

# HiTRON

**AUTO-RANGING INPUT HARMONIC CORRECTION  
AC-DC N+1 REDUNDANCY AND ACTIVE CURRENT SHARING  
OPEN FRAME SINGLE & MULTI-OUTPUT 350 WATTS  
INTERNAL SWITCHING POWER SUPPLIES HVP350 SERIES**



## FEATURES:

- ACCOMMODATE WORLD-WIDE AC SOURCES
- MEET IEC 61000-3-2 HARMONIC CORRECTION
- N+1 REDUNDANCY & CURRENT SHARING
- MEET UNIVERSAL SAFETY STANDARDS
- EMI MEET CISPR PUB. 22 CLASS A
- CE MARKING COMPLIANCE

## SPECIFICATION

### INPUT SPECIFICATION

**Input Voltage:** Auto-ranging input 115Vac(90-132Vac) and 230Vac(180-264Vac).

**Input Connector:** Molex Mini-Fit 42404-06.

**Input Frequency:** 47-63 Hz.

**Inrush Current:** Typ. 25A @ 230Vac(Active).

**Input Current:** Typ. 4.0A @ 115Vac, 2.0A @ 230Vac.

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

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

**Hold-up Time:** Typ. 7-8.5mS @ 115Vac/50mS @ 230Vac.

**Power Factor Correction & Harmonic Correction:**  
Meet IEC 61000-3-2, PF typ. 0.97-0.99 @ full load.

**Over Temperature Protection:** With thermostat.

**Earth Leakage:** Less than 1.0mA.

### OUTPUT SPECIFICATION

**Output Voltage:** See Ratings Chart.

**Output Current:** See Ratings Chart.

**Output Connector:** Molex Mini-Fit 42404-24.

**Output Wattage:** Typ. 350W under forced air flow.

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

**Load Regulation:** Main O/P VO1  $\pm 1-2.0\%$  typ.  
Aux. O/P VO2  $\pm 2-3\%$  typ. (Magnetic Amp).  
Aux. O/P VO3  $\pm 3-5.0\%$  typ. (P.R.).

**Noise & Ripple:** Typ. 1% peak to peak.

**OVP:** Built-in at O/P VO1 and VO2. (Latch type).

**Adjustability:** Available at VO1 & VO2 output.

**Remote Sense:** Available at O/P VO1 and VO2.

**Redundancy:** Available for N+1 redundant operation.

**Current Sharing:** Third-wire current sharing.

**OR-ing diodes:** Installed in all outputs.

**Power OK:** Installed.

**Overload Protection (OLP):** Fully protected against output overload and short circuit.  
Consult the factory for OLP setting.

### GENERAL SPECIFICATION

**Efficiency:** Typ. 71-77%.

**Switching Frequency:** Typ. 50K Hz.

**Circuit Topology:** PWM Fixed Frequency Forward Circuit.

**Transient Response:** Output voltage returns in typically 2mS following a 25% load change.

**Safety Standard:** UL 60950-1/EN 60950-1 Class I.

**Power Density:** 3.25Watts / Cubic Inch.

**Operating Temperature:** 0 to +50°C under 30 cfm forced air flow for full load.

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

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

**Cooling:** At least 30cfm forced cooling air flow for full load operation.

**Long Term Stability:** After 20 minute warm-up, 0.1% for 8 hours.

**Construction:** Enclosure box with handler.

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 (W/fan cooling)

| MODEL NO.      | MAIN VO1 @★#⊙≡ |       |
|----------------|----------------|-------|
|                | Typ.           | Volt. |
| HVP350-S033700 | 70.0A          | 3.3V  |
| HVP350-S050650 | 65.0A          | 5.0V  |
| HVP350-S120270 | 27.0A          | 12.0V |
| HVP350-S150220 | 22.0A          | 15.0V |
| HVP350-S240140 | 14.0A          | 24.0V |
| HVP350-S280120 | 12.0A          | 28.0V |
| HVP350-S360100 | 10.0A          | 36.0V |
| HVP350-S480075 | 7.5A           | 48.0V |

## DUAL OUTPUT (Under 30cfm forced air cooling)

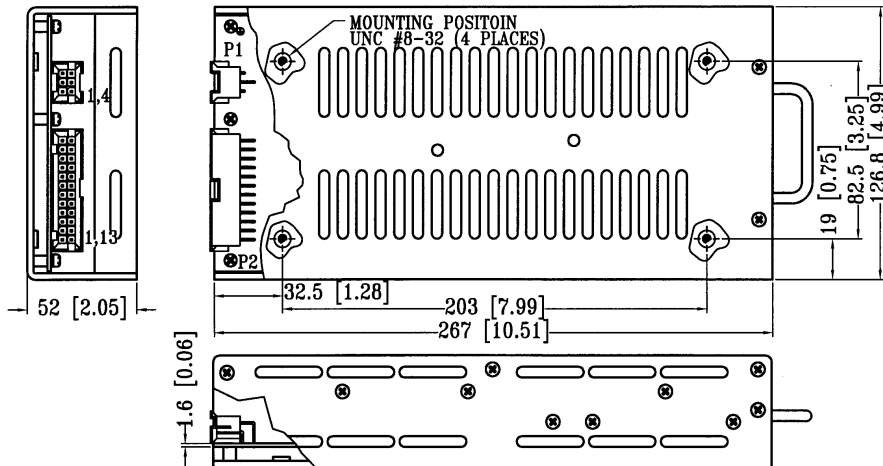
| MODEL NO.    | MAIN VO1 @★#≡⊙ |        | AUX. VO2 @★▲#≡⊙ |       |
|--------------|----------------|--------|-----------------|-------|
|              | Typ.           | Volt.  | Typ.            | Volt. |
| HVP350-D120E | 19.0A          | +12.0V | 24.0A           | +5.0V |
| HVP350-D150E | 15.5A          | +15.0V | 24.0A           | +5.0V |
| HVP350-D240E | 10.0A          | +24.0V | 24.0A           | +5.0V |
| HVP350-D050D | 35.0A          | +5.0V  | 24.0A           | +3.3V |
| HVP350-D120D | 15.0A          | +12.0V | 24.0A           | +3.3V |
| HVP350-D150D | 12.0A          | +15.0V | 24.0A           | +3.3V |

## TRIPLE OUTPUT (Under 30 cfm forced air cooling)

| MODEL NO.     | MAIN VO1 ⊙@★#≡ |        | AUX. VO2 @★⊙▲#≡ |       | AUX. -VO3 •⊙ |        |
|---------------|----------------|--------|-----------------|-------|--------------|--------|
|               | Typ.           | Volt.  | Typ.            | Volt. | Typ.         | Volt.  |
| HVP350-T120EI | 17.0A          | +12.0V | 23.0A           | +5.0V | 1.0A         | -12.0V |
| HVP350-T120EE | 17.0A          | +12.0V | 23.0A           | +5.0V | 1.0A         | -5.0V  |
| HVP350-T240EI | 8.5A           | +24.0V | 23.0A           | +5.0V | 1.0A         | -12.0V |
| HVP350-T150EK | 13.5A          | +15.0V | 23.0A           | +5.0V | 1.0A         | -15.0V |
| HVP350-T050DI | 30.0A          | +5.0V  | 30.0A           | +3.3V | 1.0A         | -12.0V |
| HVP350-T033DK | 35.0A          | +3.3V  | 25.0A           | +3.3V | 1.0A         | -15.0V |
| HVP350-T120DI | 20.0A          | +12.0V | 25.0A           | +3.3V | 1.0A         | -12.0V |
| HVP350-T150DK | 16.0A          | +15.0V | 25.0A           | +3.3V | 1.0A         | -15.0V |

Symbol: "★" OVP built-in. "≡" 3rd-wire current sharing. "@ " Adjustable. "▲" Installed with magnetic amplifier.  
 "•" Installed with Post Regulator (P.R.). "⊙" OR-ing diodes. "#" Remote sensing.

**MECHANICAL DIMENSIONS: MM [INCHES] WEIGHT: 1,872.0g (66.0 Oz.) for Enclosure box.  
 1,675.0g (59.0 Oz.) for U-Bracket.**



## INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

| ASSIGNMENT       | AC INPUT |      |      | SINGLE/ DUAL / TRIPLE OUTPUT |              |       |                              | ASSORTED SIGNALS |       |       |       |       |        |
|------------------|----------|------|------|------------------------------|--------------|-------|------------------------------|------------------|-------|-------|-------|-------|--------|
|                  | AC-L     | AC-N | AC-G | VO1                          | VO2          | VO3   | DC-COM                       | VO1#             | VO2#  | VO1≡  | VO2≡  | P.F.  | P.Good |
| CONNECTOR & PIN# | P1-3     | P1-5 | P1-1 | P2-1,2,3,4,5,13,14,15,16,17  | --           | --    | P2-6,7,8,9,10,18,19,20,21,22 | P2-11            | --    | P2-23 | --    | P2-12 | P2-24  |
| CONNECTOR & PIN# | P1-3     | P1-5 | P1-1 | P2-1,2,3,13,14               | P2-8,9,20,21 | --    | P2-4,5,6,7,15,16,17,18,19    | P2-11            | P2-10 | P2-23 | P2-22 | P2-12 | P2-24  |
| CONNECTOR & PIN# | P1-3     | P1-5 | P1-1 | P2-1,2,3,13,14               | P2-8,9,20,21 | P2-15 | P2-4,5,6,7,16,17,18,19       | P2-11            | P2-10 | P2-23 | P2-22 | P2-12 | P2-24  |

Mating connector: Molex # 42385-06& 42385-24.