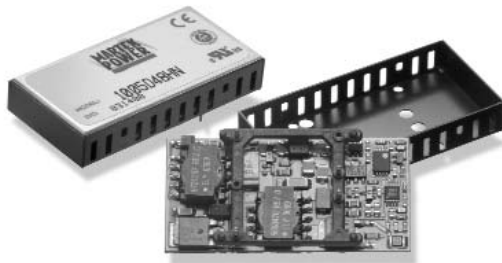


# 1000 HN series

## Dual Output DC/DC Converter



### DESCRIPTIONS

The 1000HN, dual output power modules are 10 watt DC/DC converters featuring a 4 - 1 input range and available in a dual output configuration providing both digital and analog outputs in a compact, industry standard 1.0" X 2.0" X 0.375" package. These 400kHz, switching converters are available in 12, 24 and 48 VDC inputs making them one of the most versatile product lines in the market with efficiencies up to 83%. Advanced surface mount construction allows these converters to achieve outstanding thermal performance eliminating the need for thermal potting compounds and thereby enhancing manufacturing efficiency to reduce costs.

### OUTPUT CHARACTERISTICS

	Min	Typ	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
Line Regulation		±0.5		% Output voltage measured from min. input line to maximum
Load Regulation		±0.5		% Output voltage measured from FL to 10% load (Balanced Loads)
Temperature Coefficient		±0.01		% per degree C
Ripple/Noise		60	100	mV p-p measured at 20 MHz bandwidth with external 1 µf capacitor
Output Voltage and Current				Refer to model selection chart
Load Transient Response		±2		% deviation of Vout voltage for a 25% load change for 200µS
Short Circuit Protection				Indefinite, Automatic Recovery
Overvoltage Protection		260		%; Clamp type



### FEATURES

- Up to 83% Efficiency
- Dual Output, Up To 10 watt converter
- Available in 12, 24 and 48 VDC Inputs 4-1 Input Range
- Industry Standard 1.0" X 2.0" X 0.375" Package
- Remote On/Off, Input Over Voltage and Short Circuit Protection

### INPUT CHARACTERISTICS

	Min	Typ	Max	Units/Comments
<b>Input Voltage</b>				
12 VDC Input Models	9	12	18	VDC
24 VDC Input Models	9	24	36	VDC
48 VDC Input Models	18	48	75	VDC
<b>Under Voltage Shut Down</b>				
12 VDC Input Models	8.5			VDC
24 VDC Input Models	8.5			VDC
48 VDC Input Models	16			VDC
<b>Minimum Input Current</b>				
12 VDC Input Models	0			mA
24 VDC Input Models	0			mA
48 VDC Input Models	0			mA
<b>Full Load Input Current</b>				
12 VDC Input Models			1.06	A
24 VDC Input Models			0.40	A
48 VDC Input Models			0.27	A
<b>Input Fuse Requirements</b>				
12 VDC Input Models			3.0	Amps; Slow blow type
24 VDC Input Models			3.0	Amps; Slow blow type
48 VDC Input Models			1.5	Amps; Slow blow type
<b>Efficiency by Model</b>				
1005D12HN		81		%; FL Nominal Line
1012D12HN		83		%; FL Nominal Line
1015D12HN		83		%; FL Nominal Line
1005D24HN		81		%; FL Nominal Line
1012D24HN		83		%; FL Nominal Line
1015D24HN		83		%; FL Nominal Line
1005D48HN		81		%; FL Nominal Line
1012D48HN		83		%; FL Nominal Line
1015D48HN		83		%; FL Nominal Line
Switching Frequency	360	400	440	kHz; Factory set
Remote Shut Down	Off	0	0.80	VDC; Referenced to input
	On	3.5		VDC or open ; Referenced to input
Input - Output Capacitance		1200		pF
Input Filter				LC type
<b>Isolation Voltage</b>				
12 VDC & 24 VDC Input Models				
Input to Output		750		VDC
Input to Baseplate		750		VDC
Output to Baseplate		750		VDC
48 VDC Input Models				
Input to Output		1100		VDC
Input to Baseplate		1100		VDC
Output to Baseplate		750		VDC
Isolation Resistance		100		MOHms

Martek Power reserves the right to change specifications without notice.





## How To ORDER

**HOW TO ORDER**

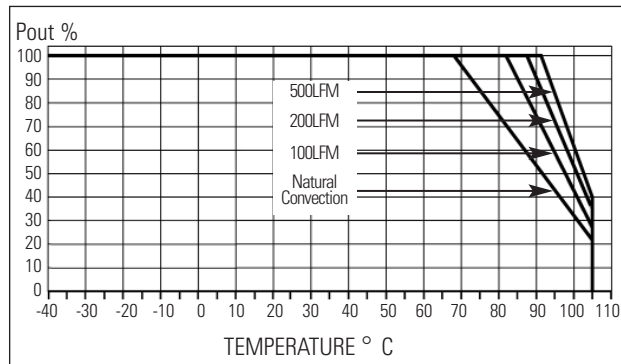
**10 XX D XX HN - Y**

Wattage ———— 10  
 Output Voltage ———— XX  
 Dual Output ———— D  
 Input Voltage ———— XX  
 ROHS Compliant ———— HN  
 Hi-Density, Non-Encap ———— Y

**R Options:** To add the remote on/off feature to the converter please add a "-R" 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 1000HN Dual 3.3V & 5V**



**MODEL 1000HN Dual 12 & 15V**

