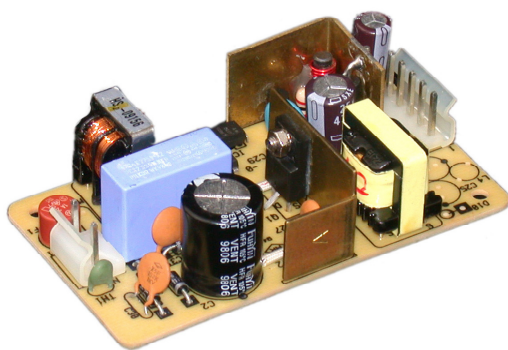


# • **HiTRON**

## **UNIVERSAL INPUT AC-DC PCB OPEN FRAME SINGLE & DUAL OUTPUT 13-15 WATTS INTERNAL SWITCHING POWER SUPPLIES HVI13 SERIES**



### **FEATURES:**

- ACCOMMODATE UNIVERSAL AC SOURCES
- LOW-PROFILE & COMPACT PCB FORMAT
- MEET UNIVERSAL SAFETY STANDARDS
- EMI MEET CISPR PUB. 22 & FCC CLASS B
- CE MARKING COMPLIANCE

### **SPECIFICATION**

#### **INPUT SPECIFICATION**

**Input Voltage:** Range typ. 90-264Vac.

Rating 100 to 240Vac.

**Input Connector:** Molex # 5045.

**Input Frequency:** 47-63Hz

**Inrush Current:** Typ. 26.0A @230Vac.

**Input Current:** Typ. 0.30A @115Vac, 0.15A@230Vac.

**Dielectric Withstand:** Meet IEC 60950-1.

**EMI:** Meet CISPR PUB. 22 & FCC Class B.

**Hold-up Time:** Typ. 10mS @115Vac, 40mS @230Vac.

**Earth Leakage:** Typ. 0.25mA @230Vac.

#### **OUTPUT SPECIFICATION**

**Output Voltage:** See Ratings Chart.

**Output Current:** See Ratings Chart.

**Output Wattage:** Typ. 13-15watts.

**Output Connector:** Molex # 5045.

**Line Regulation:** Typ. 0.1%.

**Load Regulation:** Main VO1 typ.  $\pm 2.0\%$ .

Aux. VO2 typ.  $\pm 5.0\%$  (stacked on).

**Noise & Ripple:** Typ. 1.0% peak to peak.

**OVP:** Built-in at VO1 (Zener diode).

**Adjustability:** Available at VO1.

**Overload Protection (OLP):**

Fully protected against output overload and short circuit.

OLP set at about 125-150% rating output wattage.

Consult the factory for OLP setting.

#### **GENERAL SPECIFICATION**

**Efficiency:** Typ. 70-80%.

**Switching Frequency:** 40 KHz.

**Circuit Topology:** Fixed Frequency Flyback Circuit.

**Transient Response:** Output voltage returns in less than 3mS following a 25% load change.

**Safety Standard:** IEC 60950-1/UL 60950-1 Class II.

**Operating Temperature:** 0 to +50°C.

**Storage Temperature:** -20 to +85°C.

**Temperature Coefficient:** Typ. 0.04%/°C.

**Cooling:** Free air convection.

**Construction:** PCB open frame format.

**Power Density:** 2.12 Watts / Cubic Inch.

Note: Due to requests in market and advances in technology, specifications subject to change without notification.



In application

## OUTPUT VOLTAGE / CURRENT RATINGS CHART

### SINGLE OUTPUT

| MODEL NO.     | MAIN VO1 ★ |       |      |
|---------------|------------|-------|------|
|               | Typ.       | Volt  | Peak |
| HVI13-S033030 | 3.0A       | 3.3V  | 3.7A |
| HVI13-S050028 | 2.8A       | 5.0V  | 3.4A |
| HVI13-S120012 | 1.2A       | 12.0V | 1.5A |
| HVI13-S150010 | 1.0A       | 15.0V | 1.2A |
| HVI13-S240006 | 0.6A       | 24.0V | 0.8A |
| HVI13-S480003 | 0.3A       | 48.0V | 0.4A |

### DUAL OUTPUT

| MODEL NO.   | MAIN VO1 ★ |       |      | AUX. VO2 † |       |      |
|-------------|------------|-------|------|------------|-------|------|
|             | Typ.       | Volt. | Max. | Typ.       | Volt. | Max. |
| HVI13-D033I | 2.5A       | +3.3V | 3.5A | 0.4A       | +12V  | 0.5A |
| HVI13-D033K | 2.5A       | +3.3V | 3.5A | 0.3A       | +15V  | 0.4A |
| HVI13-D033M | 2.5A       | +3.3V | 3.5A | 0.2A       | +24V  | 0.2A |
| HVI13-D050I | 2.0A       | +5.0V | 2.5A | 0.4A       | +12V  | 0.5A |
| HVI13-D050K | 2.0A       | +5.0V | 2.5A | 0.3A       | +15V  | 0.4A |
| HVI13-D050M | 2.0A       | +5.0V | 2.5A | 0.2A       | +24V  | 0.2A |

Symbol: "★" OVP built-in. "†" Stacked on main output.

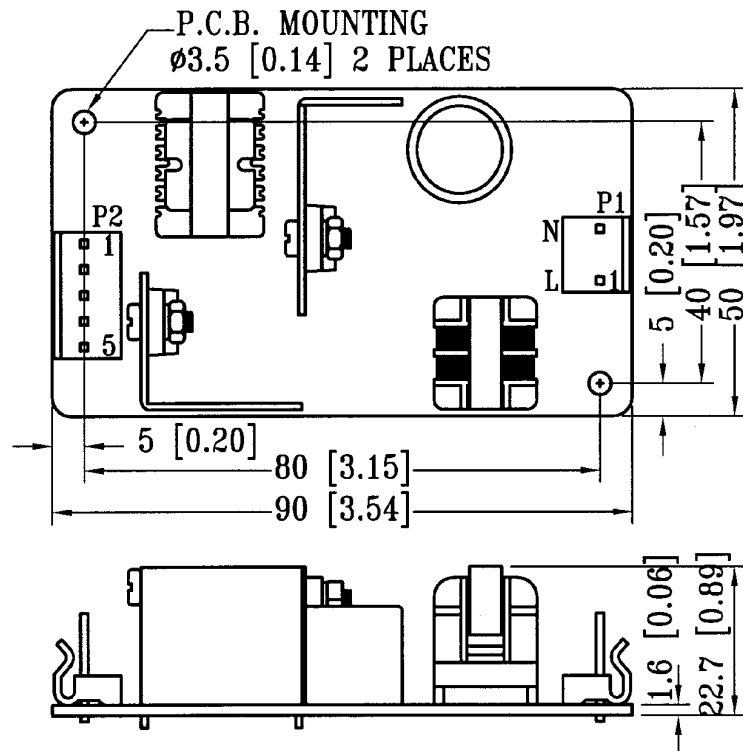
Remark: (1) At least 20% of typical main output current is required to maintain stated regulation.

(2) Peak output, less than 60 Sec. with 10% duty cycle.

(3) Max. current can't be drawn from all output at the same time.

## MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 62.0g (2.19 Oz.)



## INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

| ASSIGNMENT        | AC INPUT |            | SINGLE OUTPUT |        | DUAL OUTPUT |      |        |
|-------------------|----------|------------|---------------|--------|-------------|------|--------|
|                   | AC-LINE  | AC-NEUTRAL | +VO1          | DC-COM | VO1         | VO2  | DC-COM |
| CONNECTOR & PIN # | P1-L     | P1-N       | P2-4,5        | P2-1,2 | P2-4,5      | P2-3 | P2-1,2 |

Mating connector: Molex 5051series or equivalent.