



Distributed By: **B.J. Wolfe Enterprise, Inc**
T:(818) 889-8412, F:(818) 889-8417, E:info@bjwe.com

200HI series

Single & Dual Output DC/DC Converter



DESCRIPTIONS

The 200HI series 2 watts power modules are high efficiency, low profile dc-dc converters that operate over input voltage ranges of 4.3-6 VDC, 10.3-15.0 VDC, 15.5-22.5 VDC, 20.4-30.0 VDC, 24.2-36.0 VDC and 41.3-60.0 VDC and provide precisely regulated output voltages of 5V, 12V, $\pm 12V$ and $\pm 15V$.

The -30°C to $+75^{\circ}\text{C}$ operating temperature range makes it ideal for data communication equipment, mobile battery driven equipment, distributed power systems, telecommunication equipment, mixed analog/digital subsystems, process/machine control equipment, computer peripheral systems and industrial robot systems.

OUTPUT CHARACTERISTICS

	Min	Typ	Max	Unit/Comments
Output Voltage Set Point			± 5.0	% Output voltage at nominal line & FL
Output Voltage Balance (Duals)			± 3.0	% Equal Output Loads
Line Regulation			± 0.3	% Output voltage measured from min. input line to maximum
Load Regulation			± 0.3	% Output voltage measured from FL to 10% load
Ripple/Noise			20	mV p-p, Nom.Line @FL, 20MHz B.W., using 1 μf bypass capacitor
Short Circuit Protection				Continuous, Automatic Recovery
Temperature Coefficient			± 0.01	% per degree C

FEATURES

- Up to 58% Efficiency
- Single & Dual Output, 2 watt converter
- 1500 VDC Input / Output Isolation
- Short Circuit Protection

GENERAL CHARACTERISTICS

	Min	Typ	Max	Unit/Comments
Switching Frequency			1000	kHz
Isolation Voltage	1500			VDC, 1 minute
Isolation Resistance	1000			Mohm, 500VDC
Input Filter				Pi Filter



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ENVIRONMENTAL SPECIFICATIONS

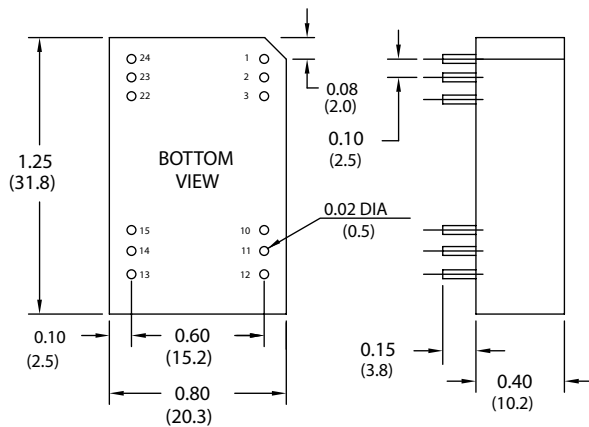
	Min	Typ	Max	Unit/Comments
Operating Temp. Range	-30		+75	°C; Ambient
Relative Humidity			95	% Humidity; non-condensing
Cooling				Free-Air Convection
MTBF			1.5	Million Hours

PHYSICAL CHARACTERISTICS

	Unit/Comments
Case Size	1.25 X 0.8 X 0.4 inches (31.8 X 20.3 X 10.2 mm)
Case Material	Non-conductive Black Plastic
Flammability	UL94V-0
Weight	0.5 oz.

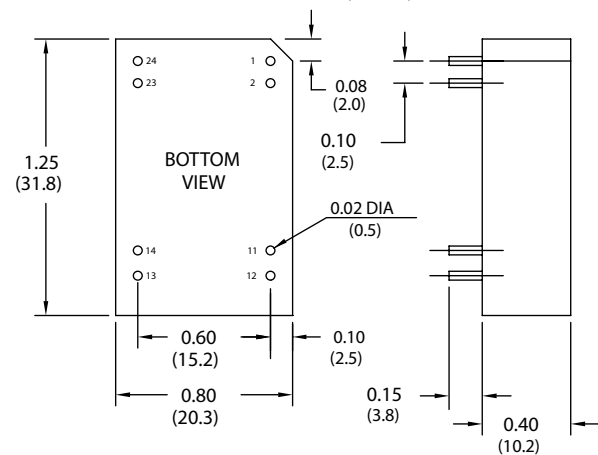
OUTLINE DRAWING

B1: STANDARD



B2: ALTERNATE PIN CONFIGURATION

DUAL OUTPUT MODELS ARE NOT AVAILABLE IN B2 (ALTERNATE) PIN CONFIGURATION.



STANDARD PIN OUT CHART (B1)

Pins	Single	-Dual
1, 2, 3	+ Vin	+Vin
22, 23, 24	- Vin	- Vin
15	NC	+Vout
13	+ Vout	- Vout
10, 11	NC	± COMMON
12	- Vout	NC
14	NC	NC

NC = No Connection

ALTERNATE PIN OUT CHART (B2)

Pins	Single
1, 2	+ Vin
23, 24	- Vin
13, 14	- Vout
11, 12	+ Vout

Notes:

1. Ordering Information

- Case "B1" configuration is standard. Omit "B1" from the number.
- For Case "B2" alternate pin configuration, add "-2" to the number. Example: 215D12HI-2.
- For RoHS Compliant models add "-Y" suffix to the number. Example: 215D12HI-Y or 215D12HI-2-Y.
- Dual output models are not available in Case "B2" alternate pin configuration.

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

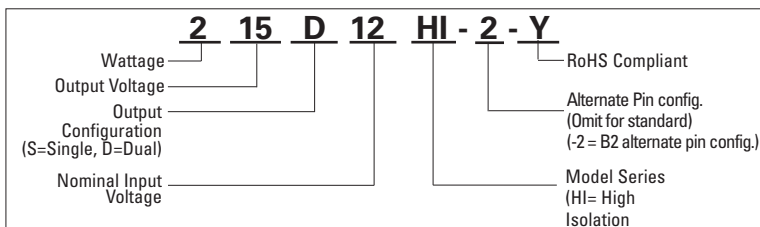
Tolerances	Inches	mm
	X.XX = ±0.02	X.X = ±0.5
	X.XXX = ±0.010	X.XX = ±0.25
Pin :	±0.002	±0.05

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)	Input Current No Load (mA)	Input Current Full Load (mA)	Output Voltage (VDC)	Full Load Output Current (mA)	Efficiency @ FL (%)	Case Style
205S5HI	5	100	780	5	400	57	B1 or B2
212S5HI	5	100	960	12	200	50	B1 or B2
212D5HI	5	110	760	±12	±100	52	B1
215D5HI	5	130	750	±15	±75	53	B1
205S12HI	12	60	310	5	400	52	B1 or B2
212S12HI	12	35	364	12	200	55	B1 or B2
212D12HI	12	60	330	±12	±100	50	B1
205S18HI	18	35	220	5	400	52	B1 or B2
212S18HI	18	35	243	12	200	55	B1 or B2
212D18HI	18	40	250	±12	±100	53	B1
205S24HI	24	20	160	5	400	52	B1 or B2
212S24HI	24	35	182	12	200	55	B1 or B2
212D24HI	24	35	180	±12	±100	55	B1
205S28HI	28	35	135	5	400	52	B1 or B2
212S28HI	28	35	156	12	200	55	B1 or B2
212D28HI	28	35	145	±12	±100	58	B1
205S48HI	48	32	80	5	400	52	B1 or B2
212S48HI	48	35	90	12	200	55	B1 or B2
212D48HI	48	32	88	±12	±100	56	B1



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 INPUT VOLTAGE RANGE VS OUTPUT LOAD

Nominal Input (VDC)	Input Voltage Range (VDC) at:			
	20% Load	40% Load	60% Load	100% Load
5	4.30 - 6.00	4.40 - 5.70	4.55 - 5.60	4.65 - 5.25
12	10.3 - 15.0	10.4 - 14.6	10.6 - 13.6	10.9 - 13.2
18	15.5 - 22.5	15.7 - 21.6	15.8 - 20.4	16.4 - 19.8
24	20.4 - 30.0	20.6 - 29.0	21.0 - 27.0	21.6 - 26.4
28	24.2 - 36.0	24.5 - 34.0	24.9 - 31.3	25.2 - 30.8
48	41.3 - 60.0	42.0 - 58.0	42.3 - 54.4	43.2 - 52.8