

# HiTRON

## 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  $\geq +70^\circ\text{C}$  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.

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.			
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

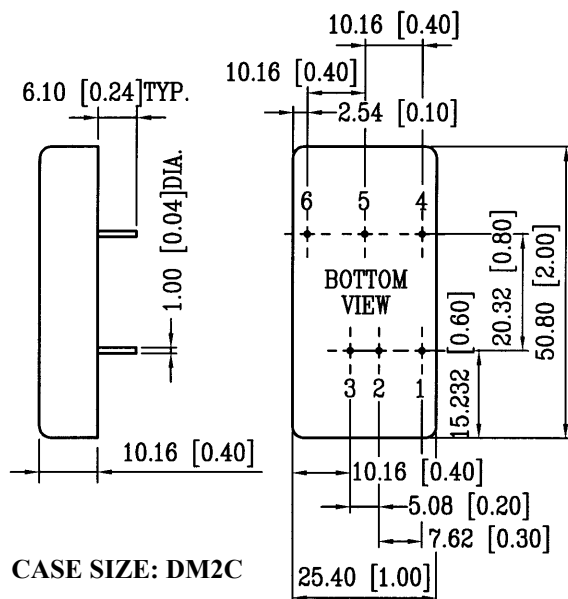
## DUAL OUTPUT

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

