

HiTRON

ON-BOARD DC-DC CONVERTER HALF-BRICK BASE PLATE POWER MODULES INDUSTRIAL GRADE 100-150 WATTS SINGLE & DUAL OUTPUT HDH100-24B OR 48B-S & D SERIES



FEATURES:

- SINGLE & DAUL OUTPUT
- WIDE 2:1 INPUT RANGE
- 1500VDC ISOLATION
- STANDARD HALF-BRICK PACKAGE
- HIGH-EFFICIENCY POWER MODULE
- UNDER-VOLTAGE LOCKOUT
- DESIGNED TO MEET INTERNATIONAL SAFETY STANDARDS

SPECIFICATION

INPUT SPECIFICATION

Input Range: Wide 2:1 Input DC Range 18-36Vdc.
or 36-72Vdc

Input Voltage: Nominal 24Vdc or 48Vdc.

Input Current: Typical 6.85A full load and 0.06A no-load
@ 24Vdc nominal input.
Typical 2.65A full load and 0.03A no-load
@ 48Vdc nominal input.

Input Fuse: Use external fuse.

Inrush Current: 8A @ 24Vdc/4A @ 48Vdc

Input Filter: Pi-Network for EMI suppression.

Under-Voltage Protection (UVP): Lock-out activated at
17.8 Vdc input @ 24Vdc nominal input.
34-35.5Vdc @ 48Vdc nominal input

Input Reflected Ripple Current: 28.4mA pk-pk @24 Vdc.

Isolation Voltage: 1,500Vdc input-output.

Remote On/Off: TTL/CMOS-Compatible input control.

Positive Logic version for Standard set up:
ON(Enable)=Open(or 2.5-5.0Vdc above-Vin)
OFF(Disable)=Short(or 0-0.8Vdc above-Vin)

Negative Logic version option available by adding a
“N” suffix to the end of Model #.

Remark :Logic input voltage reference to -Vin.

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.

Output Current: See Ratings Chart.

Output Wattage: 100-150W typical continuous.

Line Regulation: Various with input & output voltages.
± 0.1% typical.

Load Regulation: Various with output voltages.
Single O/P: ±1.0% typical.
Dual O/P: ±1.0% typical.

Noise & Ripple: Typical 120mV, peak to peak. 1% rms.

OVP: Built-in.

Adjustability: Maybe external trimmed with fixed resistor or
trimpot.

Overload Protection (OLP):
Fully protected against overload and short circuit.
OLP set at typical 130% max. load.
Consult the factory for special OLP setting.

GENERAL SPECIFICATION

Efficiency: 83.8-87% typical, various with input.

Switching Frequency: Fixed frequency 330K Hz.

Circuit Topology: Forward Circuit.

Transient Response: Peak deviation <220mV and recovers
within 1mS after 25% load-change.

Safety Standard: IEC60950 Class I.

Case: Aluminum base plate with metal standoffs.

Power Density: 36.0 Watts / Cubic inch.

Industrial Grade.

Operating Temperature: -40 to +100°C (base plate).
Power derating details; please refer to the Derating Chart.

Storage Temperature: -55 to +125 °C.

Temperature Coefficient: ± 0.02%/°C.

Humidity: Up to 95% RH, Non-Condensing.

Cooling: At least 100LFM moving air is recommended for
full load > 0°C in a confined area. Air flow vs. power
derating details please refer to the Derating Chart.

NOTE: (1) All measurements are at nominal input, full load, and +25°C unless otherwise spec.
(2) Line Regulation measured from High to Low Lines at full load.
(3) Load Regulation measured from Full-Load (F-L) to Half-Load(H-L) at nominal input.
(4) Correct fuse size by calculating the max. DC current drain at low Line input & adding 20-25% for desired fuse size.

Due to requests in market and advances in technology, specifications subject to change without notice.

INPUT/OUTPUT & VOLTAGE/CURRENT RATINGS CHART

SINGLE OUTPUT

MODEL NO.	INPUT Vdc		OUTPUT VO1 ★@ #		
	Range	Nominal	MIN.	VOLT.	TYP.
HDH100-24B-S018300	18-36Vdc	24Vdc	0A	1.8Vdc	30A
HDH100-24B-S025300	18-36Vdc	24Vdc	0A	2.5Vdc	30A
HDH100-24B-S033300	18-36Vdc	24Vdc	0A	3.3Vdc	30A
HDH100-24B-S050250	18-36Vdc	24Vdc	0A	5.0Vdc	25A
HDH100-24B-S120120	18-36Vdc	24Vdc	0A	12.0Vdc	12A
HDH100-24B-S150100	18-36Vdc	24Vdc	0A	15.0Vdc	10A
HDH100-48B-S018300	36-72Vdc	48Vdc	0A	1.8Vdc	30A
HDH100-48B-S025300	36-72Vdc	48Vdc	0A	2.5Vdc	30A
HDH100-48B-S033300	36-72Vdc	48Vdc	0A	3.3Vdc	30A
HDH100-48B-S050250	36-72Vdc	48Vdc	0A	5.0Vdc	25A
HDH100-48B-S120120	36-72Vdc	48Vdc	0A	12.0Vdc	12A
HDH100-48B-S150100	36-72Vdc	48Vdc	0A	15.0Vdc	10A

DUAL OUTPUT

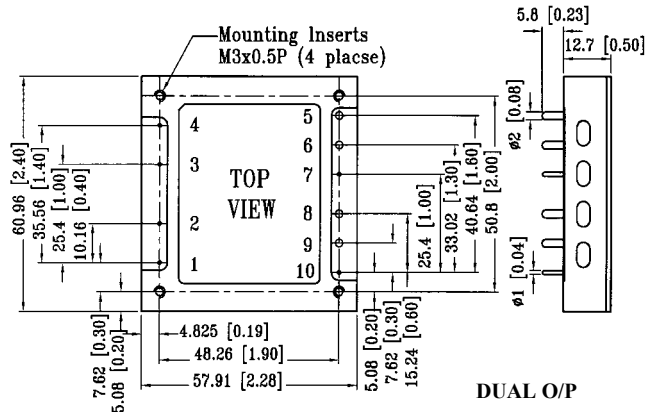
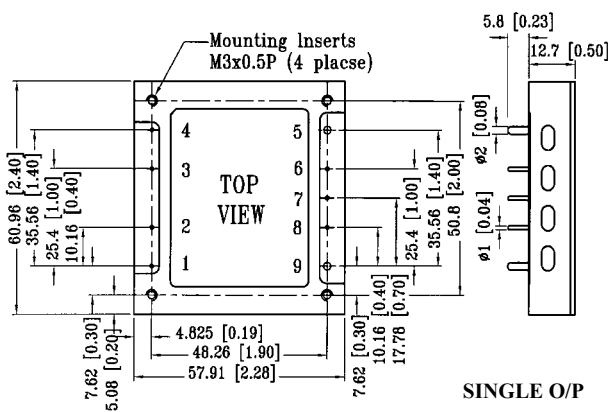
MODEL NO.	INPUT Vdc		OUTPUT VO1 ★@				OUTPUT VO2 ★@			
	Range	Nominal	MIN.	TYP.	VOLT.	MAX.	MIN.	TYP.	VOLT.	MAX.
HDH100-24B-D025B	18-36Vdc	24Vdc	2.0A	18A	2.5Vdc	25A	0A	18A	1.8Vdc	25A
HDH100-24B-D033B	18-36Vdc	24Vdc	2.0A	17A	3.3Vdc	24A	0A	18A	1.8Vdc	25A
HDH100-24B-D033C	18-36Vdc	24Vdc	2.0A	17A	3.3Vdc	24A	0A	15A	2.5Vdc	20A
HDH100-24B-D050C	18-36Vdc	24Vdc	2.0A	14A	5.0Vdc	20A	0A	15A	2.5Vdc	20A
HDH100-24B-D050D	18-36Vdc	24Vdc	2.0A	14A	5.0Vdc	20A	0A	12A	3.3Vdc	18A
HDH100-48B-D025B	36-72Vdc	48Vdc	2.0A	18A	2.5Vdc	25A	0A	18A	1.8Vdc	25A
HDH100-48B-D033B	36-72Vdc	48Vdc	2.0A	17A	3.3Vdc	24A	0A	18A	1.8Vdc	25A
HDH100-48B-D033C	36-72Vdc	48Vdc	2.0A	17A	3.3Vdc	24A	0A	15A	2.5Vdc	20A
HDH100-48B-D050C	36-72Vdc	48Vdc	2.0A	14A	5.0Vdc	20A	0A	15A	2.5Vdc	20A
HDH100-48B-D050D	36-72Vdc	48Vdc	2.0A	14A	5.0Vdc	20A	0A	12A	3.3Vdc	18A

Symbols: "★" OVP built-in. "#" Remote sensing. "@" Adjustable.

Remarks: Peak output, less than 60Sec. With duty cycle <10%.

MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 73.0g (2.6 Oz.)



PIN ASSIGNMENT

PIN NO.	SINGLE	DUAL
PIN# 1.	+Vin	+Vin
PIN# 2.	Remote ON/OFF	Remote ON/OFF
PIN# 3.	CASE	CASE
PIN# 4.	-Vin	-Vin
PIN# 5.	DC COM.	VO2
PIN# 6.	-SENSE	DC COM
PIN# 7.	VO1 ADJ.	VO2 ADJ.
PIN# 8.	+SENSE	VO1
PIN# 9.	VO1	DC COM
PIN# 10.	-----	VO1 ADJ.

DERATING CHART

output power

