1500 LN series



www.martekpower.com

Dual Output DC/DC Converter



The 1500LN, dual output power modules are 15 watt DC/DC converters available in a dual output configuration providing 5.0 VDC to 15 VDC outputs and are fully compatible to Tyco series LW010 and LW015 providing both positive and negative on/off logic. These 400kHz, switching converters are available in 48 VDC inputs with efficiencies up to 88%. Offering pin for pin and full functionality to the Tyco LW series these converters are the only true second source available in the market.

OUTPUT CHARACTERISTICS

	Min	Тур	Max	Unit/Comments
Output Voltage Set Point		±1		% Output voltage at nominal line & FL
Total Band Error	-3		+3	% Output voltage
				including line/load
				regulation setting
Temperature Coefficient		±0.01		% per degree C
Ripple/Noise		60	100	mV p-p measured
				at 20 MHz bandwidth
				with ext. 1 µf cap.
Output Voltage and Current				Refer to model
				selection chart
Load Transient Response		±2		deviation of output
				voltage for a 25%
				load change for 200µS
Short Circuit Protection				Indefinite, Automatic
				Recovery
Overvoltage Protection		260		%; Clamp type

FEATURES

- Pin Compatible to Tyco LW010 and LW015
- Positive and Negative Logic
- Up to 88% Efficiency
- Industry Standard 1.0" X 2.0" X 0.375" Package
- Remote On/Off, Output Over Voltage and Short Circuit Protection

INPUT CHARACTERISTICS

	Min	Тур	Max	Units/Comments
Input Voltage	36	48	75	VDC
Under Voltage Lock out	33			VDC
Minimum Input Current	0			mA
Full Load Input Current			0.38	Α
Input Fuse Requirements			1	Amps; Slow blow type
Efficiency by Model				
1505D48LN		84		%; FL Nominal Line
1512D48LN		87		%; FL Nominal Line
1515D48LN		88		%; FL Nominal Line
Switching Frequency	360	400	440	kHz; Factory set
Remote Shut Down (Optional)				
Positive Logic Off	0		0.80	VDC;Referenced to input
Positive Logic On	3.5			VDC or open;Referenced
				to input
Negative Logic On	0		0.80	VDC;Referenced to input
Negative Logic Off	3.5			VDC or open;Referenced
				to input
Input - Output Capacitance	!	1200		pF
Input Filter				LC type
Isolation Voltage		1500		VDC
Isolation Resistance	100			MOhms

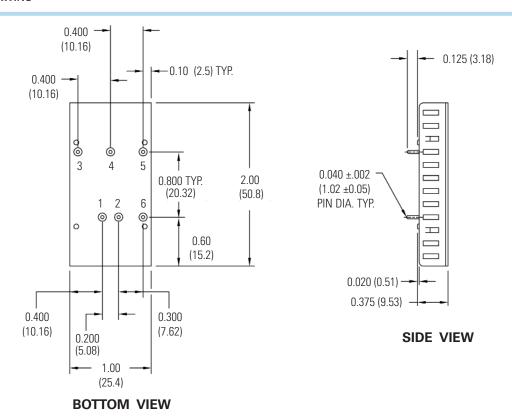
MODEL SELECTION CHART

	Input Voltage (VDC)	Output Voltage (VDC)	Full Load Output Current(A)
1505D48LN	48	5.0	± 1.5
1512D48LN	48	12.0	± 0.625
1515D48LN	48	15.0	± 0.500

GENERAL CHARACTERISTICS

	Min	Тур	Max	Unit/Comments
Operating Temp. Range	-40		+105	°C; measured
				at baseplate
Storage Temp. Range	-55		+125	°C; measured
				at baseplate
Material Flammability				UL94V-0
MTBF	500,000			Hours, at 40°C
Altitude: Operating			10,000	Feet
Non-Operatin	g		40,000	Feet
Relative Humidity	5		95	% Humidity,
				non-condensing
Weight			16	Grams
Size				1.0" X 2.0 X0.375"
Case Material				Black coated
				aluminum
Agency Approvals				UL/CUL1950,
				TUV, EN60950

OUTLINE DRAWING



PIN OUT CHART

PINS	FUNCTION
1	+ VIN
2	- VIN
3	+ Vout
4	COMMON
5	- Vout
6	*REMOTE ON/OFF

^{* =} Optional feature

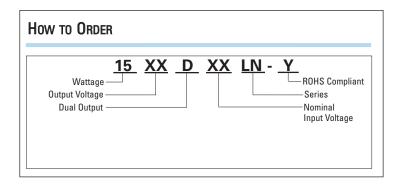
Notes

 $1. \ Unless \ otherwise \ specified \ dimensions \ are \ in \ inches \ (mm).$

Tolerances Inches mm $\begin{array}{ccc} X.XX=\pm 0.02 & X.X=\pm 0.5 \\ X.XXX=\pm 0.010 & X.XX=\pm 0.25 \end{array}$

- 2. Controlling dimension in inch.
- 3. Case is vented on 2" long sides only.

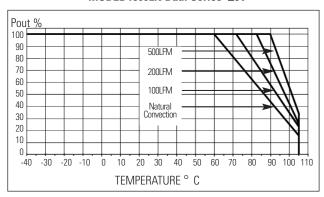
All specifications are typical at nominal input, nominal load and 25° C unless otherwise specified. External, low ESR, 10 microfarad (minimum) capacitor across output is recommended for operation.



- -4 Option, Positive Logic: To add the remote on/off feature to the converter please add a "-4" at the end of the part number. An additional pin (pin #6) will be added to the converter. Consult mechanical drawing for location.
- -1 Option, Negative Logic: To add the remote on/off feature to the converter please add a "-1" at the end of the part number. An additional pin (pin #6) will be added to the converter. Consult mechanical drawing for location.

DERATING CURVES

MODEL 1500LN Dual Series ±5V



MODEL 1500LN Dual Series ±12 & 15V

