



# 1500 LN series

## Dual Output DC/DC Converter



### DESCRIPTIONS

The 1500LN, dual output power modules are 15 watt DC/DC converters available in a dual output configuration providing  $\pm 5.0$  VDC,  $\pm 12$  VDC and  $\pm 15$  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	Typ	Max	Unit/Comments
Output Voltage Set Point		$\pm 1$		% Output voltage at nominal line & FL
Total Band Error	-3		+3	% Output voltage including line/load regulation setting
Temperature Coefficient		$\pm 0.01$		% per degree C
Ripple/Noise		60	100	mV p-p measured at 20 MHz bandwidth with ext. 1 $\mu$ f cap.
Output Voltage and Current				Refer to model selection chart
Load Transient Response		$\pm 2$		deviation of output voltage for a 25% load change for 200 $\mu$ s
Short Circuit Protection				Indefinite, Automatic Recovery

### MODEL SELECTION CHART

	Input Voltage (VDC)	Input Voltage Range (VDC)	Max. Input Current (A)	Output Voltage (VDC)	Output Current (A)	Efficiency @ FL (%)
1505D48LN	48	36 - 75	0.381	$\pm 5.0$	$\pm 1.5$	84
1512D48LN	48	36 - 75	0.367	$\pm 12.0$	$\pm 0.625$	87
1515D48LN	48	36 - 75	0.365	$\pm 15.0$	$\pm 0.500$	88

### FEATURES

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

### INPUT CHARACTERISTICS

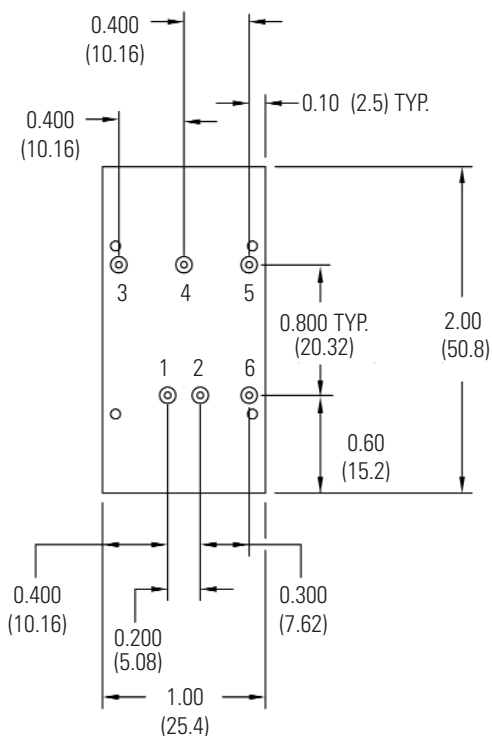
	Min	Typ	Max	Units/Comments
Input Voltage	36	48	75	VDC
Under Voltage Lock out		33		VDC
Input Fuse Requirements			1	Amps; Slow blow type
Efficiency by Model				
1505D48LN		84		%; FL Nominal Line
1512D48LN		87		%; FL Nominal Line
1515D48LN		88		%; FL Nominal Line
Switching Frequency	360	400	440	kHz; Factory set
Remote Shut Down (Optional)				
Positive Logic Off	0		0.80	VDC;Ref to input (-)
Positive Logic On	3.5			VDC or open;Referenced to input (-)
Negative Logic On	0		0.80	VDC;Ref 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



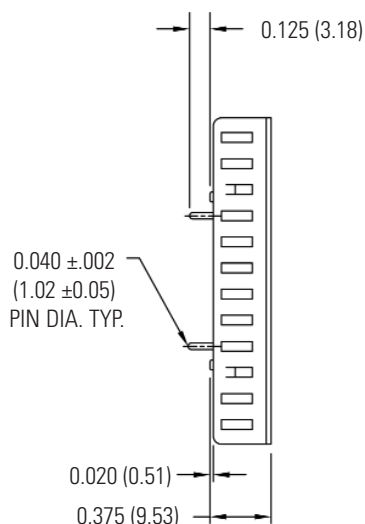
### GENERAL CHARACTERISTICS

	Min	Typ	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
Altitude: Operating			10,000	Feet
Non-Operating			40,000	Feet
Relative Humidity	5		95	% Humidity, non-condensing
Weight			16	Grams
Size				1.0" X 2.0" X 0.375"
Case Material				Black coated aluminum
Agency Approvals				UL/CUL1950, TUV, EN60950

### OUTLINE DRAWING



**BOTTOM VIEW**



**SIDE VIEW**

### PIN OUT CHART

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

\* = Optional feature

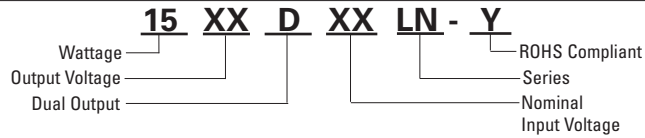
All specifications are typical at nominal input, nominal load and 25° C unless otherwise specified. External, low ESR, 10 microfarad (minimum) capacitor across output is recommended for operation.



## How To ORDER

## OPTIONAL FEATURES

### HOW TO ORDER

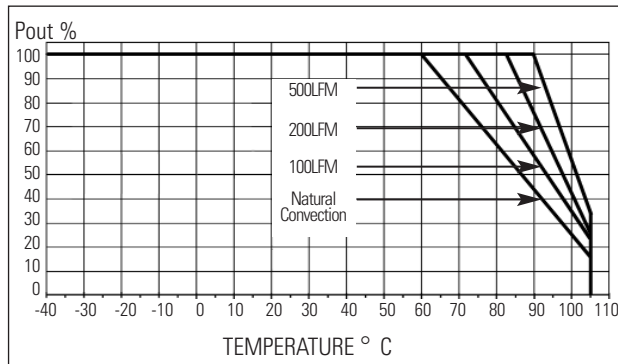


**-4 Option, Positive Logic:** To add the remote on/off feature to the converter please add a "-4" at the end of the part number. An additional pin (pin #6) will be added to the converter. Consult mechanical drawing for location.

**-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**

