

# HiTRON

## UNIVERSAL INPUT HARMONIC CORRECTION AC-DC N+1 REDUNDANCY AND ACTIVE CURRENT SHARING ENCLOSURE PLUG-IN BOX TRIPLE OUTPUT 500 WATTS INTERNAL SWITCHING POWER SUPPLIES HVP500 SERIES



### FEATURES:

- ACCOMMODATE UNIVERSAL AC SOURCES
- DUAL CONVERTER ARCHITECTURE
- MEET IEC 61000-3-2 HARMONIC CORRECTION
- HOT-SWAPPABLE/OR-ING DIODES FOR N+1 REDUNDANCY
- MEET UNIVERSAL SAFETY STANDARDS
- EMI MEET EN 55022 CLASS A
- CE MARKING COMPLIANCE

### SPECIFICATION

#### INPUT SPECIFICATION

**Input Voltage:** Typ. 90-264 Vac with PFC.  
**Input Connector:** IEC320-3P with On/Off Switch.  
**Input Frequency:** 47-63Hz.  
**Inrush Current:** Typ. 24.0A@230Vac (Active).  
**Input Current:** Typ. 7.0A@115Vac/ 3.5A@230Vac.  
**Dielectric Withstand:** Meet IEC 60950-1.  
**EMI:** Meet EN 55022 Class A.  
**Hold-up Time:** Typ. 28mS @ 115Vac & 230Vac.  
**Power OK Signal:** Available at VO1, VO2 & VO3.  
**Power Factor Correction:** Meet Harmonic Correction  
IEC 61000-3-2. PF typ. 0.97-0.98.  
**Over Temperature Protection:** By thermostat.  
**Power-On LED Indicator:** Installed.  
**Earth Leakage:** Less than 0.78mA@230Vac.

#### OUTPUT SPECIFICATION

**Output Voltage:** See Ratings Chart.  
**Output Current:** See Ratings Chart.  
**Output Connector:** Molex Mini-Fit 5569-24.  
**Output Wattage:** 500 watts max.  
**Line Regulation:** Typ. 0.1%.  
**Load Regulation:** Main VO1 typ.  $\pm 2.0\%$ .  
Main VO2 typ.  $\pm 2.0\%$ .  
Aux. VO3 typ.  $\pm 2.5\%$  (Magnetic Amp).  
**Noise & Ripple:** Typ. 1-2.0% peak to peak.  
**OVP:** Built-in at all outputs (Latch).  
**Over Current Protection:** Installed in all outputs.  
**Redundancy:** All three O/P available for N+1  
redundancy operation.  
**Current Sharing:** 3rd-wire current sharing for VO1,2.  
**OR-ing Diode:** Installed in VO1,2,3.  
**Adjustability:** Available at VO1,2,3.  
**Remote Sense:** Available at VO1 & VO2.  
**Overload Protection (OLP):** Fully protected against output  
overload or short circuit.  
Consult the factory for OLP setting.

#### GENERAL SPECIFICATION

**Efficiency:** Typ. 65-70%.  
**Switching Frequency:** Fixed frequency at 60K Hz.  
**Circuit Topology:** PWM fixed-frequency forward circuit.  
**Transient Response:** Output voltage returns in typ.  
0.3mS following a 25% load change.  
**Safety Standard:** UL 60950-1/EN 60950-1 Class I.  
**Hot Swappable:** Available.  
**Power Density:** 2.72 Watts/ Cubic Inch.  
**Operating Temperature:** 0 to +50°C.  
**Storage Temperature:** -20 to +85°C.  
**Temperature Coefficient:** Typ. 0.04% /°C.  
**Cooling:** Cooling fan installed inside.  
**MTBF:** About 60,000 hours at full load and 25°C condition  
by MIL-HDBK-217F spec.  
**Construction:** Enclosure box with cooling fan.

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



In application

## OUTPUT VOLTAGE / CURRENT RATINGS CHART

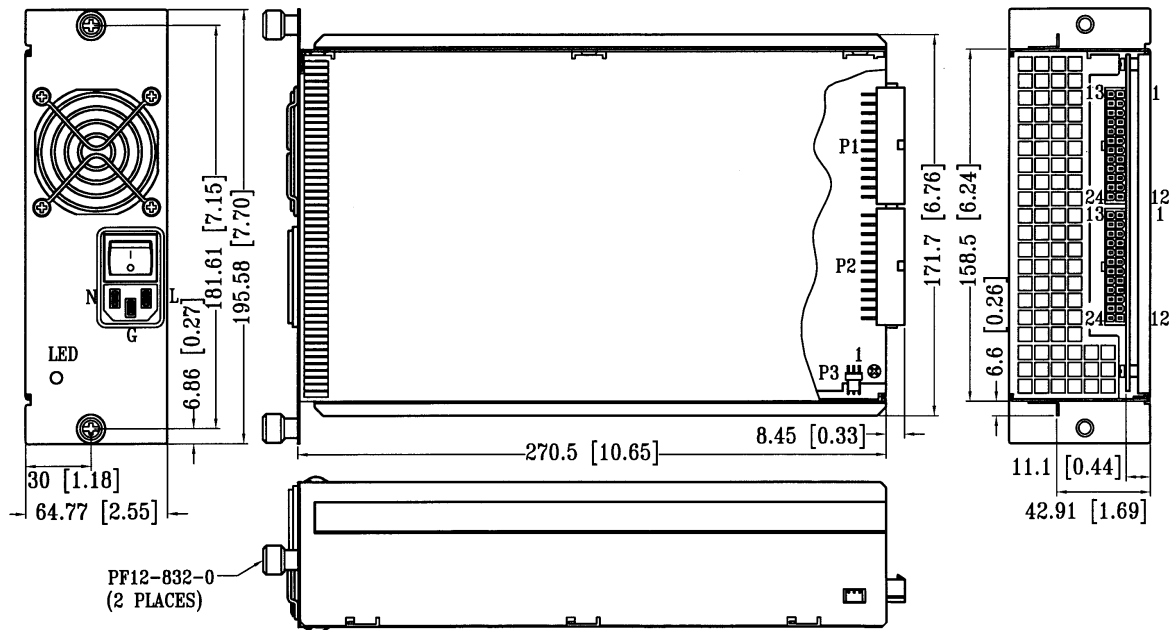
### TRIPLE OUTPUT

MODEL NO.	MAIN VO1 @★#≡⊙		MAIN +VO2 @★≡⊙#		AUX. +VO3 @★▲⊙	
	Typ.	Volt.	Typ.	Volt.	Typ.	Volt.
HVP500-T033EI	100.0A	+3.3V	25.0A	+5.0V	4.0A	+12.0V
HVP500-T033EK	100.0A	+3.3V	25.0A	+5.0V	3.2A	+15.0V
HVP500-T033EM	100.0A	+3.3V	25.0A	+5.0V	2.0A	+24.0V
HVP500-T050DI	75.0A	+5.0V	25.0A	+3.3V	4.0A	+12.0V
HVP500-T050DK	75.0A	+5.0V	25.0A	+3.3V	3.2A	+15.0V
HVP500-T050DM	75.0A	+5.0V	25.0A	+3.3V	2.0A	+24.0V

Symbol: "★" OVP built-in. "@" Adjustable. "⊙" Installed with OR-ing diode. "▲" Installed with magnetic amplifier. "≡" Active load sharing.  
 "#" Remote sense.

**MECHANICAL DIMENSIONS: MM [INCHES]**

**WEIGHT: 3,500.0g. (7.72 lb.)**



### INPUT & OUTPUT CONNECTORS PIN ASSIGNMENTS

ASSIGNMENT	AC INPUT			TRIPLE OUTPUT				ASSORTED SIGNAL									
	AC-L	AC-N	AC-G	VO1	VO2	VO3	DC COM	P.OK	+VO1≡	+VO2≡	VO1+#	VO1-#	VO2+#	VO2-#	+VO1 MSR	+VO2 MSR	+VO3 MSR
CONNECTOR & PIN #	L	N	G	P1-1~4,12~15,23,24 P2-1,2,13,14	P2-3,4,15,16	P2-20,21	P1-5~11,16~22 P2-5,6,7,8,17,18,19	P2-10	P2-11	P2-24	P2-9	P2-12	P2-22	P2-23	P3-1	P3-2	P3-3

Mating connector: Molex 5557-24 or 42358-24.

Remark: <MSR> means output measurement Point.