

# HiTRON

## ON-BOARD DC-DC CONVERTER ENCAPSULATED MODULES 16 WATTS TRIPLE OUTPUT HDM16-T SERIES



### FEATURES:

- TRIPLE OUTPUT.
- 2:1 INPUT RANGE.
- 16W ISOLATED OUTPUT.
- SIX-SIDED METAL SHIELD.

### SPECIFICATION

#### INPUT SPECIFICATION

**Input Range:** 2:1 DC input range.  
See Ratings Chart.  
**Input Voltage:** Nominal 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 Resistance:** 1,000 Mega Ohms.  
**Isolation Voltage:** 1,500Vdc.  
**EMI:** Six-sided metal shielding.  
**Remote On/Off:** TTL/CMOS-Compatible Input Control.  
Logic input reference to -Input/-Vin.  
Logic [1]/Open(or 2.5-7.0Vdc above-Vin)=ON.  
Logic [2]/Short(or 0-0.08Vdc above-Vin)=OFF.

#### OUTPUT SPECIFICATION

**Output Voltage:** See Ratings Chart.  
**Output Current:** See Ratings Chart.  
**Voltage Accuracy:** Main O/P  $\pm 2.0\%$  typ.  
**Line Regulation:**  $\pm 0.5\%$  typ.  
**Load Regulation:** VO1 & VO3  $\pm 2.0\%$  typ.  
VO2 O/P  $\pm 5.0\%$   
**Noise & Ripple:** Typ. 100mV for 3.3V/5.0V & 1.0% for others peak to peak.  
**OVP:** Built-in on main output.  
**Adjustability:** Not available.  
**Short Circuit Protection:** Power fold back, Self-recovering.  
**Overload Protection:** About 130% of overrange foldback type.

#### GENERAL SPECIFICATION

**Efficiency:** Typ. 80%, various with input.  
**Switching Frequency:** Fixed frequency 100K Hz.  
**Circuit Topology:** 100K Hz. Forward Circuit.  
**Transient Response:** Full to 1/2 load  $< 200 \mu\text{Sec}$ .  
**Case:** Black coated steel with non-conductive metal base.  
**Weight:** 61.0g (2.15 Oz.)  
**Power Density:** 10.45 Watts./ Cubic inch.

**Operating Temperature:** -25°C to +71°C range.  
-20°C to +60°C @ full load without derating.  
**Temperature:** -40°C to +105°C.  
**Temperature Coefficient:** 0.02% /°C.  
**Cooling:** Convection cooling up to +60°C @ full load.  
At least 100LFM moving air is recommended for F-L  
> +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.

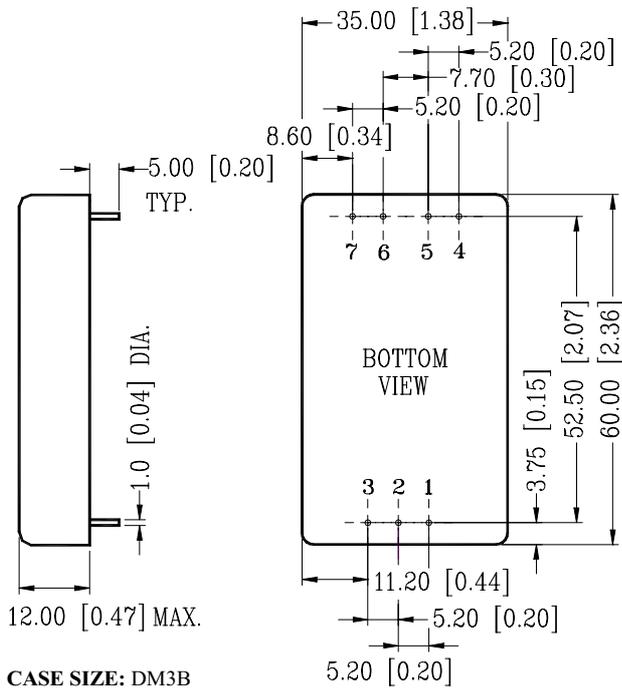
## INPUT/ OUTPUT VOLTAGE/ CURRENT RATINGS CHART

### TRIPLE OUTPUT

MODEL NO.	INPUT Vdc	INPUT CURRENT		OUTPUT (Vdc)			OUTPUT(A)			CASE SIZE
		N.L. (mA)	F.L.	+VO1	+VO2	-VO3	+VO1	+VO2	-VO3	
HDM16-24B-T3/5	18.0-36.0	20	850	+3.3V	+5.0V	-5.0V	2.5A	0.70A	0.70A	DM3B
HDM16-24B-T3/12	18.0-36.0	20	840	+3.3V	+12.0V	-12.0V	2.5A	0.29A	0.29A	DM3B
HDM16-24B-T3/15	18.0-36.0	20	830	+3.3V	+15.0V	-15.0V	2.5A	0.23A	0.23A	DM3B
HDM16-24B-T3/ 5,-12	18.0-36.0	20	850	+3.3V	+5.0V	-12.0V	1.6A	1.00A	0.41A	DM3B
HDM16-24B-T3/ 5,-15	18.0-36.0	20	850	+3.3V	+5.0V	-15.0V	1.6A	1.00A	0.33A	DM3B
HDM16-24B-T5/12	18.0-36.0	20	840	+5.0V	+12.0V	-12.0V	2.0A	0.25A	0.25A	DM3B
HDM16-24B-T5/15	18.0-36.0	20	840	+5.0V	+15.0V	-15.0V	2.0A	0.20A	0.20A	DM3B
HDM16-24B-T5/+12,-5	18.0-36.0	20	840	+5.0V	+15.0V	-5.0V	2.0A	0.30A	0.60A	DM3B
HDM16-48B-T3/5	36.0-72.0	20	425	+3.3V	+5.0V	-5.0V	2.5A	0.70A	0.70A	DM3B
HDM16-48B-T3/12	36.0-72.0	20	420	+3.3V	+12.0V	-12.0V	2.5A	0.29A	0.29A	DM3B
HDM16-48B-T3/15	36.0-72.0	20	415	+3.3V	+15.0V	-15.0V	2.5A	0.23A	0.23A	DM3B
HDM16-48B-T3/ 5,-12	36.0-72.0	20	425	+3.3V	+5.0V	-12.0V	1.6A	1.00A	0.41A	DM3B
HDM16-48B-T3/ 5,-15	36.0-72.0	20	425	+3.3V	+5.0V	-15.0V	1.6A	1.00A	0.33A	DM3B
HDM16-48B-T5/12	36.0-72.0	20	420	+5.0V	+12.0V	-12.0V	2.0A	0.25A	0.25A	DM3B
HDM16-48B-T5/15	36.0-72.0	20	420	+5.0V	+15.0V	-15.0V	2.0A	0.20A	0.20A	DM3B
HDM16-48B-T5/+12,-5	36.0-72.0	20	420	+5.0V	+15.0V	-5.0V	2.0A	0.30A	0.60A	DM3B

### MECHANICAL DIMENSIONS: MM [INCHES]

Weight: 61.0g (2.15 Oz.)



### PIN ASSIGNMENT

PIN NO.	TRIPLE
PIN #1.	- INPUT/-Vin
PIN #2.	+ INPUT
PIN #3.	Remote ON/OFF
PIN #4.	-VO3
PIN #5.	DC-COM
PIN #6.	+VO1
PIN #7.	+VO2