11/26/2002

APS

Advanced Power Solutions

36-72VDC INPUT RANGE DC-DC CONVERTER HALF-BRICK POWER MODULES 100-150 WATTS SINGLE & DUAL OUTPUT APS100DH-48B-S&D SERIES

FEATURES:

- **SINGLE & DUAL OUTPUT**
- **WIDE 2:1 INPUT RANGE**
- **1500VDC ISOLATION**
- **STANDARD HALF-BRICK PACKAGE**
- **HIGH-EFFICIENCY POWER MODULE**
- **UNDER-VOLTAGE LOCKOUT**
- **DESIGNED TO MEET INTERNATIONAL SAFETY STANDARDS**

SPECIFICATION

INPUT SPECIFICATION

Input Range: Wide 2:1 Input DC Range 36-72Vdc
Input Voltage: Nominal 48Vdc
Input Current: Typ. 2.65A @ full load and 0.03A at no-load under 48Vdc nominal input
Input Fuse: Use external fuse
Inrush Current: Typ. 55A @ 75Vdc
Input Filter: Pi-Network for EMI suppression
Under-Voltage Protection (UVP): Lock-out activated at 34 - 35.5Vdc input
Input Reflected Ripple Current: 400mA pk-pk @ 48 Vdc
Isolation Voltage: 1,500Vdc input-output.
Remote On/Off: TTL/CMOS-compatible input control
Logic input reference to -Vin
Logic [1] Open (or 2.4Vand above – Vin) = ON
Logic [0] Short (0 to 0.08Vdc above – Vin) = OFF

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart
Output Current: See Ratings Chart
Output Wattage: Typ. 100W continuous
Line Regulation: Typ. 0.1%
Load Regulation: Typ. ±1.0%
Noise & Ripple: Typ. 100mV, peak to peak
OVP: Built-in on main output
Adjustability: Factory set
Overload Protection (OLP): Fully protected against overload and short circuit. Typical 130% max. load
Consult factory for special OLP setting.

GENERAL SPECIFICATION

Efficiency: Typ. 80%, varies with input
Switching Frequency: Fixed frequency 330KHz
Circuit Topology: 300KHz Forward Circuit
Transient Response: Peak transient <100mV and recovers within 1mS after a 25% load-change
Case: Aluminum base-plate
Power Density: 36.0 Watts / Cubic inch

Operating Temperature: -40 to +100°C (base plate)
Storage Temperature: -40 to +100°C
Temperature Coefficient: 0.02% per °C
Humidity: Up to 95% RH, Non-Condensing
Case: Aluminum base plate
Weight: 73.0g (2.6 Oz.)
Industrial Grade

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

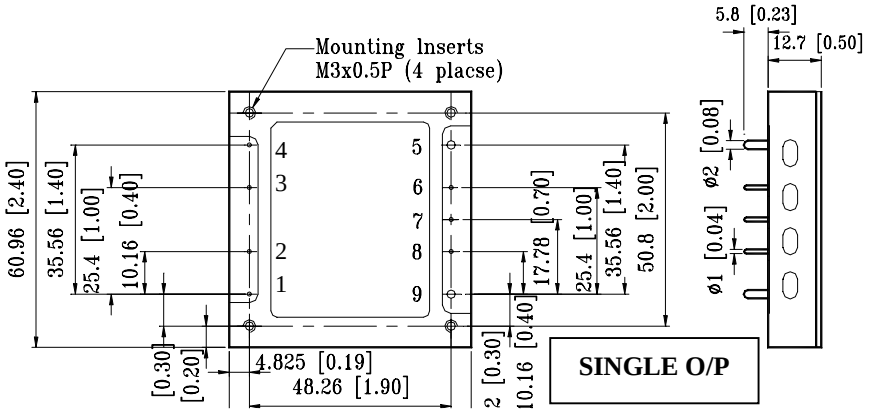
SINGLE OUTPUT

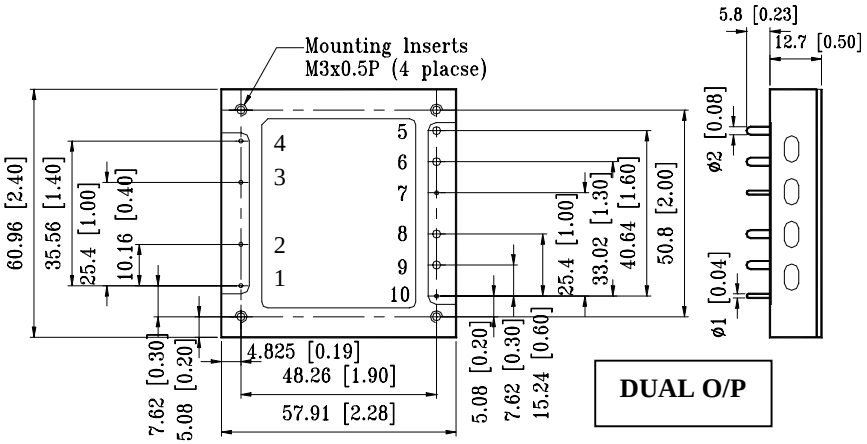
MODEL NO.	INPUT Vdc		OUTPUT VO1 *@ #		
	Range	Nominal	Min.	**Volt.**	Max.
APS100DH-48B-S018	36-72Vdc	48Vdc	0A	**1.8Vdc**	30A
APS100DH-48B-S025	36-72Vdc	48Vdc	0A	**2.5Vdc**	30A
APS100DH-48B-S033	36-72Vdc	48Vdc	0A	**3.3Vdc**	30A
APS100DH-48B-S050	36-72Vdc	48Vdc	0A	**5.0Vdc**	25A
APS100DH-48B-S120	36-72Vdc	48Vdc	0A	**12.0Vdc**	12A
APS100DH-48B-S150	36-72Vdc	48Vdc	0A	**15.0Vdc**	10A

DUAL OUTPUT

MODEL NO.	INPUT Vdc		OUTPUT VO1 *@				AUX. OUTPUT VO2 *@			
	Range	Nominal	Min.	Typ.	**Volt.**	Max.	Min.	Typ.	Volt.	Max.
APS100DH-48B-D025B	36-72Vdc	48Vdc	2.0A	18A	**2.5Vdc**	25A	0A	18A	1.8Vdc	25A
APS100DH-48B-D033B	36-72Vdc	48Vdc	2.0A	17A	**3.3Vdc**	24A	0A	18A	1.8Vdc	25A
APS100DH-48B-D033C	36-72Vdc	48Vdc	2.0A	17A	**3.3Vdc**	24A	0A	15A	2.5Vdc	20A
APS100DH-48B-D050C	36-72Vdc	48Vdc	2.0A	14A	**5.0Vdc**	20A	0A	15A	2.5Vdc	20A
APS100DH-48B-D050D	36-72Vdc	48Vdc	2.0A	14A	**5.0Vdc**	20A	0A	12A	3.3Vdc	18A

MECHANICAL DIMENSIONS: MM [INCHES] **WEIGHT:** 73.0g (2.6 Oz.)





Drawings show modules from Bottom View

PIN ASSIGNMENTS

PIN NO.	SINGLE	DUAL
PIN# 1.	+Vin	+Vin
PIN# 2.	Remote ON/OFF	Remote ON/OFF
PIN# 3.	CASE	CASE
PIN# 4.	-Vin	-Vin
PIN# 5.	DC COM	+VO2
PIN# 6.	- SENSE	DC COM
PIN# 7.	VO1 ADJ.	VO2 ADJ.
PIN# 8.	+ SENSE	+VO2
PIN# 9.	+VO1	DC COM
PIN# 10.	----	VO1 ADJ