

ON-BOARD DC-DC CONVERTER ENCAPSULATED MODULES 7.5 WATTS SINGLE & DUAL OUTPUT APS07DM-S & APS07DM-D SERIES



FEATURES:

- VERY LOW PROFILE 7.0 MM HIGH
- SINGLE & DUAL OUTPUT
- WIDE 4:1 INPUT RANGE
- 7.5W ISOLATED OUTPUT
- SIX-SIDED METAL SHIELD

SPECIFICATION

INPUT SPECIFICATION

Input Range: Wide 4:1 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: 1,000 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: Single O/P $\pm 1.0\%$ typ.
Dual O/P $\pm 2.0\%$ typ.

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. 81%, various with input.

Switching Frequency: Fixed frequency 450K Hz.

Circuit Topology: 450K Hz. Forward Circuit.

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

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

Weight: 20.0g (0.71 Oz.).

Power Density: 12.0Watts./ 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

SINGLE OUTPUT

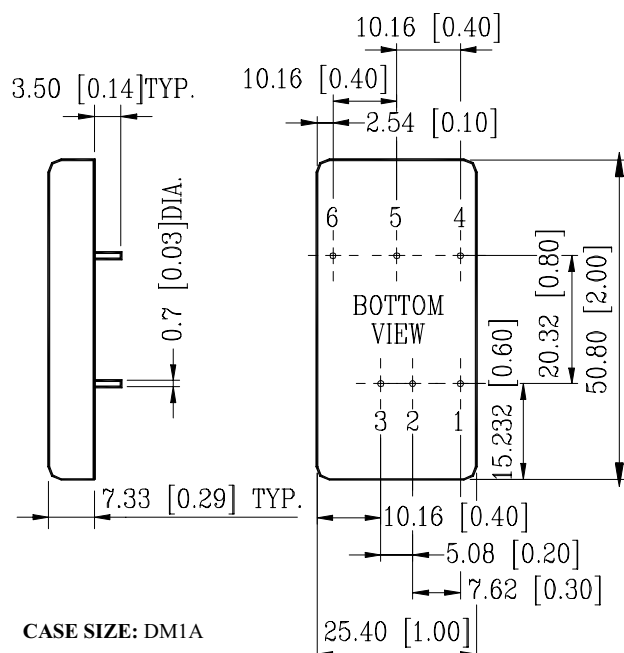
MODEL NO.	INPUT Vdc	INPUT CURRENT N.L. (mA) F.L.	OUTPUT VO1(Vdc)	OUTPUT VO1(A)	CASE SIZE
APS07DM-12D-S03	9.0- 36.0	50 700	3.3V	1.90A	DM1A
APS07DM-12D-S05	9.0- 36.0	50 780	5.0V	1.50A	DM1A
APS07DM-12D-S09	9.0- 36.0	50 780	9.0V	0.83A	DM1A
APS07DM-12D-S12	9.0- 36.0	50 780	12.0V	0.62A	DM1A
APS07DM-12D-S15	9.0- 36.0	50 780	15.0V	0.50A	DM1A
APS07DM-24D-S03	9.0- 36.0	50 350	3.3V	1.90A	DM1A
APS07DM-24D-S05	9.0- 36.0	50 390	5.0V	1.50A	DM1A
APS07DM-24D-S09	9.0- 36.0	50 390	9.0V	0.83A	DM1A
APS07DM-24D-S12	9.0- 36.0	50 390	12.0V	0.62A	DM1A
APS07DM-24D-S15	9.0- 36.0	50 390	15.0V	0.50A	DM1A
APS07DM-48D-S03	18.0- 72.0	46 175	3.3V	1.90A	DM1A
APS07DM-48D-S05	18.0- 72.0	46 192	5.0V	1.50A	DM1A
APS07DM-48D-S09	18.0- 72.0	46 192	9.0V	0.83A	DM1A
APS07DM-48D-S12	18.0- 72.0	46 192	12.0V	0.62A	DM1A
APS07DM-48D-S15	18.0- 72.0	46 192	15.0V	0.50A	DM1A

DUAL OUTPUT

MODEL NO.	INPUT Vdc	INPUT CURRENT N.L. (mA) F.L.	OUTPUT (Vdc) +VO1 -VO2	OUTPUT(A) +VO1 -VO2	CASE SIZE
APS07DM-12D-D03	9.0- 36.0	50 700	+3.3V -3.3V	0.95A 0.95A	DM1A
APS07DM-12D-D05	9.0- 36.0	50 780	+5.0V -5.0V	0.75A 0.75A	DM1A
APS07DM-12D-D12	9.0- 36.0	50 780	+12.0V -12.0V	0.31A 0.31A	DM1A
APS07DM-12D-D15	9.0- 36.0	50 780	+15.0V -15.0V	0.25A 0.25A	DM1A
APS07DM-24D-D03	9.0- 36.0	50 350	+3.3V -3.3V	0.95A 0.95A	DM1A
APS07DM-24D-D05	9.0- 36.0	50 390	+5.0V -5.0V	0.75A 0.75A	DM1A
APS07DM-24D-D12	9.0- 36.0	50 390	+12.0V -12.0V	0.31A 0.31A	DM1A
APS07DM-24D-D15	9.0- 36.0	50 390	+15.0V -15.0V	0.25A 0.25A	DM1A
APS07DM-48D-D03	18.0- 72.0	46 175	+3.3V -3.3V	0.95A 0.95A	DM1A
APS07DM-48D-D05	18.0- 72.0	46 192	+5.0V -5.0V	0.75A 0.75A	DM1A
APS07DM-48D-D12	18.0- 72.0	46 192	+12.0V -12.0V	0.31A 0.31A	DM1A
APS07DM-48D-D15	18.0- 72.0	46 192	+15.0V -15.0V	0.25A 0.25A	DM1A

MECHANICAL DIMENSIONS: MM [INCHES]

Weight: 20.0g (0.71 Oz.).



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.	NC	DC-COM
PIN #6.	VO1	+ VO1