APS

Advanced Power Solutions

18-36 VDC INPUT RANGE DC-DC CONVERTER HALF-BRICK POWER MODULES 100-150 WATTS SINGLE & DUAL OUTPUT APS100HD-24B-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 18-36Vdc.
Input Voltage: Nominal 24Vdc.
Input Current: Typ. 6.85A full load and 0.06A no-load @ 24Vdc nominal input.
Input Fuse: Use external fuse.
Inrush Current: Peak 20A @ 24Vdc.
Input Filter: Pi-Network for EMI suppression.
Under-Voltage Protection (UVP): Lock-out activated at 17.8 Vdc input.
Input Reflected Ripple Current: 28.4mA pk-pk @24 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. 100-150W continuous.
Line Regulation: Typ. 0.1%.
Load Regulation: Typ. ±1.0%.
Noise & Ripple: Typ. 120mV, peak to peak.
OVP: Built-in.
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. 83.8-87%, various with input.
Switching Frequency: Fixed frequency 330K Hz.
Circuit Topology: Forward Circuit.
Transient Response: Peak transient <220mV and recovers within 1mS after 25% load-change.
Power Density: 36.0 Watts / Cubic inch.
Operating Temperature: -40 to +100℃ (baseplate).
Storage Temperature: -40 to +100 ℃.
Temperature Coefficient: 0.02%/℃.
Humidity: Up to 95% RH, Non-Condensing.
Case: Aluminum baseplate.
Industrial Grade.

NOTE: (1) All measurements are at nominal input, full load, and +25℃ 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

SINGLE OUTPUT

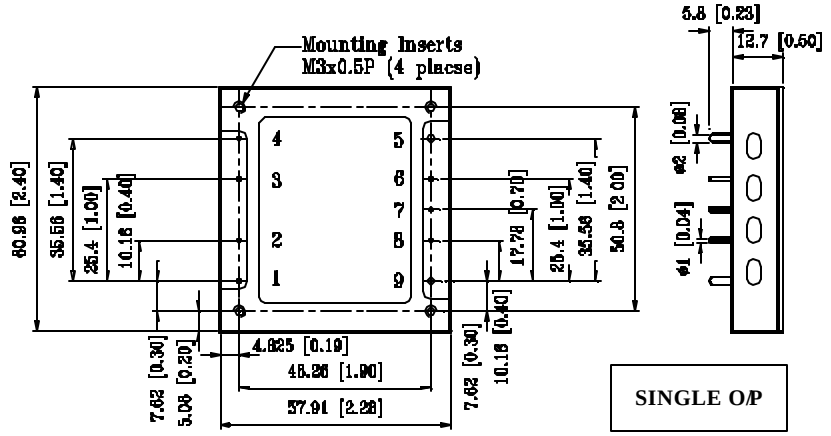
MODEL NO.	INPUT Vdc		OUTPUT VO1 ? @ #		
	Range	Nominal	Min.	**Volt.**	Max.
APS100HD-24B-S018	18-36Vdc	24Vdc	0A	**1.8Vdc**	30A
APS100HD-24B-S025	18-36Vdc	24Vdc	0A	**2.5Vdc**	30A
APS100HD-24B-S033	18-36Vdc	24Vdc	0A	**3.3Vdc**	30A
APS100HD-24B-S050	18-36Vdc	24Vdc	0A	**5.0Vdc**	25A
APS100HD-24B-S120	18-36Vdc	24Vdc	0A	**12.0Vdc**	12A
APS100HD-24B-S150	18-36Vdc	24Vdc	0A	**15.0Vdc**	10A

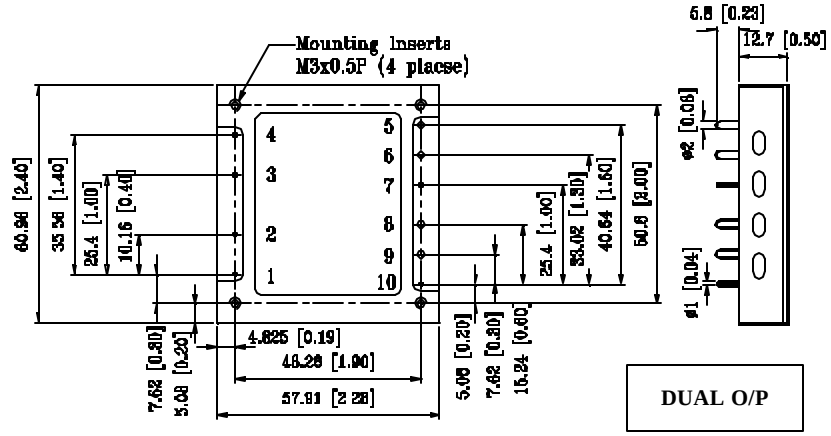
DUAL OUTPUT

MODEL NO.	INPUT Vdc		OUTPUT VO1 ? @				AUX. OUTPUT VO2 ? @			
	Range	Nominal	Min.	Typ.	**Volt.**	Max.	Min.	Typ.	**Volt.**	Max.
APS100HD-24B-D025B	18-36Vdc	24Vdc	2.0A	18A	**2.5Vdc**	25A	0A	18A	**1.8Vdc**	25A
APS100HD-24B-D033B	18-36Vdc	24Vdc	2.0A	17A	**3.3Vdc**	24A	0A	18A	**1.8Vdc**	25A
APS100HD-24B-D033C	18-36Vdc	24Vdc	2.0A	17A	**3.3Vdc**	24A	0A	15A	**2.5Vdc**	20A
APS100HD-24B-D050C	18-36Vdc	24Vdc	2.0A	14A	**5.0Vdc**	20A	0A	15A	**2.5Vdc**	20A
APS100HD-24B-D050D	18-36Vdc	24Vdc	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.