

ON-BOARD DC-DC CONVERTER ENCAPSULATED MODULES 20 WATTS TRIPLE OUTPUT APS20DM-T SERIES



FEATURES:

- 2:1 INPUT RANGE.
- 20W ISOLATED OUTPUT.
- TRIPLE 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
and load. See Ratings Chart

Input Fuse: Use external fuse

Input Filter: Pi-Network

Undervoltage Shutdown: 8Vdc

Isolation resistor: 1,000Mega Ohms

Isolation voltage: 1,500Vdc

EMI: Six-sided metal shielded

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

Line Regulation: $\pm 0.5\%$ typ.

Load Regulation: VO1 & VO3 $\pm 2.0\%$ typ.
VO2 $\pm 5.0\%$ typ.

Noise & Ripple: Typ. 100mV for 3.3V/5.0V &
1.0% for others peak to peak

OVP: Built-in on main output

Short Circuit Protection: Fold back.

Voltage Accuracy: $\pm 2.0\%$

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 450KHz

Circuit Topology: 450K Hz. forward circuit

Transient Response: Full to 1/2 load < 200 μ sec.

Case: Black coated steel with non-conductive
metal base

Weight: 65.0g(2.4 Oz.)

Power Density: 12.5Watts. / Cubic inch

Operating Temperature: -40°C to +85°C range. -25°C to
+71°C @ full load without derating. Derating linearly
3.5%/°C from +71°C @ full load to +85°C @ half-load.

Storage Temperature: -55°C to +110°C

Humidity: Up to 95% RH, Non-condensing

Temperature Coefficient: 0.02% /°C

Cooling: Convection cooling up to 60°C @F-L. At least
100LFM moving air is recommended for F-L >+60°C in
a confined area

Commercial Grade: Full load up to +71°C with moving air

Industrial Grade: +71 to +85°C F-L to H-L with moving air

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 drain at low Line input & Load and then adding 20-25% for the desired fuse size.

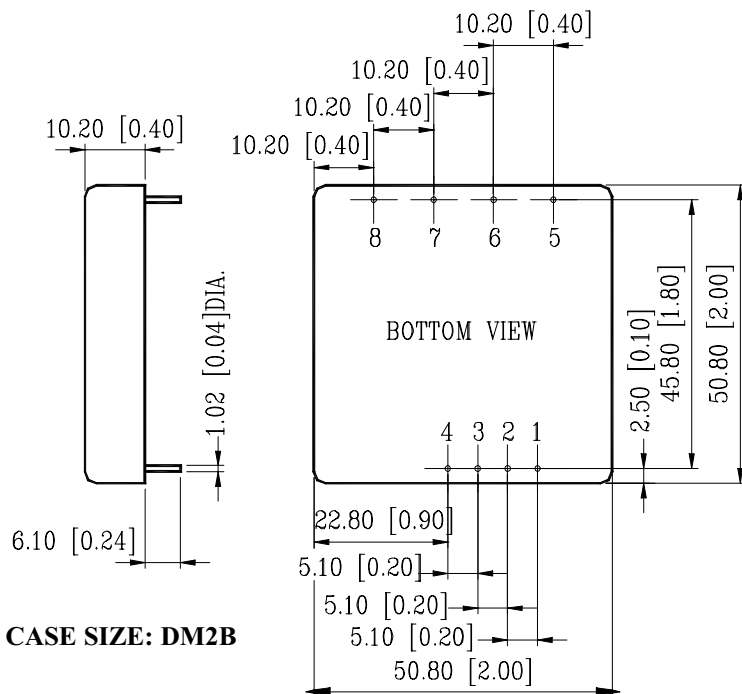
INPUT/OUTPUT & VOLTAGE/CURRENT RATINGS CHART

DUAL OUTPUT

MODEL NO.	INPUT Vdc	INPUT CURRENT		OUTPUT(Vdc)			OUTPUT(A)			CASE SIZE
		N. L. (mA)	F.L.	+VO1	+VO2	-VO3	+VO1	+VO2	-VO3	
APS20DM-12B-T3/12	9.0- 18.0	30	1,850	+3.3V	+12.0V	-12.0V	3.00A	0.30A	0.30A	DM2B
APS20DM-12B-T3/15	9.0- 18.0	30	1,850	+3.3V	+15.0V	-15.0V	3.00A	0.25A	0.25A	DM2B
APS20DM-12B-T3/+12,-5	9.0- 18.0	30	1,850	+3.3V	+12.0V	-5.0V	3.00A	0.30A	0.75A	DM2B
APS20DM-12B-T5/12	9.0- 18.0	30	2,070	+5.0V	+12.0V	-12.0V	2.50A	0.31A	0.31A	DM2B
APS20DM-12B-T5/15	9.0- 18.0	30	2,060	+5.0V	+15.0V	-15.0V	2.50A	0.25A	0.25A	DM2B
APS20DM-12B-T5/+12,-5	9.0- 18.0	30	2,080	+5.0V	+12.0V	-5.0V	2.50A	0.31A	0.75A	DM2B
APS20DM-24B-T3/12	18.0- 36.0	30	925	+3.3V	+12.0V	-12.0V	3.00A	0.30A	0.30A	DM2B
APS20DM-24B-T3/15	18.0- 36.0	30	925	+3.3V	+15.0V	-15.0V	3.00A	0.25A	0.25A	DM2B
APS20DM-24B-T3/+12,-5	18.0- 36.0	30	925	+3.3V	+12.0V	-5.0V	3.00A	0.30A	0.75A	DM2B
APS20DM-24B-T5/12	18.0- 36.0	30	1,035	+5.0V	+12.0V	-12.0V	2.50A	0.31A	0.31A	DM2B
APS20DM-24B-T5/15	18.0- 36.0	30	1,030	+5.0V	+15.0V	-15.0V	2.50A	0.25A	0.25A	DM2B
APS20DM-24B-T5/+12,-5	18.0- 36.0	30	1,040	+5.0V	+12.0V	-5.0V	2.50A	0.31A	0.75A	DM2B
APS20DM-48B-T3/12	36.0- 72.0	30	462	+3.3V	+12.0V	-12.0V	3.00A	0.30A	0.30A	DM2B
APS20DM-48B-T3/15	36.0- 72.0	30	462	+3.3V	+15.0V	-15.0V	3.00A	0.25A	0.25A	DM2B
APS20DM-48B-T3/+12,-5	36.0- 72.0	30	462	+3.3V	+12.0V	-5.0V	3.00A	0.30A	0.75A	DM2B
APS20DM-48B-T5/12	36.0- 72.0	30	517	+5.0V	+12.0V	-12.0V	2.50A	0.31A	0.31A	DM2B
APS20DM-48B-T5/15	36.0- 72.0	30	515	+5.0V	+15.0V	-15.0V	2.50A	0.25A	0.25A	DM2B
APS20DM-48B-T5/+12,-5	36.0- 72.0	30	520	+5.0V	+12.0V	-5.0V	2.50A	0.31A	0.75A	DM2B

MECHANICAL DIMENSIONS: MM[INCHES]

Weight: 65.0g(2.4 Oz.)



CASE SIZE: DM2B

PIN ASSIGNMENT

PIN NO.	TRIPLE
PIN #1	Remote ON/OFF
PIN #2	NC
PIN #3	- INPUT/-Vin
PIN #4	+ INPUT
PIN #5	- VO3
PIN #6	DC-COM
PIN #7	+ VO1
PIN #8	+ VO2