

36-72VDC INPUT RANGE DC-DC CONVERTER HALF-BRICK POWER MODULES 165-200 WATTS SINGLE OUTPUT APS165HD-48B-S SERIES



FEATURES:

- SINGLE 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.3.92A full load and 0.1A no-load @ 48Vdc nominal input.
Input Fuse: Use external fuse.
Soft-Start: Installed.
Inrush Current: Typ. 3.8A peak @ 48Vdc.
Input Filter: Pi-Network for EMI suppression.
Under-Voltage Protection (UVP): Lock-out activated at 34-35.5Vdc input.
Input OVP: 74-76Vdc.
Input Reflected Ripple Current: 20mA pk-pk @48 Vdc.
Isolation Voltage: 1,500Vdc input-output.
Remote On/Off: Option #1 Logic[1]=Off ,Logic[0]=On
 Option #2 Logic [1]=On ,Logic [1]=Off.

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.
Output Current: See Ratings Chart.
Output Wattage: Typ. 165-200W continuous.
Line Regulation: Typ. 0.1%.
Load Regulation: Typ. ±0.5%.
Noise & Ripple: Typ. 1% rms.
OVP: Built-in (latch).
Adjustability: Factory set. Maybe externally trimmed with fixed resistor or trimpot.
Overload Protection (OLP): Fully protected against overload and short circuit. Typical 120% max. load. Consult the factory for special OLP setting.
Over Temperature Protection:
 By NTC, thermal shut-down at 105-115°C.

GENERAL SPECIFICATION

Efficiency: Typ. 87.5-89%, various with input & output.
Switching Frequency: Fixed frequency 330K Hz.
Circuit Topology: 330K Hz. Forward Circuit.
Transient Response: Peak transient 100mV and recovers within 0.2mS after 50% load-change.
Safety: IEC60950 class I.
Power Density: Typ. 60 Watts / Cubic inch.
Operating Temperature: -40 to +100°C (baseplate).
Storage Temperature: -55 to +125 °C.
Temperature Coefficient: 0.02%/°C.
Humidity: Up to 95% RH, Non-Condensing.
Case: Aluminum baseplate with metal standoffs.
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

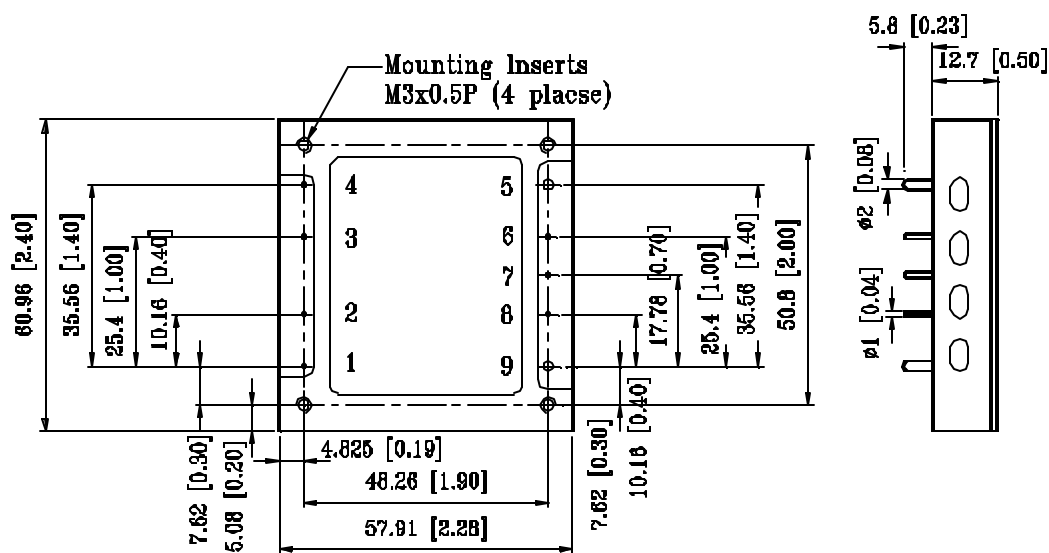
MODEL NO.	INPUT Vdc		OUTPUT VO1 ? # ?			
	Range	Nominal	Typ.	Volt.	Max.	Peak
APS165HD -48B-S018600	36-72Vdc	48Vdc	60A	1.8Vdc	62A	64A
APS165HD -48B-S025600	36-72Vdc	48Vdc	60A	2.5Vdc	62A	64A
APS165HD -48B-S033500	36-72Vdc	48Vdc	50A	3.3Vdc	52A	53A
APS165HD -48B-S050450	36-72Vdc	48Vdc	45A	5.0Vdc	47A	48A

Symbols: "?" "OVP built-in. "# Remote sensing. "? " Synchronous Rectifier.

Remarks: Peak output, less than 60Sec. With duty cycle <10%.

MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 73.0g (2.6 Oz.)



INPUT & OUTPUT CONNECTOR PIN ASSIGNMENT

		SINGLE OUPUT							
ASSIGNEMENT	+VIN	Remote ON/OFF	CASE	-VIN	DC COM	-SENSE	VO1 ADJ.	+SENSE	VO1
CONNECTOR & PIN	PIN#1	PIN#2	PIN#3	PIN#4	PIN#5	PIN#6	PIN#7	PIN#8	PIN#9