

## ON-BOARD DC-DC CONVERTER ENCAPSULATED MODULES 16 WATTS TRIPLE OUTPUT APS16DM-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 over-range foldback type

#### GENERAL SPECIFICATION

**Efficiency:** Typ. 80%, various with input

**Switching Frequency:** Fixed frequency 100KHz

**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.

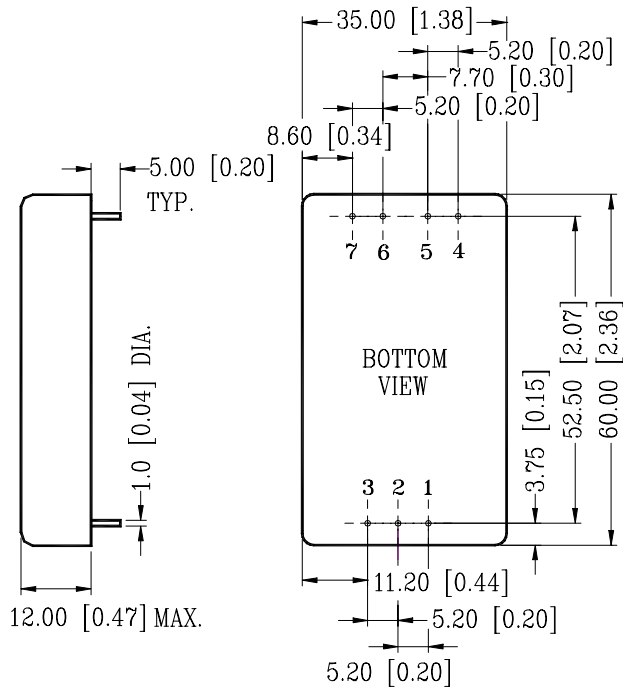
# INPUT/ OUTPUT VOLTAGE/ CURRENT RATINGS CHART

## TRIPLE OUTPUT

MODEL NO.	INPUT Vdc	INPUT CURRENT		OUTPUT (Vdc)			OUTPUT(A)			CASE SIZE
		N.L.	F.L.	+VO1	+VO2	-VO3	+VO1	+VO2	-VO3	
APS16DM-24B-T3/5	18.0-36.0	20	850	+3.3V	+5.0V	-5.0V	2.5A	0.70A	0.70A	DM3B
APS16DM-24B-T3/12	18.0-36.0	20	840	+3.3V	+12.0V	-12.0V	2.5A	0.29A	0.29A	DM3B
APS16DM-24B-T3/15	18.0-36.0	20	830	+3.3V	+15.0V	-15.0V	2.5A	0.23A	0.23A	DM3B
APS16DM-24B-T3/ 5,-12	18.0-36.0	20	850	+3.3V	+5.0V	-12.0V	1.6A	1.00A	0.41A	DM3B
APS16DM-24B-T3/ 5,-15	18.0-36.0	20	850	+3.3V	+5.0V	-15.0V	1.6A	1.00A	0.33A	DM3B
APS16DM-24B-T5/12	18.0-36.0	20	840	+5.0V	+12.0V	-12.0V	2.0A	0.25A	0.25A	DM3B
APS16DM-24B-T5/15	18.0-36.0	20	840	+5.0V	+15.0V	-15.0V	2.0A	0.20A	0.20A	DM3B
APS16DM-24B-T5/+12,-5	18.0-36.0	20	840	+5.0V	+15.0V	-5.0V	2.0A	0.30A	0.60A	DM3B
APS16DM-48B-T3/5	36.0-72.0	20	425	+3.3V	+5.0V	-5.0V	2.5A	0.70A	0.70A	DM3B
APS16DM-48B-T3/12	36.0-72.0	20	420	+3.3V	+12.0V	-12.0V	2.5A	0.29A	0.29A	DM3B
APS16DM-48B-T3/15	36.0-72.0	20	415	+3.3V	+15.0V	-15.0V	2.5A	0.23A	0.23A	DM3B
APS16DM-48B-T3/ 5,-12	36.0-72.0	20	425	+3.3V	+5.0V	-12.0V	1.6A	1.00A	0.41A	DM3B
APS16DM-48B-T3/ 5,-15	36.0-72.0	20	425	+3.3V	+5.0V	-15.0V	1.6A	1.00A	0.33A	DM3B
APS16DM-48B-T5/12	36.0-72.0	20	420	+5.0V	+12.0V	-12.0V	2.0A	0.25A	0.25A	DM3B
APS16DM-48B-T5/15	36.0-72.0	20	420	+5.0V	+15.0V	-15.0V	2.0A	0.20A	0.20A	DM3B
APS16DM-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.)



CASE SIZE: DM3B

## 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