

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 & DAUL 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 no-load @ 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: 40mA 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 2.4Vdc 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.
Output Wattage: Typ. 100W continuous.
Line Regulation: Typ. 0.1%.
Load Regulation: Typ. $\pm 1.0\%$.
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 the factory for special OLP setting.

GENERAL SPECIFICATION

Efficiency: Typ. 80%, various with input.
Switching Frequency: Fixed frequency 330K Hz.
Circuit Topology: 300KHz. Forward Circuit.
Transient Response: Peak transient <100mV and recovers within 1mS after 25% load-change.
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.
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

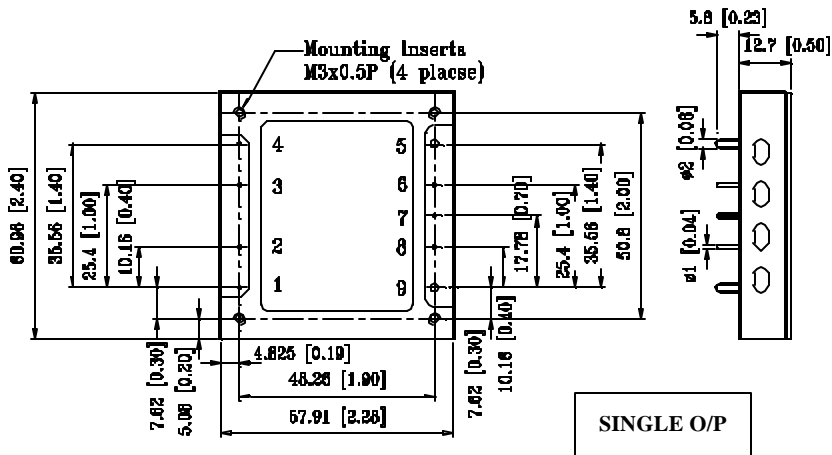
MODEL NO.	INPUT Vdc		OUTPUT VO1 ? @ #		
	Range	Nominal	Min.	Volt.	Max.
APS100DH-48B-S018	36-72Vdc	48Vdc	0A	1.8Vdc	30A
APS100DH-48B-S025	36-72Vdc	48Vdc	0A	2.5Vdc	30A
APS100DH-48B-S033	36-72Vdc	48Vdc	0A	3.3Vdc	30A
APS100DH-48B-S050	36-72Vdc	48Vdc	0A	5.0Vdc	25A
APS100DH-48B-S120	36-72Vdc	48Vdc	0A	12.0Vdc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



PIN ASSIGNMENT

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	VO1
PIN# 9.	VO1	DC COM
PIN# 10.	-----	VO1 ADJ.

