

HiTRON

PCB-MOUNT DC-DC CONVERTER ENCAPSULATED MODULES 9 WATTS SINGLE & DUAL OUTPUT HDM09-S & HDM09-D SERIES



FEATURES:

- **LOW COST SINGLE & DUAL OUTPUT**
- **2:1 INPUT RANGE**
- **9W ISOLATED OUTPUT**
- **SIX-SIDED METAL SHIELD**

SPECIFICATION

INPUT SPECIFICATION

Input Range: 2:1 DC input range.
See Ratings Chart.

Input Voltage: Nominal 12/24/48 Vdc.

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

Input Fuse: Use external fuse.

Input Filter: Pi-Network.

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. $\pm 0.5\%$ typ.

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.

Adjustability: Not available.

Overload Protection (OLP):
Fully protected against output overload and short circuit.
Typical 120-150% max. load.
Consult the factory for special OLP setting.

GENERAL SPECIFICATION

Efficiency: 65-75% typical various with input.

Switching Frequency: 40-70K Hz., various with input and loading condition.

Circuit Topology: Free Running Flyback Circuit.

Transient Response: Peak deviation 200mV.
Recovery time < 3mS for a 25% load change.

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

Power Density: 5.6Watts. / Cubic inch.

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

Operating Temperature: -10°C to +70°C range.
0°C to +60°C @ full load without derating.
From +60°C, derating lineally to half load @ +70°C.
(Refer to the 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 Full load > +60°C in a confined area.

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

Commercial Grade only.

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 drain 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.			
HDM09-12B-S03	9.0- 18.0	60	650	3.3V	1.65A	DM2B
HDM09-12B-S05	9.0- 18.0	60	930	5.0V	1.65A	DM2B
HDM09-12B-S09	9.0- 18.0	60	950	9.0V	0.95A	DM2B
HDM09-12B-S12	9.0- 18.0	60	940	12.0V	0.70A	DM2B
HDM09-12B-S15	9.0- 18.0	60	990	15.0V	0.60A	DM2B
HDM09-12B-S24	9.0- 18.0	60	1060	24.0V	0.40A	DM2B
HDM09-24B-S03	18.0- 36.0	35	325	3.3V	1.65A	DM2B
HDM09-24B-S05	18.0- 36.0	35	465	5.0V	1.65A	DM2B
HDM09-24B-S09	18.0- 36.0	35	475	9.0V	0.95A	DM2B
HDM09-24B-S12	18.0- 36.0	35	470	12.0V	0.70A	DM2B
HDM09-24B-S15	18.0- 36.0	35	495	15.0V	0.60A	DM2B
HDM09-24B-S24	18.0- 36.0	35	530	24.0V	0.40A	DM2B
HDM09-48B-S03	36.0- 72.0	20	163	3.3V	1.65A	DM2B
HDM09-48B-S05	36.0- 72.0	20	233	5.0V	1.65A	DM2B
HDM09-48B-S09	36.0- 72.0	20	238	9.0V	0.95A	DM2B
HDM09-48B-S12	36.0- 72.0	20	235	12.0V	0.70A	DM2B
HDM09-48B-S15	36.0- 72.0	20	247	15.0V	0.60A	DM2B
HDM09-48B-S24	36.0- 72.0	20	265	24.0V	0.40A	DM2B

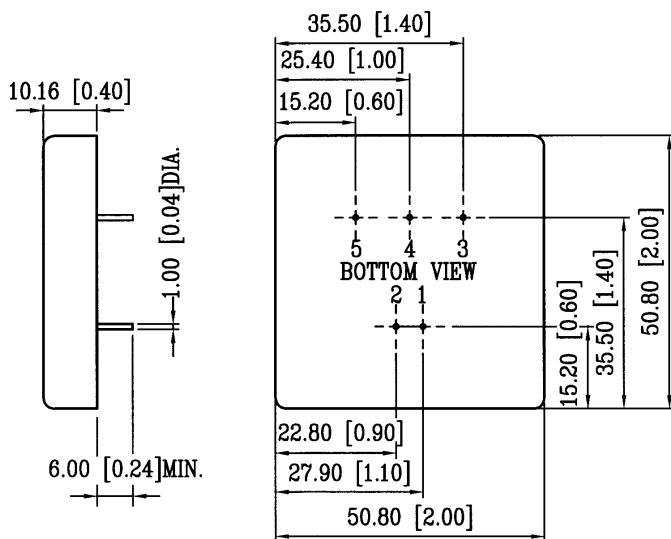
DUAL OUTPUT

MODEL NO.	INPUT Vdc	INPUT CURRENT		OUTPUT (Vdc)		OUTPUT (A)		CASE SIZE
		N. L. (mA)	F.L.	+VO1 ★	-VO2	+VO1	-VO2	
HDM09-12B-D05	9.0- 18.0	50	960	+5.0V	-5.0V	0.85A	0.85A	DM2B
HDM09-12B-D12	9.0- 18.0	50	970	+12.0V	-12.0V	0.36A	0.36A	DM2B
HDM09-12B-D15	9.0- 18.0	50	990	+15.0V	-15.0V	0.30A	0.30A	DM2B
HDM09-24B-D05	18.0- 36.0	30	480	+5.0V	-5.0V	0.85A	0.85A	DM2B
HDM09-24B-D12	18.0- 36.0	30	485	+12.0V	-12.0V	0.36A	0.36A	DM2B
HDM09-24B-D15	18.0- 36.0	30	495	+15.0V	-15.0V	0.30A	0.30A	DM2B
HDM09-48B-D05	36.0- 72.0	20	240	+5.0V	-5.0V	0.85A	0.85A	DM2B
HDM09-48B-D12	36.0- 72.0	20	243	+12.0V	-12.0V	0.36A	0.36A	DM2B
HDM09-48B-D15	36.0- 72.0	20	248	+15.0V	-15.0V	0.30A	0.30A	DM2B

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

MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 62.5g (2.2 Oz.)



CASE SIZE: DM2B

PIN ASSIGNMENT

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

DERATING CHART

