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

300HI series

Single & Dual Output DC/DC Converter

Features

- Up to 66% Efficiency
- Single & Dual Output, 3 watt converter
- 1500 VDC Input / Output Isolation
- Short Circuit Protection
- MTF > 1,500,000 Hrs.

Descriptions

The 300HI series 3 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 15V and ±15V.

The -30°C to +75°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

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
Isolation Capacitance		70		pF, 100kHz, 1 Volt
MTBF (MIL-HBK-217F)	1.5			Million Hrs., +25°C, Ground Benign

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Environmental Specifications

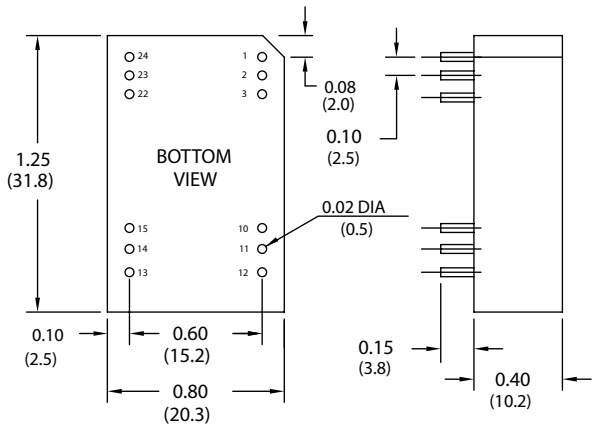
	Min	Typ	Max	Unit/Comments
Operating Temp. Range	-30		+75	°C; Ambient
Relative Humidity			95	% Humidity; non-condensing
Cooling				Free-Air Convection
MTBF			1.5	Million Hours

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.

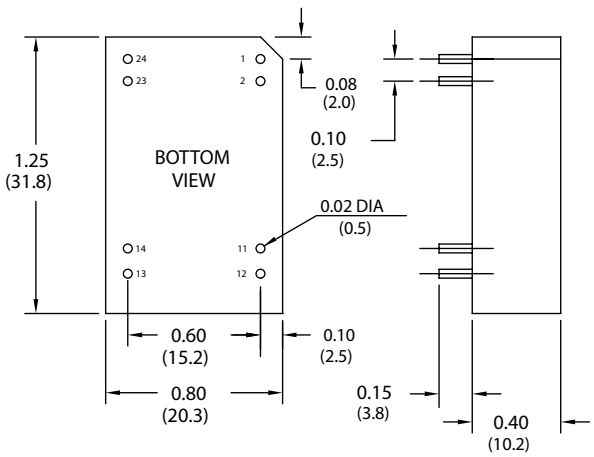
Outline Drawing

B1: STANDARD



B2: ALTERNATE PIN CONFIGURATION

DUAL OUTPUT MODELS ARE NOT AVAILIBLE 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
   - 1.1 Case "B1" configuration is standard. Omit "B1" from the number.
   - 1.2 For Case "B2" alternate pin configuration, add "-2" to the number. Example: 315D12HI-2.
   - 1.3 For RoHS Compliant models add "-Y" suffix to the number. Example: 315D12HI-Y or 315D12HI-2-Y.
   - 1.4 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

How to Order

3 15 D 12 HI - 2 - Y

- 3 — Wattage
- 15 — Output Voltage
- D — Output Configuration (S=Single, D=Dual)
- 12 — Nominal Input Voltage
- HI — Model Series (HI= High Isolation
- 2 — Alternate Pin config. (Omit for standard) (-2 = B2 alternate pin config.)
- Y — RoHS Compliant

Model Selection Chart

Model	Nominal Input Voltage (VDC)	Input Current No Load (mA)	Input Current Full Load (mA) Typ.	Output Voltage (VDC)	Full Load Output Current (mA)	Efficiency @ FL (%) Typ.	Case Style
315S5HI	5	100	1100	15	200	55	B1 or B2
315S12HI	12	50	380	15	200	66	B1 or B2
315D12HI	12	50	400	±15	±100	63	B1
315S18HI	18	35	303	15	200	55	B1 or B2
315D18HI	18	40	280	±15	±100	60	B1
315S24HI	24	35	227	15	200	55	B1 or B2
315D24HI	24	35	210	±15	±100	60	B1
315S28HI	28	20	175	15	200	61	B1 or B2
315D28HI	28	35	170	±15	±100	63	B1
315S48HI	48	35	113	15	200	55	B1 or B2
315D48HI	48	32	100	±15	±100	63	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

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