



PCB-MOUNT DC-DC CONVERTER ENCAPSULATED MODULES INDUSTRIAL GRADE 17 WATTS SINGLE & DUAL OUTPUT HDM17-S & HDM17-D SERIES



FEATURES:

- SINGLE & DUAL OUTPUT
- 2:1 INPUT RANGE
- 17W ISOLATED OUTPUT
- SIX-SIDED METAL SHIELD

SPECIFICATION

INPUT SPECIFICATION

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

Input Voltage: Nominal 12/24/48Vdc.

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

Input Fuse: Use external fuse.

Input Filter: Pi-Network.

Undervoltage Shutdown: 8Vdc.

Isolation Resistor: 1,000 Mega Ohms.

Isolation Voltage: 1,500Vdc.

EMI: Six-sided metal shielding.

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: Logic voltage refer to -Input(-Vin).

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.

Output Current: See Ratings Chart.

Voltage Accuracy: Main O/P $\pm 1.0\%$ 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.

Adjustability: Not available.

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

GENERAL SPECIFICATION

Efficiency: 80-81% typical various with input.

Switching Frequency: Fixed frequency 450K Hz.

Circuit Topology: 450K Hz. Forward Circuit.

Transient Response: Peak deviation 200mV,
Recovery time <3mSec. @ 25% step load change.

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

Power Density: 18.0Watts. / Cubic inch.

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

Operating Temperature: -25°C to +85°C range.
-10°C to +70°C @ full load without derating.
Derating linearly from +70°C to half-load @ +85°C.
(Refer to the Derating Chart).

Storage Temperature: -40°C to +105°C.

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

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

Cooling: Convection cooling up to +70°C @ full load.
At least 100LFM moving air is recommended for full load >+70°C in a confined area.

Industrial 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 (F-L) to Half-Load (H-L) 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
HDM17-12B-S03	9.0- 18.0	20	1,200	3.3V	3.40A	DM2C
HDM17-12B-S05	9.0- 18.0	15	1,740	5.0V	3.40A	DM2C
HDM17-12B-S09	9.0- 18.0	15	1,740	9.0V	1.88A	DM2C
HDM17-12B-S12	9.0- 18.0	15	1,740	12.0V	1.41A	DM2C
HDM17-12B-S15	9.0- 18.0	15	1,730	15.0V	1.13A	DM2C
HDM17-24B-S03	18.0- 36.0	15	600	3.3V	3.40A	DM2C
HDM17-24B-S05	18.0- 36.0	10	870	5.0V	3.40A	DM2C
HDM17-24B-S09	18.0- 36.0	10	870	9.0V	1.88A	DM2C
HDM17-24B-S12	18.0- 36.0	10	870	12.0V	1.41A	DM2C
HDM17-24B-S15	18.0- 36.0	10	860	15.0V	1.13A	DM2C
HDM17-48B-S03	36.0- 72.0	15	300	3.3V	3.40A	DM2C
HDM17-48B-S05	36.0- 72.0	10	435	5.0V	3.40A	DM2C
HDM17-48B-S09	36.0- 72.0	10	435	9.0V	1.88A	DM2C
HDM17-48B-S12	36.0- 72.0	10	435	12.0V	1.41A	DM2C
HDM17-48B-S15	36.0- 72.0	10	430	15.0V	1.13A	DM2C

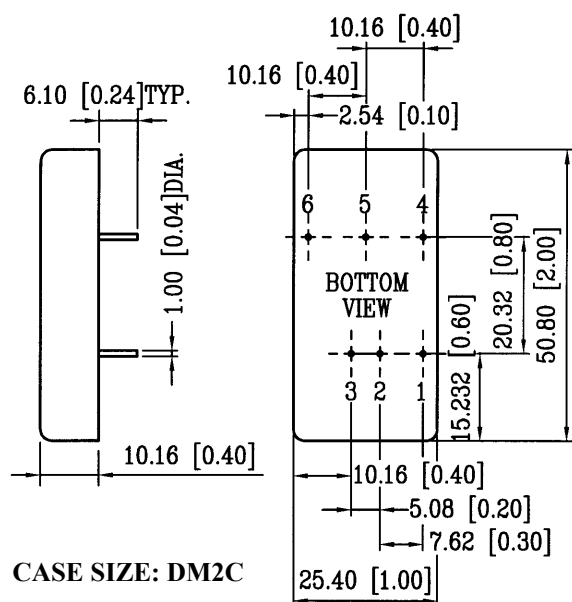
DUAL OUTPUT

MODEL NO.	INPUT Vdc	INPUT CURRENT N. L. (mA) F.L.		OUTPUT (Vdc)		OUTPUT (A)		CASE SIZE
				+VO1 ★	-VO2	+VO1	-VO2	
HDM17-12B-D03	9.0- 18.0	25	1220	+3.3V	-3.3V	1.70A	1.70A	DM2C
HDM17-12B-D05	9.0- 18.0	20	1760	+ 5.0V	- 5.0V	1.70A	1.70A	DM2C
HDM17-12B-D12	9.0- 18.0	20	1740	+12.0V	-12.0V	0.70A	0.70A	DM2C
HDM17-12B-D15	9.0- 18.0	20	1760	+15.0V	-15.0V	0.55A	0.55A	DM2C
HDM17-24B-D03	18.0- 36.0	20	610	+3.3V	-3.3V	1.70A	1.70A	DM2C
HDM17-24B-D05	18.0- 36.0	15	880	+ 5.0V	- 5.0V	1.70A	1.70A	DM2C
HDM17-24B-D12	18.0- 36.0	15	870	+12.0V	-12.0V	0.70A	0.70A	DM2C
HDM17-24B-D15	18.0- 36.0	15	855	+15.0V	-15.0V	0.55A	0.55A	DM2C
HDM17-48B-D03	36.0- 72.0	20	305	+3.3V	-3.3V	1.70A	1.70A	DM2C
HDM17-48B-D05	36.0- 72.0	15	440	+ 5.0V	- 5.0V	1.70A	1.70A	DM2C
HDM17-48B-D12	36.0- 72.0	15	435	+12.0V	-12.0V	0.70A	0.70A	DM2C
HDM17-48B-D15	36.0- 72.0	15	427	+15.0V	-15.0V	0.55A	0.55A	DM2C

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

MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 27.5g (0.97 Oz.)



CASE SIZE: DM2C

PIN ASSIGNMENT

PIN NO.	SINGLE	DUAL
PIN# 1.	Remote ON/OFF	Remote ON/OFF
PIN# 2.	-INPUT/-Vin	-INPUT/-Vin
PIN# 3.	+ INPUT	+INPUT
PIN# 4.	DC-COM	-VO2
PIN# 5.	NO PIN	DC-COM
PIN# 6.	VO1	+VO1

DERATING CHART

