

# HiTRON

## PCB-MOUNT DC-DC CONVERTER ENCAPSULATED MODULES 8 WATTS SINGLE & DUAL OUTPUT HDM08-S & HDM08-D SERIES



### FEATURES:

- LOW COST SINGLE & DUAL OUTPUT
- WIDE 4:1 & 2:1 INPUT RANGE
- 8W ISOLATED OUTPUT
- SIX-SIDED METAL SHIELD

### SPECIFICATION

#### INPUT SPECIFICATION

**Input Range:** Wide 4:1 & 2:1 DC input range.  
See Ratings Chart.

**Input Voltage:** Nominal 12/24/48 Vdc.

**Input Current:** Various with input range and load.  
See Ratings Chart.

**Input Fuse:** Use external fuse.

**Input Filter:** Pi-Network.

**Undervoltage Shutdown:** 8Vdc.

**Isolation Resistance:** 1,000 Mega Ohms.

**Isolation Voltage:** 1,500Vdc.

**EMI:** Six-sided metal shielding.

#### OUTPUT SPECIFICATION

**Output Voltage:** See Ratings Chart.

**Output Current:** See Ratings Chart.

**Voltage Accuracy:** Main O/P  $\pm 2.0\%$  typical.

**Line Regulation:** Various with output voltages.  
 $\pm 0.5\%$  typical.

**Load Regulation:** Various with output voltages.  
Single O/P  $\pm 1.0\%$  typical.  
Dual O/P  $\pm 2.0\%$  typical.

**Noise & Ripple:** Typical 100mV for 3.3V/5.0V &  
1.0% for others peak to peak.

**OVP:** Built-in on main output.

**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:** 84% typical various with input.

**Switching Frequency:** Fixed frequency 100K Hz.

**Circuit Topology:** 100K Hz. Forward Circuit.

**Transient Response:** Peak deviation 200mV.  
Recovery time  $< 3\text{mS}$  for a 25% load change.

**Case:** Black coated steel with non-conductive metal base.

**Power Density:** 10Watts. / Cubic inch.

**Commercial Grade only.**

**MTBF:** 1,000,000 hours. Mil Std 217, 25°C.

**Operating Temperature:** -10 to +70°C range.  
0°C to +60°C full load without derating.  
From +60°C, derating linearly to half load @ +70°C.  
(Refer to Derating Chart.)

**Temperature:** -20°C to +85°C.

**Temperature Coefficient:**  $\pm 0.03\%$  /°C.

**Cooling:** Convection cooling up to +60°C @ full load.  
At least 100LFM moving air is recommended for  
F-L  $> +60^\circ\text{C}$  in a confined area.

**Humidity:** Up to 95%RH, Non-condensing.

**NOTE:** (1) All measurements are at nominal input, full load, and +25°C unless otherwise specified.

(2) Line Regulation measured from High to Low Lines at full load.

(3) Load Regulation measured from Full Load to 1/2 Full Load at nominal input.

(4) Correct fuse size by calculating the max. DC current drains at low Line input & Load and then adding 20-25% for the 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	INPUT CURRENT		OUTPUT VO1(Vdc)★	OUTPUT VO1(A)	CASE SIZE
		N. L. (mA)	F.L.			
HDM08-24B-S03	18.0- 36.0	46	290	3.3V	1.50A	DM2C
HDM08-24B-S05	18.0- 36.0	46	393	5.0V	1.50A	DM2C
HDM08-24B-S09	18.0- 36.0	46	420	9.0V	0.90A	DM2C
HDM08-24B-S12	18.0- 36.0	46	415	12.0V	0.67A	DM2C
HDM08-24B-S15	18.0- 36.0	46	425	15.0V	0.55A	DM2C
HDM08-24B-S24	18.0- 36.0	46	430	24.0V	0.35A	DM2C
HDM08-24D-S03	9.0- 36.0	50	290	3.3V	1.50A	DM2C
HDM08-24D-S05	9.0- 36.0	50	393	5.0V	1.50A	DM2C
HDM08-24D-S09	9.0- 36.0	50	420	9.0V	0.90A	DM2C
HDM08-24D-S12	9.0- 36.0	50	415	12.0V	0.67A	DM2C
HDM08-24D-S15	9.0- 36.0	50	425	15.0V	0.55A	DM2C
HDM08-24D-S24	9.0- 36.0	50	430	24.0V	0.35A	DM2C
HDM08-48D-S03	20.0- 72.0	46	145	3.3V	1.50A	DM2C
HDM08-48D-S05	20.0- 72.0	46	196	5.0V	1.50A	DM2C
HDM08-48D-S09	20.0- 72.0	46	210	9.0V	0.90A	DM2C
HDM08-48D-S12	20.0- 72.0	46	207	12.0V	0.67A	DM2C
HDM08-48D-S15	20.0- 72.0	46	212	15.0V	0.55A	DM2C
HDM08-48D-S24	20.0- 72.0	46	215	24.0V	0.35A	DM2C

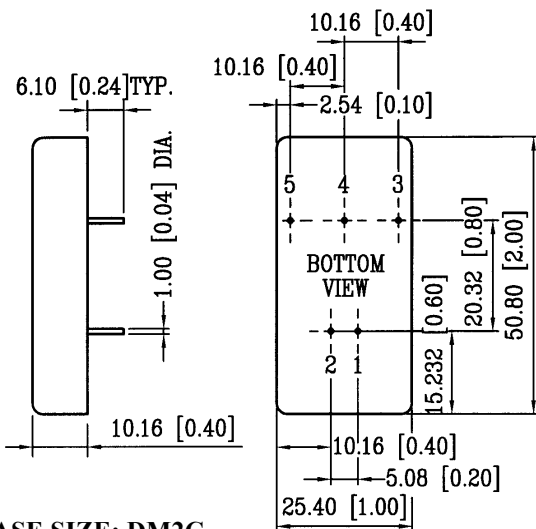
## DUAL OUTPUT

MODEL NO.	INPUT Vdc	INPUT CURRENT		OUTPUT (Vdc)		OUTPUT (A)		CASE SIZE
		N. L. (mA)	F.L.	+VO1★	-VO2	+VO1	-VO2	
HDM08-24B-D03	18.0- 36.0	46	300	+3.3V	-3.3V	0.80A	0.80A	DM2C
HDM08-24B-D05	18.0- 36.0	46	420	+ 5.0V	-5.0V	0.80A	0.80A	DM2C
HDM08-24B-D12	18.0- 36.0	46	420	+12.0V	-12.0V	0.34A	0.34A	DM2C
HDM08-24B-D15	18.0- 36.0	46	420	+15.0V	-15.0V	0.27A	0.27A	DM2C
HDM08-24D-D03	9.0- 36.0	50	300	+3.3V	-3.3V	0.80A	0.80A	DM2C
HDM08-24D-D05	9.0- 36.0	50	420	+ 5.0V	-5.0V	0.80A	0.80A	DM2C
HDM08-24D-D12	9.0- 36.0	50	420	+12.0V	-12.0V	0.34A	0.34A	DM2C
HDM08-24D-D15	9.0- 36.0	50	420	+15.0V	-15.0V	0.27A	0.27A	DM2C
HDM08-48D-D03	20.0- 72.0	46	150	+3.3V	-3.3V	0.80A	0.80A	DM2C
HDM08-48D-D05	20.0- 72.0	46	210	+ 5.0V	-5.0V	0.80A	0.80A	DM2C
HDM08-48D-D12	20.0- 72.0	46	210	+12.0V	-12.0V	0.34A	0.34A	DM2C
HDM08-48D-D15	20.0- 72.0	46	210	+15.0V	-15.0V	0.27A	0.27A	DM2C

Symbols: "★" OVP built-in. "||" Double Feedback.

## MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 27.5g (0.95 Oz.)



CASE SIZE: DM2C

## PIN ASSIGNMENT

PIN NO.	SINGLE	DUAL
PIN# 1.	-INPUT	-INPUT
PIN# 2.	+INPUT	+INPUT
PIN# 3.	DC-COM	-VO2
PIN# 4.	NO PIN	DC-COM
PIN# 5.	+VO1	+VO1

## DERATING CHART

