outputs.

**Dc Power Good:** Provides a TTL “1” when output #1 is above 4.6 V nominal.

**Redundancy:** External OR-ing diodes and current sharing on output #1, 2 and 3 provide “N+1” capability. Remote Senses compensate for additional 0.6 V diode voltage drop. When the

forced current sharing terminal is connected among units, current sharing remains within 10% of the unit's full output current rating. For hot swap applications see RMX Series.

### ENVIRONMENTAL

**Thermal Protection:** Shuts down power supply if overheated. Automatic recovery.

**Temperature Range:** 0° to 50° C at full ratings.

**Safety Agencies:** Most models are approved to UL1950; CSA 22.2 #234; IEC 950 and TÜV EN60950, Class 1 SELV., CE 72/23/EEC/93/68EEC (low voltage directive).

**Conducted RFI:** Meets FCC Part 15, Class A; EN55022 Class B.

**Output Isolation:** Isolated from ground 50 Vdc.

**Reverse Voltage:** Protected against reverse voltage up to supply current rating.

**Cooling:** Self cooled with internal ball-bearing fans.

**OPTIONS:** Consult factory for other available options.

### AC INPUT

FUNCTION	115 VAC	230 VAC	CONNECTOR
TB1-(L)	Line	Line 1	Barrier strip
TB1-(N)	Neutral	Line 2	#6-32 screws, 3/8" centers
TB1-(GND)	Safety Ground	Safety Ground	

### DC OUTPUT

FUNCTION	LOCATION	NOTES	CONNECTOR
Output #1	Terminal marked +V	Main output	Studs #5/16-18 x1"
	Terminal marked -V	Rtn (common)	#1/4-20 screws
Output #2	J2-1, 2, 3		AMP#350830-1 mates
	J2-4, 5, 6	Rtn (common)	with plug housing
Output #3	J2-7, 8, 9		#350736-1 with pins
	J2-4, 5, 6	Rtn (common)	
Output #4	J2-10, 11, 12	(+) Floating Output	
	J2-13, 14, 15	(-) Floating Output	

### STATUS AND CONTROL

FUNCTION	LOCATION	NOTES	CONNECTOR
Remote Sense	J3-1	Output #1 Sense	AMP MTA type #640456-9 pin header (locking)
	J3-3	Output #1 Sense Rtn	
	J3-8	Output #2 Sense	
	J3-7	Output #2&3 Sense Rtn	
	J3-9	Output #3 Sense	
Dc Power Good	J3-6	Reference to common	
Ac Power Fail	J3-4	when a Sense Rtn is terminated	
Inhibit	J3-5		
Current Share	J3-2		

# NMX-1000 Power Factor Corrected Multiple Output, Forced Current Sharing

Commercial Model	Power Out	Output No.	Output	Current	Total Regulation (A)
NMX-1004-1203	1000	1	+5 V	150 A	±1
		2	+12 V	20/30 A pk	±1
		3	-12 V	10 A	±1
		4	3.3 V	10 A	±1
NMX-1004-1205	1000	1	+5 V	150 A	±1
		2	+12 V	20/30 A pk	±1
		3	-12 V	10 A	±1
		4	5 V	10 A	±1
NMX-1004-1212	1000	1	+5 V	150 A	±1
		2	+12 V	20/30 A pk	±1
		3	-12 V	10 A	±1
		4	12 V	10 A	±1
NMX-1004-1224	1000	1	+5 V	150 A	±1
		2	+12 V	20/30 A pk	±1
		3	-12 V	10 A	±1
		4	24 V	5 A	±1

Note: (A) Main +5 V output requires minimum load of 10%

## NMX-1000 MECHANICAL SPECIFICATIONS

