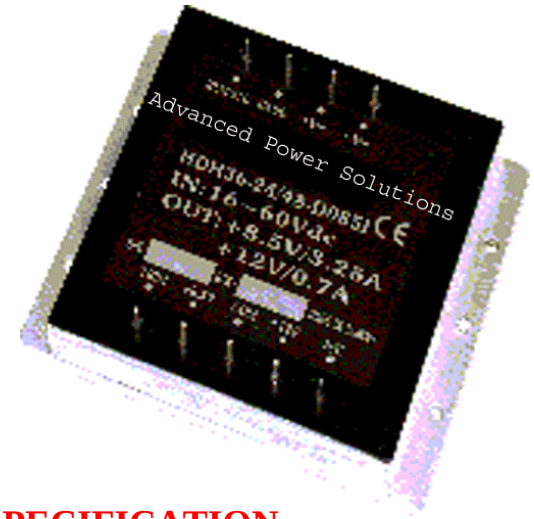
APS

Advanced Power Solutions

WIDE 4:1 INPUT RANGE DC-DC CONVERTER SINGLE AND MULTIPLE OUTPUT 40 WATTS BASEPLATE POWER MODULE APS40DH-24/48D-S,D,T SERIES



FEATURES:

- **SINGLE, DUAL & TRIPLE OUTPUT**
- **4:1 ULTRA-WIDE INPUT VOLTAGE**
- **1,500VDC ISOLATION**
- **HEATSINK MOUNT FORMAT**
- **INDUSTRIAL STANDARD PIN-OUT**
- **UNDER-VOLTAGE LOCKOUT**

SPECIFICATION

INPUT SPECIFICATION

Input Range/Voltage: Ultra-wide 4:1 Range.
9-36Vdc for 24Vdc nominal input.
18-36Vdc for 24Vdc nominal input.
Input Current: Various with input range & load.
See Ratings Chart.
Input Fuse: Use external fuse.
Input Filter: Pi-Network.
Undervoltage Drop Out: Typ. 12Vdc.
Isolation Resistor: 1,000 Mega Ohms.
Isolation Voltage: 1,500Vdc for input to output.
500Vdc for input to case and output to case.
Shielding: Five-sided.
Remote On/Off: TTL/CMOS-Compatible input control.
Logic input reference to -Vin.
Logic [1]/Open(or 2.5~7.0Vdc above -Vin)=ON.
Logic [0]/Short(or 0~0.08Vdc above -Vin)=OFF.

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.
Output Current: See Ratings Chart.
Voltage Accuracy: Typ. main O/P ±1.0%, Aux. O/P ±2.0%.
Line Regulation: Typ. 0.5%.
Load Regulation:
Single O/P: VO1 typ. ±1.0%
Dual O/P: VO1 typ. ±1.0% & VO2 typ. ±2.5%.
Triple O/P: VO1 & VO3 typ. ±2.0% ,VO2 typ. ±5.0%.
Noise & Ripple: 100mV for 3.3V/5.0V & 1.0% typical for others output peak to peak.
OVP: Built-in on main output.
Adjustability: VO1 O/P may optionally be external trimmed ±3.0% with a fixed resistors or trim-pot.
Overload Protection (OLP): Fully protected against overload and short circuit.
Typ. 125-150% max. load.
Consult factory for special OLP setting.

GENERAL SPECIFICATION

Efficiency: Typ. 80%, various with input.
Switching Frequency: Fixed frequency 250K Hz.
Circuit Topology: Forward Circuit.
Transient Response: Typ. 0.2mS for a 25% load change.
Case: Aluminum baseplate.
Power Density: 7.5 Watts / Cubic inch.
Operating Temperature (ambient): -40 to +100°C baseplate.
Storage Temperature: -55 to +100 °C.
Temperature Coefficient: ±0.02%/°C.
Cooling: Convection cooling up to +85°C.
Industrial Grade only.
Weight: 145.8g (5.13 Oz.)

NOTE: (1) All measurements are at nominal input, full load, and +25°C unless otherwise spec
(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 & adding 20-25% for desired fuse size.

INPUT/OUTPUT & VOLTAGE/CURRENT RATINGS CHART

SINGLE OUTPUT

MODEL NO.	INPUT Vdc		O/P VO1 ♦@#	
	Range	Nom.	Typ.	**Volt.**
APS40DH-24D-S033076	9-36Vdc	24Vdc	7.6A	**3.3V**
APS40DH-24D-S050080	9-36Vdc	24Vdc	8.0A	**5.0V**
APS40DH-24D-S120034	9-36Vdc	24Vdc	3.4A	**12.0V**
APS40DH-24D-S150027	9-36Vdc	24Vdc	2.7A	**15.0V**
APS40DH-24D-S180023	9-36Vdc	24Vdc	2.3A	**18.0V**
APS40DH-48D-S033076	18-72Vdc	48Vdc	7.6A	**3.3V**
APS40DH-48D-S050080	18-72Vdc	48Vdc	8.0A	**5.0V**
APS40DH-48D-S120034	18-72Vdc	48Vdc	3.4A	**12.0V**
APS40DH-48D-S150027	18-72Vdc	48Vdc	2.7A	**15.0V**
APS40DH-48D-S180023	18-72Vdc	48Vdc	2.3A	**18.0V**

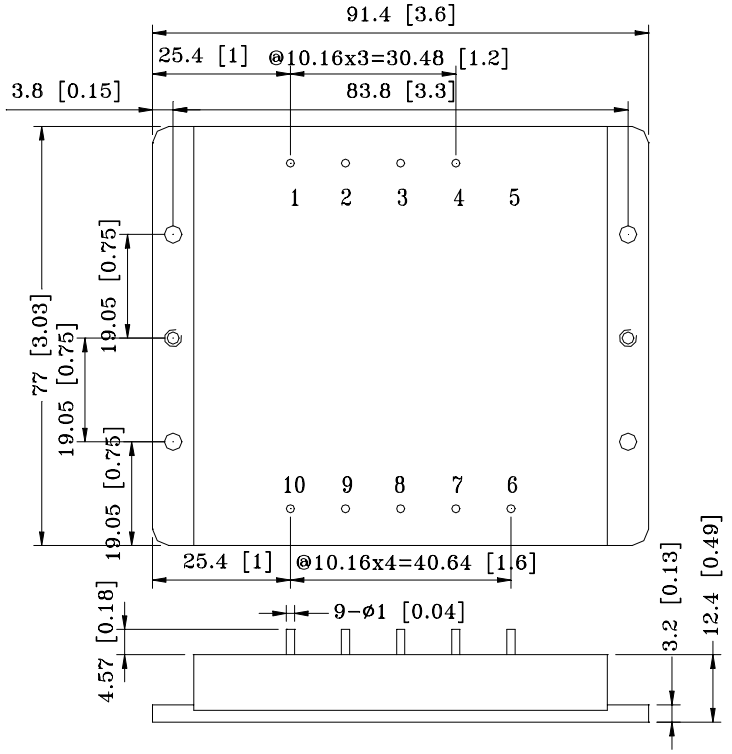
DUAL OUTPUT

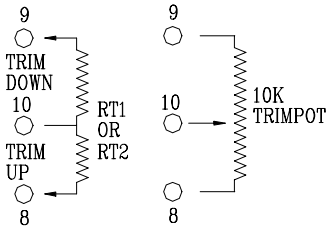
MODEL NO.	INPUT Vdc		MAIN VO1 ♦@		AUX. VO2	
	Range	Nom.	Typ.	**Volt.**	Typ.	**Volt.**
APS40DH-24D-D120I	9-36Vdc	24Vdc	1.67A	**+12.0V**	1.67A	**-12.0V**
APS40DH-24D-D150K	9-36Vdc	24Vdc	1.35A	**+15.0V**	1.35A	**-15.0V**
APS40DH-48D-D120I	18-72Vdc	48Vdc	1.67A	**+12.0V**	1.67A	**-12.0V**
APS40DH-48D-D150K	18-7Vdc	48Vdc	1.35A	**+15.0V**	1.35A	**-15.0V**

TRIPLE OUTPUT

MODEL NO.	INPUT Vdc		MAIN VO1 ♦@		AUX. VO2		AUX. VO3	
	Range	Nom.	Typ.	**Volt.**	Typ.	**Volt.**	Typ.	**Volt.**
APS40DH-24D-T050II	9-36Vdc	24Vdc	5.0A	5.0V	1.25A	+12.0V	1.25A	**-12.0V**
APS40DH-24D-T050KK	9-36Vdc	24Vdc	5.0A	5.0V	1.25A	+15.0V	1.25A	**-15.0V**
APS40DH-48D-T050II	18-72Vdc	48Vdc	5.0A	5.0V	1.00A	+12.0V	1.00A	**-12.0V**
APS40DH-48D-T050KK	18-7Vdc	48Vdc	5.0A	5.0V	1.00A	+15.0V	1.00A	**-15.0V**

MECHANICAL DIMENSIONS: MM [INCHES] **WEIGHT:** 145.8g (5.13 Oz.)





PIN ASSIGNMENT

PIN NO.	SINGLE	DUAL	TRIPLE
PIN# 1.	Remote	Remote	REMOTE
PIN# 2.	Case	Case	CASE
PIN# 3.	+Vin	+Vin	+Vin
PIN# 4.	-Vin	-Vin	-Vin
PIN# 5.	No Pin	No Pin	No Pin
PIN# 6.	N/C	N/C	-VO3
PIN# 7.	N/C	+VO2	+VO2
PIN# 8.	DC COM	DC COM	DC COM
PIN# 9.	+VO1	+VO1	+VO1
PIN# 10.	Trim	Trim	TRIM