

**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°C (baseplate).
Storage Temperature: -40 to +100 °C.
Temperature Coefficient: 0.02%/°C.
Humidity: Up to 95% RH, Non-Condensing.
Case: Aluminum baseplate.
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

SINGLE OUTPUT

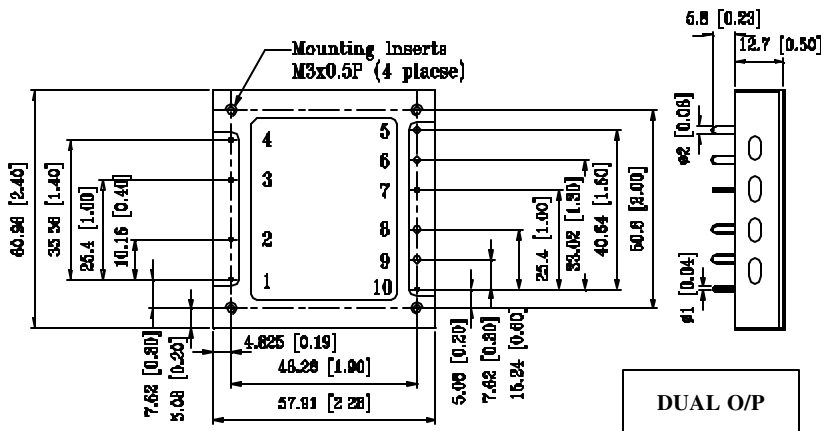
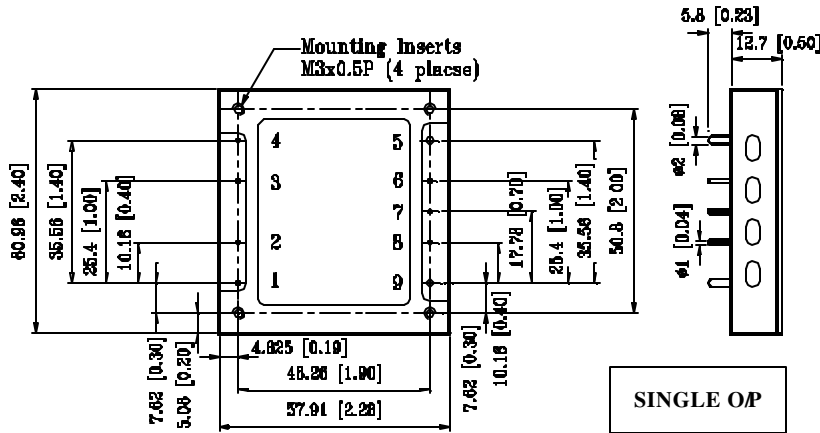
| MODEL NO. | INPUT Vdc | | OUTPUT VO1 ? @ # | | |
|-------------------|-----------|---------|------------------|---------|------|
| | Range | Nominal | Min. | Volt. | Max. |
| APS100HD-24B-S018 | 18-36Vdc | 24Vdc | 0A | 1.8Vdc | 30A |
| APS100HD-24B-S025 | 18-36Vdc | 24Vdc | 0A | 2.5Vdc | 30A |
| APS100HD-24B-S033 | 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. |