

NMX-500, Power Factor Corrected Multiple Output, Forced Current Sharing



Option V

FEATURES:

- Forced current sharing for N +1 redundancy
- Remote sense on outputs #1 and 2
- Universal ac input
- 0.99 typical power factor
- Dual converter design eliminates interaction between logic and auxiliary outputs
- Low Ripple and noise on all outputs
- Dc power good and ac power fail signals
- True remote inhibit
- Monotonic turn-on and turn-off

SPECIFICATIONS:

INPUT

Ac Input: 90-264 Vac continuous range, 47 to 63 Hz. Internally fused for 10 A.

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

Inrush: Cold start ac current is less than 30 A at 115 Vac and 60 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: Outputs #1 and 2 user adjustable $\pm 5\%$ minimum. Output #3 tracks #2; initial accuracy $\pm 4\%$. Output #4 user adjustable $\pm 5\%$ minimum, or +5% only if voltage is 5.2 V

Line & Load Reg: Outputs #1, 2, and 4 hold $\pm 1\%$ over ac input range and 0 to 100% load change. Output #3 requires 20% minimum load on outputs #2 and 3 to hold $\pm 4\%$.

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

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

Temperature Coefficient (Outputs #1, 2, and 4): 0.02% per degree C.

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

Transient Response (Outputs #1, 2, and 4): Output voltage returns to within 1% in less than 500 μ 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.

Overvoltage Protection (Outputs #1 and 2): Protects load against power supply induced overvoltage. 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" open collector when output #1 is above 4.6 V nominal.

Redundancy: External OR-ing diodes and forced current sharing on output #1 provide "N+1" capability. Remote sense (+S) compensates for additional 0.6 V diode voltage drop. When the current sharing terminal is connected between units, current sharing remains within 10% of the unit's full output current rating. For hot swap applications see TMX 350.

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

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.

Cooling: 30 cfm required to achieve full ratings.

OPTIONS:

Option "F", Fan/Cover Assembly: Cover with integral ball-bearing fan provides proper cooling to achieve full ratings at 50°C ambient temperature. 2.05" dimension increases to 3.28".

Option "V", Fan/Cover Assembly: Low profile, end venting cover with integral ball-bearing fan. 2.05" dimension increases to 2.50", and 9.65" dimension increases to 11".

AC INPUT (90-264 VAC Continuous Range)

FUNCTION	115 VAC	230 VAC	CONNECTOR
TB1-(L)	Line	Line 1	Barrier strip #6-32 screws
TB1-(N)	Neutral	Line 2	
TB1-(GND)	Safety Ground	Safety Ground	0.325" Centers

DC OUTPUT

FUNCTION	LOCATION	NOTES	CONNECTOR
Output #1	Terminal marked +V	Main output	Bus bars
	Terminal marked -V	Rtn (common)	#6-32 screws
Output #2	J1-5, 10	Rtn (common)	AMP#770743-1 mates
	J1-4, 9		with connector 7705801
Output #3	J1-3, 8	Rtn (common)	with sockets #171639-1
	J1-4, 9		(AWG #20 to #16)
Output #4	J1-2, 7	(+) Floating Output	
	J1-1, 6	(-) Floating Output	

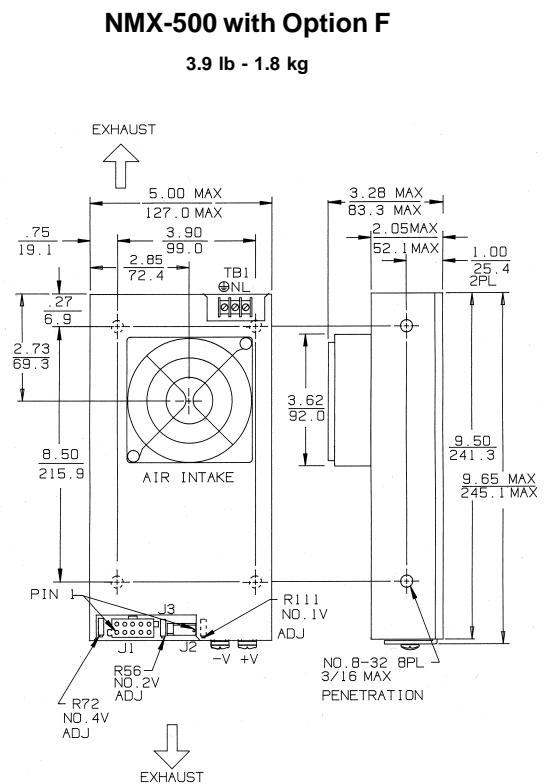
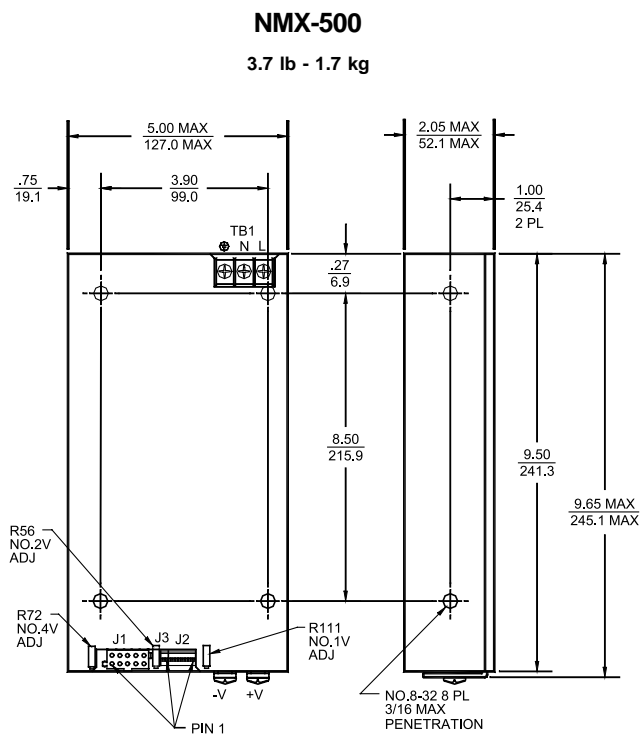
STATUS AND CONTROL

FUNCTION	LOCATION	NOTES	CONNECTOR
Remote Sense	J2-2	Output #1 Sense	AMP MTA type #640456-8 pin header (locking)
	J2-1	Output #1 Sense Rtn	
	J2-8	Output #2 Sense	
	J2-7	Output Sense Rtn	
Dc Power Good	J2-3	Reference to Common	
Ac Power Fail	J2-4	Reference to Common	
Inhibit	J2-5		
Current Share	J2-6		
Aux. Fan Voltage (Not available with "V" or "F" options)	J3-1	+12V @ 0.5 A Output	AMP MTA type #640456-2 pin header (locking)
	J3-2	Rtn (common)	

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Commercial Model	Power Out	Output No.	Output	Current	Total Regulation (A)
NMX-504-1205	500	1	+5 V	75 A	±1%
		2	+12 V	8/12 A pk	±1%
		3	-12 V	4 A	±4%
		4	5.2 V	5 A	±1%
NMX-504-1212	500	1	+5 V	75 A	±1%
		2	+12 V	8/12 A pk	±1%
		3	-12 V	4 A	±4%
		4	12 V	5 A	±1%
NMX-504-1224	500	1	+5 V	75 A	±1%
		2	+12 V	8/12 A pk	±1%
		3	-12 V	4 A	±4%
		4	24 V	3 A	±1%

NMX-500 MECHANICAL SPECIFICATIONS



Dimensions: Inches
Millimeters