

# APS

## Advanced Power Solutions

### **36-72VDC INPUT RANGE DC-DC OPEN FRAME PCB CONVERTER MULTIPLE OUTPUT 40-50 WATTS INTERNAL SWITCHING POWER SUPPLIES APS41DA SERIES**



#### **FEATURES:**

- PCB OPEN FRAME FORMAT
- LOW PROFILE & COMPACT SIZE
- 36-72VDC NOMINAL 48VDC INPUT
- EMI MEETS EN 55022 / FCC CLASS B
- CE MARKING COMPLIANCE

#### **SPECIFICATION**

##### **INPUT SPECIFICATION**

**Input Voltage:** Typ. 36-72Vdc, nominal input 48Vdc  
**Input Connector:** Molex V-M  
**Input Current:** 1.4A @ nominal input 48Vdc  
**Dielectric Withstand:** Meets IEC950 regulation  
**EMI:** Meets EN55022 / FCC Class B  
**Overload Protection (OLP):** Fully protected against  
 output overload or short circuit  
 Typical 125-130% Max. load  
 Consult the factory for special OLP setting

##### **OUTPUT SPECIFICATION**

**Output Voltage:** See Ratings Chart  
**Output Current:** See Ratings Chart  
**Output Wattage:** Typ. 45W continuous  
**Output Connector:** Molex V-M  
**Line Regulation:** Typ. 0.1 - 0.5%  
**Load Regulation:** Main VO1 typ.  $\pm 1.0\%$   
 Aux. VO2 typ.  $\pm 2.0-3.0\%$ .(Stacked)  
 Aux. VO3 typ.  $\pm 1.0-2.0\%$ .(P.R.)  
**Noise & Ripple:** Typ. 1% peak to peak  
**OVP:** Built-in on Main VO1  
**Adjustability:** Available at Main VO1

##### **GENERAL SPECIFICATION**

**Efficiency:** Typ. 75%  
**Switching Frequency:** 55KHz  
**Circuit Topology:** Fixed Frequency Flyback Circuit  
**Transient Response:** Typ. 2 mS following a 25%  
 load change  
**Safety Standard:** IEC 950 / Class I  
**Power Density:** 3.1Watts / Cubic Inch

**Operating Temperature:** 0 to +50°C at full load,  
 De-rating to half @+ 70°C  
**Storage Temperature:** -40°C to +85°C  
**Temperature Coefficient:**  $\pm 0.04\%/^{\circ}\text{C}$   
**Cooling:** Convection cooling is adequate. Moving air is  
 recommended for operating in a confined area  
**Construction:** PCB open frame format

## OUTPUT VOLTAGE/CURRENT RATINGS CHART

### DUAL OUTPUT

| MODEL NO.          | MAIN VO1 @ ★ |       |      | AUX. VO2 † |       |      |      |
|--------------------|--------------|-------|------|------------|-------|------|------|
|                    | Typ.         | Volt. | Max. | Typ.       | Volt. | Max. | Peak |
| APS41DA-48B-D050I  | 4.0A         | +5.0V | 5.0A | 2.0A       | +12V  | 3.0A | 4.0A |
| APS41DC1-48B-D033E | 5.0A         | +3.3V | 6.0A | 5.0A       | +5V   | 6.0A | 6.0A |

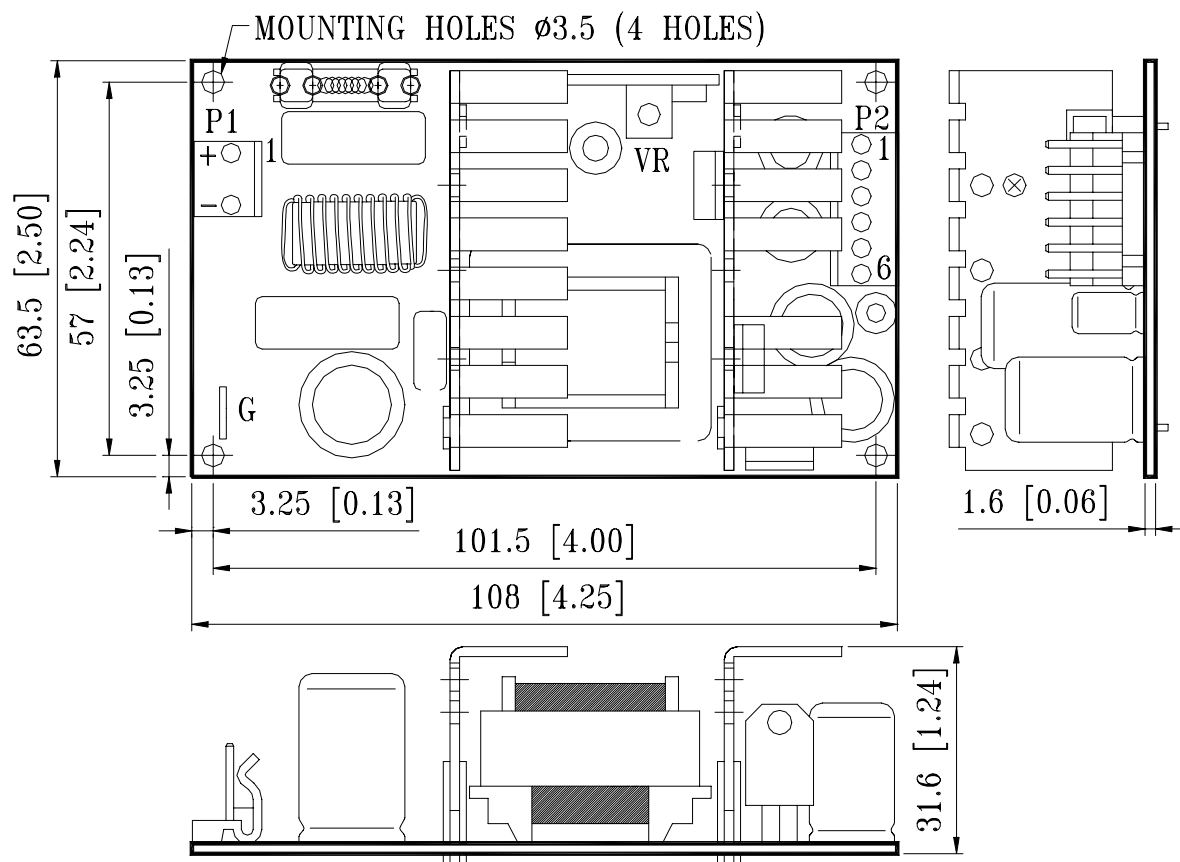
### TRIPLE OUTPUT

| MODEL NO.           | MAIN VO1 @ ★ |       |      | AUX. VO2 † |       |      |      | AUX. VO3 • |       |      |
|---------------------|--------------|-------|------|------------|-------|------|------|------------|-------|------|
|                     | Typ.         | Volt. | Max. | Typ.       | Volt. | Max. | Peak | Typ.       | Volt. | Max. |
| APS41DA-48B-T050II  | 4.0A         | +5.0V | 5.0A | 2.0A       | +12V  | 3.0A | 4.0A | 0.2A       | -12V  | 1.0A |
| APS41DC1-48B-T033EI | 5.0A         | +3.3V | 6.0A | 5.0A       | +5V   | 6.0A | 6.0A | 0.2A       | -12V  | 1.0A |

Symbol: "★" OVP built-in. "@" Adjustable. "†" Stacked on main output. "•" Installed with Post Regulator (PR).

### MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 170.0g (6.00 Oz.)



### INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

| ASSIGNMENT  | DC INPUT |      |     | DUAL/TRIPLE OUTPUT |      |      | DC COM |
|-------------|----------|------|-----|--------------------|------|------|--------|
|             | +Vin     | -Vin | Gnd | VO1                | VO2  | VO3  |        |
| CNTR & PIN# | P1-1     | P1-2 | GND | P2-2,3             | P2-1 | P2-6 | P2-4,5 |

Mating connector: Molex 5196 series or equivalent.