1200H series

Dual Output DC/DC Converter

Features

- Low Output Ripple and Noise
- 6 sided Continuous Shielding
- -40°C to +75°C Operating Temperature Range
- ±0.03% Line/Load Regulation
- Short Circuit Protection
- >1,000,000 Hours MTBF

Descriptions

The 1200H series 12 watts, low noise high density DC/DC converters offer a wide variety of input voltages in 5, 12, 18, 24, 28 and 48 VDC with high performance output characteristics. The low profile modular case (2.0" X 2.0" X 0.4") makes the 1200H series attractive for printed circuit board mounting applications for I/O computer subsystems, instruments, telecommunication equipment, medical and analog networks where low noise output and excellent line and load regulation is required.

Input Characteristics

	Min	Typ	Max	Unit/Comments
Input Voltage				
5 VDC Input Models	4.65	5	5.25	VDC
12 VDC Input Models	10.9	12	13.2	VDC
18 VDC Input Models	16.4	18	19.8	VDC
24 VDC Input Models	21.6	24	26.4	VDC
28 VDC Input Models	25.2	28	30.8	VDC
48 VDC Input Models	43.2	48	52.8	VDC
Input Fuse Requirements				
5 VDC Input Models		5000		mA; Slow blow type
12 VDC Input Models		2500		mA; Slow blow type
18 VDC Input Models		2000		mA; Slow blow type
24 VDC Input Models		1500		mA; Slow blow type
28 VDC Input Models		1000		mA; Slow blow type
48 VDC Input Models		750		mA; Slow blow type
Reverse Polarity Input Current			5	Amp
Input Filter				Pi Filter

Output Characteristics

	Min	Typ	Max	Unit/Comments
Output Voltage Set Point		±0.5	±1.0	% Output voltage at nominal line & FL
Output Voltage Balance			±50	mV; Equal Output Loads
Line Regulation		±0.1	±0.3	% Output voltage measured from min. input line to maximum
Load Regulation		±0.1	±0.3	% Output voltage measured from FL to 10% load
Ripple/Noise			15	mV p-p, Nom.Line @FL, 20MHz B.W., using 1 µf bypass capacitor
Short Circuit Protection				Limited, Automatic Recovery
Temperature Response Deviation			±5	% deviation of Vout for a 25% load change
Transient Recovery Time			20	µS for 25% load change, to within 1%
Temperature Coefficient			±0.01	% per °C

General Characteristics

	Min	Typ	Max	Unit/Comments
Switching Frequency		125		kHz
Isolation Voltage	1000			VDC, 1 minute
Isolation Resistance	1000			Mohm, 500VDC
Isolation Capacitance		100		pF, 100kHz, 1Volt
MTBF (MIL-HBK-217F)	1			Million Hours, +25°C, Ground Benign

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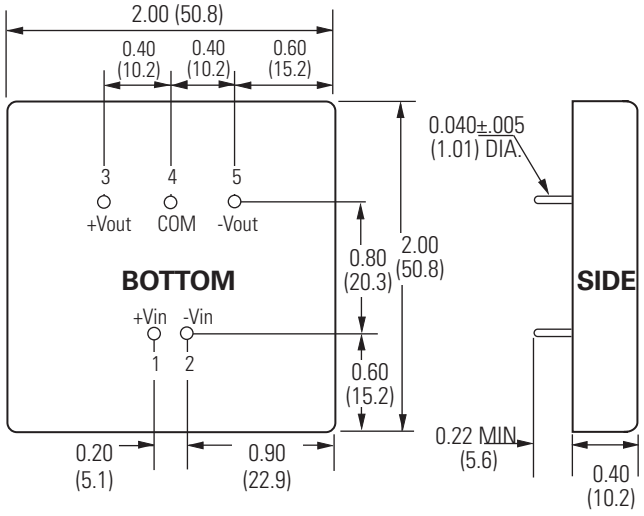
Environmental Specifications

	Min	Typ	Max	Unit/Comments
Operating Temp. Range	-40		+75	°C; Ambient
Storage Temp. Range	-40		+125	°C
Relative Humidity			+95	% Humidity; non-condensing
Cooling				Free-Air Convection

Physical Characteristics

	Unit/Comments
Case Size	2.0 X 2.0 X 0.4 inches (51.0 X 51.0 X 10.2 mm)
Case Material	Painted Metal with Non-Conductive Base
Shield Connection	Output Common Pin
Flammability	UL94V-0
Weight	74 Grams

Outline Drawing



Pin Out Chart

Pins	Dual
1	+ Vin
2	- Vin
3	+ Vout
4	Common
5	- Vout

NC = No Connection

Notes:

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

Tolerances	Inches	mm
	X.XX = ±0.02	X.X = ±0.5
	X.XXX= ±0.010	X.XX = ±0.25

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.

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How To Order

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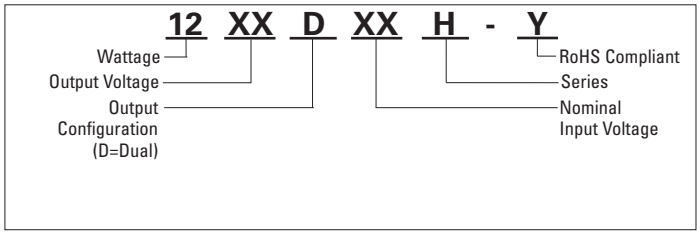

Model Selection Chart

Model	Nominal Input Voltage (VDC)	Output Voltage (VDC)	Full Load Output Current (mA)	No Load Input Current (mA)	Full Load Input Current (mA)	Reflected Ripple Current (mA)	Efficiency @ FL (%)
1205D5H	5	±5	±1200	160	3700	20	65
1212D5H	5	±12	±500	160	3510	20	67
1215D5H	5	±15	±400	160	3400	20	70
1205D12H	12	±5	±1200	40	1540	10	65
1212D12H	12	±12	±500	40	1450	10	69
1215D12H	12	±15	±400	40	1360	10	73
1205D18H	18	±5	±1200	40	1025	10	65
1212D18H	18	±12	±500	40	955	10	70
1215D18H	18	±15	±400	40	955	10	70
1205D24H	24	±5	±1200	30	750	5	67
1212D24H	24	±12	±500	30	670	5	75
1215D24H	24	±15	±400	30	670	5	75
1205D28H	28	±5	±1200	30	660	5	65
1212D28H	28	±12	±500	30	580	5	74
1215D28H	28	±15	±400	30	560	5	76
1205D48H	48	±5	±1200	20	390	5	65
1212D48H	48	±12	±500	20	340	5	74
1215D48H	48	±15	±400	20	340	5	74

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