



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.

INPUT/OUTPUT & VOLTAGE/ CURRENT RATINGS CHART

SINGLE OUTPUT

MODEL NO.	INPUT Vdc	INPUT CURRENT N. L. (mA) F.L.		OUTPUT VO1(Vdc)★	OUTPUT VO1(A)	CASE SIZE
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

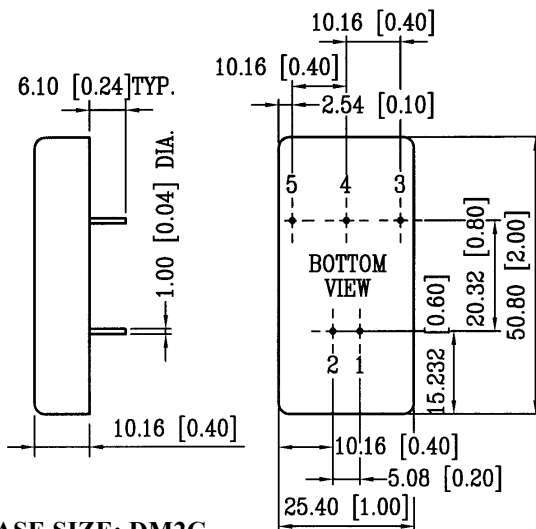
DUAL OUTPUT

MODEL NO.	INPUT Vdc	INPUT CURRENT N. L. (mA) F.L.		OUTPUT (Vdc) +VO1★ -VO2		OUTPUT (A) +VO1 -VO2		CASE SIZE
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

