

HiTRON

ON-BOARD DC-DC CONVERTER POWER MODULES INDUSTRIAL GRADE WITH ACTIVE CLAMP/RESET PWM IC 100 WATTS SINGLE OUTPUT HDMA100 SERIES



FEATURES:

- WIDE 2:1 INPUT VOLTAGE RANGE
- 1500VDC ISOLATION
- ACTIVE CLAMP/RESET PWM IC
- HIGH-EFFICIENCY BY SYNCHRONOUS RECTIFIER
- UNDER-VOLTAGE LOCKOUT
- MEET INTERNATIONAL SAFETY STANDARDS

SPECIFICATION

INPUT SPECIFICATION

Input Range: Wide 2:1 Input DC Range 36-78Vdc.
Input Voltage: Nominal 48Vdc.
Input Current: Typical 2.4A full load and 0.04A no-load at 48Vdc nominal input.
Input Fuse: Use external fuse.
Inrush Current: 84A at 48Vdc.
Input Filter: Pi-Network for EMI suppression.
Under-Voltage Protection (UVP): Lock-out activated at 30-34Vdc@ 48Vdc nominal input
Input Reflected Ripple Current: 240mA pk-pk at 48Vdc.
Input Terminal ripple Current: 360mA pk-pk at 48Vdc.
Isolation Voltage: 1,500Vdc input-output.
EMI: Six-sided metal shielding.
Over Temp. Protection: By NTC.
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)

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.
Output Current: See Ratings Chart.
Output Wattage: Typical & continuous 100W.
Line Regulation: Various with output voltages, typ. $\pm 0.1\%$.
Load Regulation: Various with output voltages, typ. $\pm 1.0\%$.
Noise & Ripple: Typical 100mV, 1% pk-pk.
OVP: Built-in.
Adjustability: Factory set.
Remote Sense: Built-in.
Synchronous Rectifier: Built-in.
Overload Protection (OLP):
Fully protected against overload and short circuit.
OLP set at typical 125-150% Nominal at 48Vdc.
Consult the factory for special OLP setting.

GENERAL SPECIFICATION

Efficiency: Typical 84% (various with output voltage)
Switching Frequency: Fixed frequency 230K Hz.
Circuit Topology: Active Clamp Forward Circuit.
Transient Response: Peak deviation 400mV and recovers within 0.2mS after 25% load-change.
Safety Standard: IEC60950-1 Class I.
Case: Black coated steel with non-conductive metal case.
Operating Temperature: -40 to +85°C.
Power derating details; please refer to the Derating Chart.
Storage Temperature: -55 to +125 °C.
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.
Power Density: 36.6 Watts / Cubic inch.
Industrial Grade.

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

INPUT/OUTPUT & VOLTAGE/CURRENT RATINGS CHART

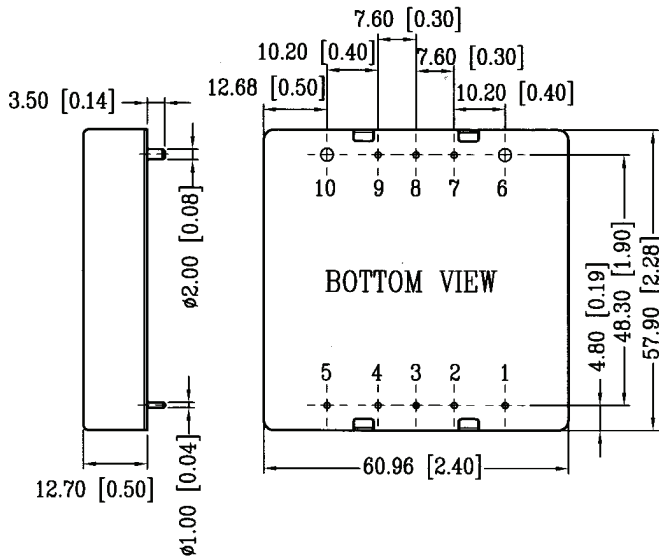
SINGLE OUTPUT

MODEL NO.	INPUT Vdc		OUTPUT VO1 ★#				
	Range	Nominal	Min.	Typ.	Volt.	Max.	Peak
HDMA100-48B-S033300	36-78Vdc	48Vdc	0A	30.0A	3.3V	36.0A	36.0A
HDMA100-48B-S120083	36-78Vdc	48Vdc	0A	8.3A	12.0V	10.0A	10.0A

Symbol: "★" OVP built-in. "#" Remote sensing.

MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 60.0g (2.1Oz)



PIN ASSIGNMENT

PIN NO.	SINGLE
PIN# 1.	+Vin
PIN# 2.	Remote On/Off
PIN# 3.	SYNC
PIN# 4.	CASE
PIN# 5.	-Vin
PIN# 6.	+VO1
PIN# 7.	+S
PIN# 8.	TRIM
PIN# 9.	-S
PIN# 10.	DC COM

DERATING CHART

