CONDOR

500 WATTS
MULTIPLE OUTPUT
48 VDC INPUT, FORCED CURRENT SHARING

DMX-500



Featuring:

- Forced current sharing for N +1 redundancy
- Identical output performance as NMX-500 Series with 48 Vdc input
- Remote sense on outputs #1 and 2
- Dual converter design eliminates interaction between logic and auxiliary outputs
- Low ripple and noise on all outputs
- Input transient specification up to 75 V
- DC power good signal
- True remote inhibit
- Monotonic turn-on and turn-off
- Designed for use in telephone network systems

STANDARD DMX SERIES

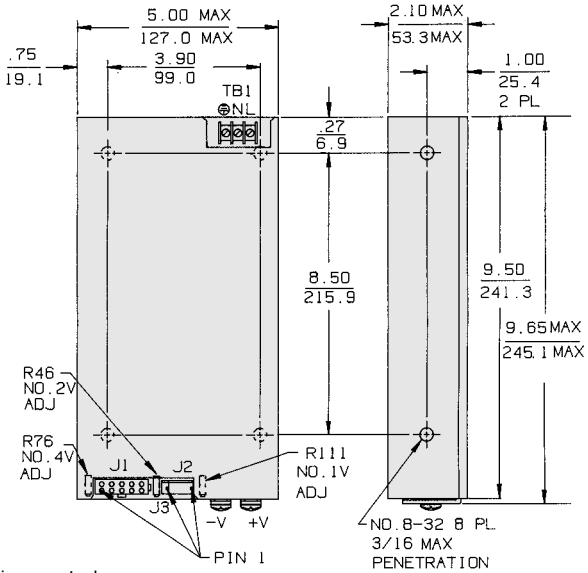
MODEL	PWR	OUTPUT #1	OUTPUT #2	OUTPUT #3	OUTPUT #4
DMX-503-0512	500	+5V @ 75A	+12V @ 8/12A pk	-12V @ 4A	
DMX-504-1205	500	+5V @ 75A	+12V @ 8/12A pk	-12V @ 4A	5.2V @ 5A
DMX-504-1212	500	+5V @ 75A	+12V @ 8/12A pk	-12V @ 4A	12V @ 5A
DMX-504-1224	500	+5V @ 75A	+12V @ 8/12A pk	-12V @ 4A	24V @ 3A
DMX-504-1512	500	+5V @ 75A	+15V @ 4A	-15V @ 4A	12V @ 5A
DMX-504-1524	500	+5V @ 75A	+15V @ 4A	-15V @ 4A	24V @ 3A

Designed to meet applicable Bellcore and NEBS standards, the DMX Series 500-watt power supplies require DC input. They are DC “clones” of Condor’s popular NMX 500 Series of AC power factor corrected power supplies. This gives you the ability to operate existing systems from central office power (–48 Vdc) simply by changing power supplies.

DMX and NMX Series power supplies are directly interchangeable, without compromising performance and without making any mechanical changes for mounting or cooling. DMX and NMX Series power supplies can also be operated in redundant configurations to achieve AC operation with battery backup capability.

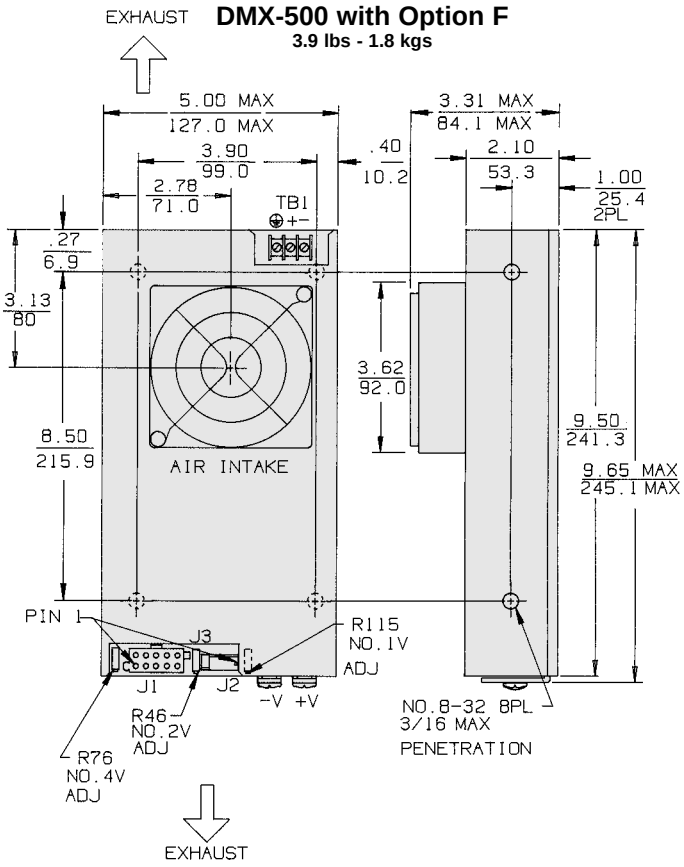
SEE NMX 500 FOR AC INPUT EQUIVALENT

DMX-500
3.7 lbs - 1.7 kgs



Dimensions: Inches
Millimeters

DMX-500 with Option F
3.9 lbs - 1.8 kgs



SPECIFICATIONS: ALL MODELS

INPUT
DC Input: 40-60 Vdc range. Internally fused for 25 A.
Efficiency: 75% typical.

OUTPUT
Adjustability: Outputs #1 and 2 user adjustable ±5% minimum. Output #3 tracks #2; initial accuracy ±4%. Output #4 user adjustable ±5% minimum.
Line & Load Reg: Outputs #1, 2, and 4 hold ±1% over DC input range and 0 to 100% load change. Output #3 requires 20% minimum load on outputs #2 and 3 to hold ±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 µs 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.
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 among units, current sharing remains within 10% of the unit’s full output current rating.
DC Power Good: Provides a TTL “1” open collector when output #1 is above 4.6 V nominal.
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, Subpart J, Class A; EN55022 Class B; CISPR 22 Class B.
Cooling: 30 CFM required to achieve full ratings.
Output Isolation: Isolated from ground 50 Vdc.

OPTIONS:
Option “F”, Fan/Cover Assembly: Cover with integral ball-bearing fan provides proper cooling to achieve full ratings at 50°C ambient temperature. 2.10” dimension increases to 3.31”.
Option “V”, Fan/Cover Assembly: Low profile, end venting cover with integral ball-bearing fan. 2.10” dimension increases to 2.50”, and 9.65” dimension increases to 11”.

Consult factory for other available options.

DC INPUT

FUNCTION	48 Vdc	CONNECTOR
TB1- (–)	-48 VDC Input	Barrier strip #6-32 screws 3/8” centers
TB1- (+)	-48 VDC Return	
TB1- (⏚)	Safety Ground	

DC OUTPUT

FUNCTION	LOCATION	NOTES	CONNECTOR
Output #1	Terminal marked +V	Main Output	Bus bars #8-32 screws
	Terminal marked -V	Rtn (Common)	
Output #2	J1-5, 10		AMP #770743-1 mates with connector #770580-1 with sockets #171639-1
	J1-4, 9	Rtn (Common)	
Output #3	J1-3, 8		
	J1-4, 9	Rtn (Common)	
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 #2 Sense Rtn	
DC Power Good	J2-3	Reference to Common	
Inhibit	J2-5	Reference to Common when #1 Sense Rtn is terminated.	
Current Share	J2-6		
Aux. Fan Voltage (Not available with “V” or “F” options)	J3-1	+12V @ 0.5A Output	AMP MTA type #640456-2 pin header (locking)
	J3-2	Rtn (Common)	