

# 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)

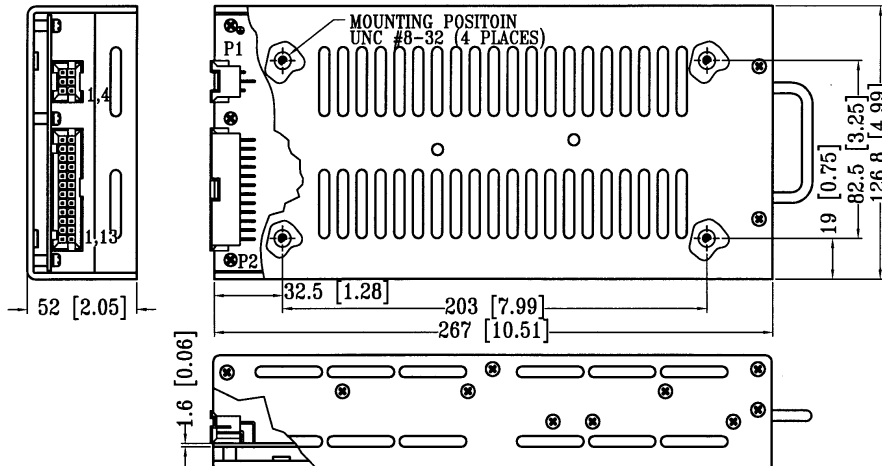
MODEL NO.	MAIN VO1 @ ★ # ≡		AUX. VO2 @ ★ ▲ # ≡	
	Typ.	Volt.	Typ.	Volt.
HVP350-D120E	19.0A	+12.0V	24.0A	+5.0V
HVP350-D150E	15.5A	+15.0V	24.0A	+5.0V
HVP350-D240E	10.0A	+24.0V	24.0A	+5.0V
HVP350-D050D	35.0A	+5.0V	24.0A	+3.3V
HVP350-D120D	15.0A	+12.0V	24.0A	+3.3V
HVP350-D150D	12.0A	+15.0V	24.0A	+3.3V

## 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.