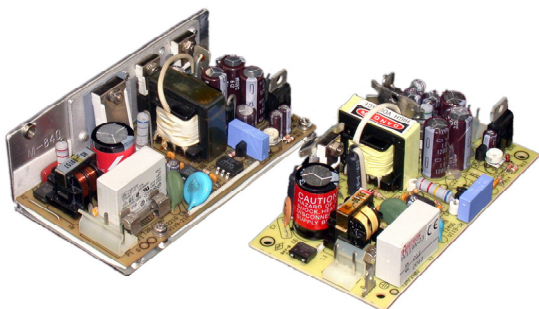


# • **HiTRON**

## **UNIVERSAL INPUT AC-DC OPEN FRAME SINGLE & MULTI-OUTPUT 19-20 WATTS INTERNAL SWITCHING POWER SUPPLIES HVI19 SERIES**



### **FEATURES:**

- ACCOMMODATE UNIVERSAL AC SOURCES
- COMPACT OPEN FRAME 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 5273(vertical).  
**Mating Connector:** Molex 5195 or equivalent.  
**Input Frequency:** 47-63Hz.  
**Inrush Current:** Typ. 20A @ 230Vac.  
**Input Current:** Typ. 0.70A @115Vac, 0.3A@230Vac.  
**Dielectric Withstand:** Meet IEC 60950-1.  
**EMI:** Meet CISPR PUB. 22 & FCC Class B.  
**Hold-up Time:** Typ. 40mS @115Vac, 150mS @230Vac.  
**Earth Leakage:** Less than 0.3mA @230Vac.

#### **OUTPUT SPECIFICATION**

**Output Voltage:** See Ratings Chart.  
**Output Current:** See Ratings Chart.  
**Output Connector:** Molex 5273 or 41671.  
**Mating Connector:** Molex 5195 or 3069.  
**Output Wattage:** PCB 19 watts, L-Bracket 25 watts.  
**Line Regulation:** Typ. 0.1%.  
**Load Regulation:** Main VO1 typ.  $\pm 1-2\%$   
Aux. VO2 typ.  $\pm 3-5\%$  (stacked on).  
Aux. VO3 typ.  $\pm 2-3\%$  (P.R.).  
**Noise & Ripple:** Typ. 1.0% peak to peak.  
**OVP:** Built-in at Main VO1.  
**Adjustability:** Available at Main 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%.  
**Switching Frequency:** 40K Hz.  
**Circuit Topology:** Free-running flyback circuit.  
**Transient Response:** Output voltage returns in less than 3ms following a 25% load change.  
**Power Density:** 1.26-1.58 Watts /Cubic Inch.  
**Operating Temperature:** 0 to +50 °C.  
**Storage Temperature:** -20 to +85 °C.  
**Temperature Coefficient:** Typ. 0.04% / °C.  
**Cooling:** Free air convection cooling.  
**Safety Standard:** UL 60950-1/EN 60950-1 Class I.  
**Construction:** PCB or L-Bracket format.

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



For the details of safety approval, please consult the factory.

## OUTPUT VOLTAGE / CURRENT RATINGS CHART

### SINGLE OUTPUT

| MODEL NO.     | MAIN VO1 @★ |       |      |
|---------------|-------------|-------|------|
|               | Typ.        | Volt. | Max. |
| HVI19-10      | 4.0A        | 5V    | 5.0A |
| HVI19-10(L-B) | 4.6A        | 5V    | 5.0A |
| HVI19-11      | 1.5A        | 12V   | 1.5A |
| HVI19-11(L-B) | 2.0A        | 12V   | 2.5A |
| HVI19-12      | 1.2A        | 15V   | 1.3A |
| HVI19-12(L-B) | 1.6A        | 15V   | 1.7A |
| HVI19-13      | 0.8A        | 24V   | 1.0A |
| HVI19-13(L-B) | 1.0A        | 24V   | 1.2A |

### DUAL OUTPUT

| MODEL NO.     | MAIN VO1 @★ |       |      | AUX. +VO2 † or -VO3 • |       |      |
|---------------|-------------|-------|------|-----------------------|-------|------|
|               | Typ.        | Volt. | Max. | Typ.                  | Volt. | Max. |
| HVI19-20      | 3.0A        | +5V   | 4.0A | 0.20A                 | -5V   | 1.0A |
| HVI19-20(L-B) | 4.0A        | +5V   | 5.0A | 0.50A                 | -5V   | 1.0A |
| HVI19-21      | 2.6A        | +5V   | 3.0A | 0.50A                 | ±12V  | 1.0A |
| HVI19-21(L-B) | 4.0A        | +5V   | 5.0A | 0.50A                 | ±12V  | 1.0A |
| HVI19-22      | 2.6A        | +5V   | 3.0A | 0.40A                 | ±15V  | 0.8A |
| HVI19-22(L-B) | 4.0A        | +5V   | 5.0A | 0.40A                 | ±15V  | 0.8A |
| HVI19-23      | 2.6A        | +5V   | 3.0A | 0.25A                 | +24V  | 0.5A |
| HVI19-23(L-B) | 4.0A        | +5V   | 5.0A | 0.25A                 | +24V  | 0.5A |

### TRIPLE OUTPUT

| MODEL NO.     | MAIN VO1 @★ |       |      | AUX. VO2 † |       |      | AUX. VO3 • |       |      |
|---------------|-------------|-------|------|------------|-------|------|------------|-------|------|
|               | Typ.        | Volt. | Max. | Typ.       | Volt. | Max. | Typ.       | Volt. | Max. |
| HVI19-30      | 2.2A        | +5V   | 3.0A | 0.5A       | +12V  | 1.0A | 0.2A       | -12V  | 0.5A |
| HVI19-30(L-B) | 3.0A        | +5V   | 4.0A | 0.5A       | +12V  | 1.0A | 0.4A       | -12V  | 0.8A |
| HVI19-31      | 2.0A        | +5V   | 3.0A | 0.5A       | +12V  | 1.0A | 0.2A       | -5V   | 0.5A |
| HVI19-31(L-B) | 3.0A        | +5V   | 4.0A | 0.7A       | +12V  | 1.5A | 0.3A       | -5V   | 0.6A |
| HVI19-32      | 2.0A        | +5V   | 3.0A | 0.3A       | +24V  | 0.5A | 0.2A       | -12V  | 0.5A |
| HVI19-32(L-B) | 3.0A        | +5V   | 4.0A | 0.3A       | +24V  | 0.5A | 0.3A       | -12V  | 0.6A |
| HVI19-33      | 2.0A        | +5V   | 3.0A | 0.3A       | +15V  | 0.6A | 0.2A       | -15V  | 0.5A |
| HVI19-33(L-B) | 3.0A        | +5V   | 4.0A | 0.4A       | +15V  | 0.8A | 0.3A       | -15V  | 0.6A |

Symbol: "★" OVP built-in. "@" Adjustable. "†" Stacked on main O/P. "•" Installed with Post Regulator (P.R.).

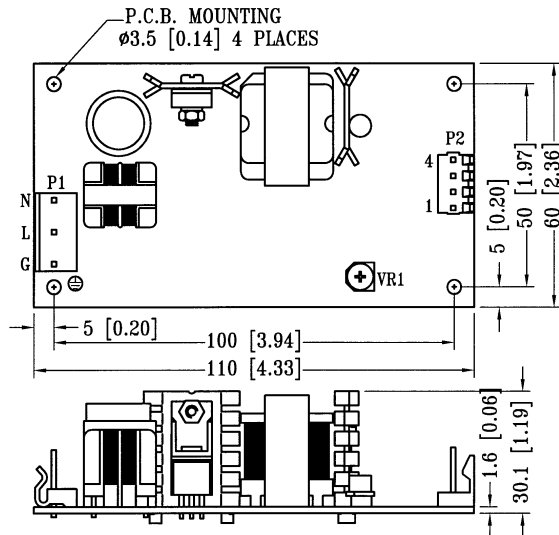
Remark: (1) At least 20% of typical main output current is required to maintain stated regulation.

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

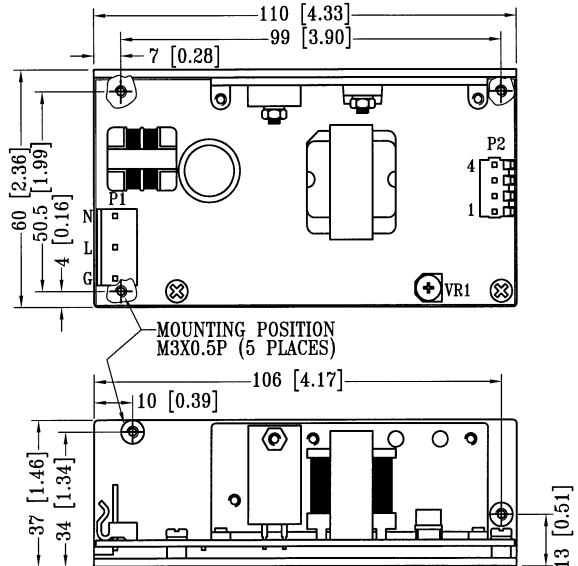
### MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: PCB 148.0g(5.2 Oz.)

L-B 223.0g(7.9 Oz.)



PCB FORMAT



L-B FORMAT

### INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

| ASSIGNMENT        | AC INPUT |      |      | SINGLE |        | SINGLE/DUAL/TRIPLE OUTPUT |      |      |        |
|-------------------|----------|------|------|--------|--------|---------------------------|------|------|--------|
|                   | AC-L     | AC-N | AC-G | VO1    | DC COM | VO1                       | VO2  | VO3  | DC COM |
| CONNECTOR or PIN# | P1-L     | P1-N | P1-G | P2-3,4 | P2-1,2 | P2-2                      | P2-3 | P2-4 | P2-1   |

Mating connector: P1 Molex 5195 or 5239 series.

P2 Molex 5195, 5239 or 3069 series.