

ON-BOARD DC-DC CONVERTER QUARTER-BRICK BASE PLATE POWER MODULES INDUSTRIAL GRADE 48-110 WATTS SINGLE OUTPUT HDH80-24B OR 48B-S SERIES



FEATURES:

- SINGLE OUTPUT
- WIDE 2:1 INPUT RANGE
- 1500VDC ISOLATION
- STANDARD QUARTER-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 36-72Vdc or 18-36Vdc.

Input Voltage: Nominal 48Vdc or 24Vdc.

Input Current: Typical 2.35A full load and 0.1A no-load @ 48Vdc nominal input.
Typical 4.14A full load and 0.05A no-load @ 48Vdc nominal input.

Input Fuse: Use external fuse.

Soft-Start: Installed.

Inrush Current: Peak 2.38A @ 48Vdc & 4.3A @ 24Vdc.

Input Filter: Pi-Network for EMI suppression.

Under-Voltage Protection (UVP): Lock-out activated at 34-35.5Vdc input @48Vdc nominal input.
17.5-17.8Vdc input @24Vdc nominal input.

Input OVP: 74-76Vdc @ 48Vdc nominal input.
37-38Vdc @24Vdc nominal input.

Input Reflected Ripple Current: 8.0mA pk-pk @48 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: Voltage refer to -Input (-Vin).

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.

Output Current: See Ratings Chart.

Output Wattage: 48-110W typical continuous.

Line Regulation: 0.1% typical.

Load Regulation: Various with output voltage.
±0.5% typical.

Noise & Ripple: 1% rms typical.

OVP: Built-in (latch).

Adjustability: Factory set. Maybe externally trimmed with fixed resistor or trim pot.

Overload Protection (OLP):

Fully protected against output overload and short circuit.

OLP set at about 125-150% rating output wattage.

Consult the factory for OLP setting.

GENERAL SPECIFICATION

Efficiency: 88-90% typical, various with input & output.

Switching Frequency: Fixed frequency 330K Hz.

Circuit Topology: 330K Hz. Forward Circuit.

Transient Response: Peak transient 150mV and recovers within 2mS after 25% load-change.

Safety Standard: IEC60950 Class II.

Case: Aluminum base plate with metal standoffs.

Power Density: 29-66 Watts / Cubic inch typical.

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 > +25°C room temperature 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.

INPUT/OUTPUT & VOLTAGE/CURRENT RATINGS CHART

02/16/2004

SINGLE OUTPUT

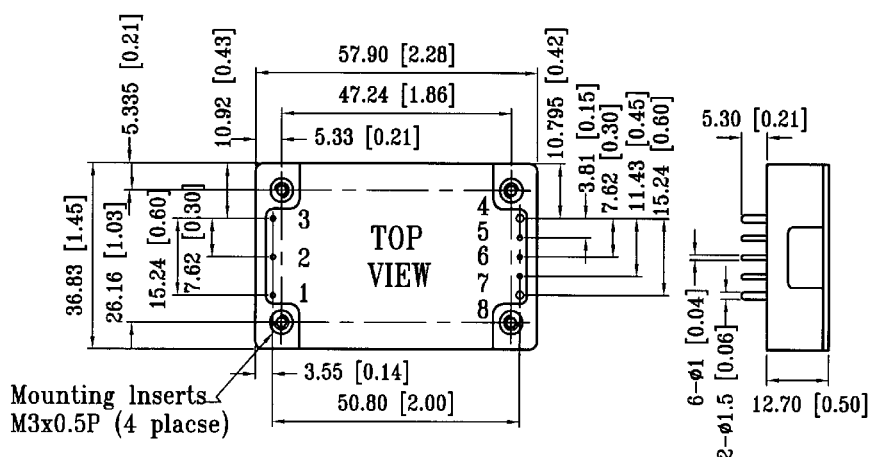
MODEL NO.	INPUT Vdc		OUTPUT VO1 ★#※			
	Range	Nominal	TYP.	VOLT.	MAX.	PEAK
HDH80-48B-S018250	36-72Vdc	48Vdc	25A	1.8Vdc	27.0A	30.0A
HDH80-48B-S025250	36-72Vdc	48Vdc	25A	2.5Vdc	27.0A	30.0A
HDH80-48B-S033220	36-72Vdc	48Vdc	22A	3.3Vdc	25.0A	27.0A
HDH80-48B-S050200	36-72Vdc	48Vdc	20A	5.0Vdc	22.0A	25.0A
HDH80-48B-S150060	36-72Vdc	48Vdc	6A	15.0Vdc	6.1A	6.2.0A
HDH80-24B-S018250	18-36Vdc	24Vdc	25A	1.8Vdc	27.0A	30.0A
HDH80-24B-S025250	18-36Vdc	24Vdc	25A	2.5Vdc	27.0A	30.0A
HDH80-24B-S033220	18-36Vdc	24Vdc	22A	3.3Vdc	25.0A	27.0A
HDH80-24B-S050200	18-36Vdc	24Vdc	20A	5.0Vdc	22.0A	25.0A
HDH80-24B-S150060	18-36Vdc	24Vdc	6A	15.0Vdc	6.1A	6.2.0A

Symbols: "★" OVP built-in. "#" Remote sensing. "※" Synchronous Rectifier.

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

MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 40.0g (1.4 Oz.)



PIN ASSIGNMENT

PIN NO.	SINGLE
PIN #1.	INPUT
PIN #2.	REMOTE ON/OFF
PIN #3.	+48V RETURN
PIN #4.	COMMON
PIN #5.	-SENSE
PIN #6.	VO1 ADJ.
PIN #7.	+SENSE
PIN #8.	+VO1

DERATING CHART

