

# HiTRON

## UNIVERSAL INPUT HARMONIC CORRECTION AC-DC HOT SWAPPABLE N+1 REDUNDANCY AND ACTIVE CURRENT SHARING OPEN FRAME QUAD OUTPUT 350 WATTS INTERNAL SWITCHING POWER SUPPLIES HVP351 SERIES



### FEATURES:

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

### SPECIFICATION

#### INPUT SPECIFICATION

**Input Voltage:** Typ. 90-264Vac with PFC.  
**Main On/Off Switch:** Installed.  
**Input Connector:** Positronic PCIH47M400A1.  
**Input Frequency:** 47-63Hz.  
**Inrush Current:** Typ. 16A @ 230Vac (active).  
**Input Current:** Typ. 4.0A @ 115Vac, 2.0A @ 230Vac.  
**Dielectric Withstand:** Meet IEC 60950-1.  
**EMI:** Meet EN 55022 CISPR PUB.22 & FCC Class A.  
**Power Factor Correction:** Meet IEC 61000-3-2 Harmonic correction. PF typ. 0.96- 0.99.  
**Hold-up Time:** Typ. 20mS @ 115 & 230Vac.  
**Power Fail/Good Signal:** LED indications.  
**Over Temp. Protection (OTP):** By thermostat.  
**Earth Leakage:** Less than 0.65mA.

#### OUTPUT SPECIFICATION

**Output Voltage:** See Ratings Chart.  
**Output Current:** See Ratings Chart.  
**Output Connector:** Positronic PCIH47M400A1.  
**Output Wattage:** Typ. 350W with forced air flow.  
**Line Regulation:** Typ. 0.1%.  
**Load Regulation:** Main VO1 ±1.0%.  
 Aux. VO2 & VO3 ±2.0% (Magnetic Amp.).  
 Aux. VO4: ±5.0%. (Post Regulator).  
**Noise & Ripple:** Typ. 1% peak to peak.  
**OVP:** Available at VO1/VO2/VO3 (Latch).  
**Remote Sense:** Available at VO1/VO2/VO3 rails.  
**N+1 Redundancy:** Installed with internal OR-ing diodes at VO1,2 & 3 for N+1 redundant Operation.  
**Current Sharing:** 3rd-wire load sharing at VO1,2,3 rails.  
**OR-ing diode:** Built-in at VO1/VO2/VO3 rails.  
**Adjustability:** Available at VO1/VO2/VO3 rails.  
**Over Current Protection:** Installed in VO1/VO2/VO3 rails.  
**DC OK Signal:** Available at VO1/VO2/VO3 rails.  
**Overload Protection (OLP):** Fully protected against output overload and short circuit.  
 Consult the factory for special OLP setting.

#### GENERAL SPECIFICATION

**Efficiency:** Typ. 65-70%.  
**Switching Frequency:** 80K Hz.  
**Circuit Topology:** PWM fixed-frequency forward circuit.  
**Transient Response:** Output voltage returns in less than 3mS following a 25% load change.  
**Safety Standard:** UL 60950-1/EN 60950-1 Class I.  
**Hot Swappable:** Available.  
**Power Density:** 3.25Watts /Cubic Inch.

**Operating Temperature:** 0 to +50°C under 30 cfm forced air cooling for full load.  
**Storage Temperature:** -20 to +85 °C.  
**Temperature Coefficient:** Typ. 0.04% /°C.  
**Cooling:** Required 30 cfm forced air flow  
**Construction:** Enclosure box or U-bracket.  
**Hot Swappable (Insertion):** Installed.

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



In application

# OUTPUT VOLTAGE / CURRENT RATINGS CHART

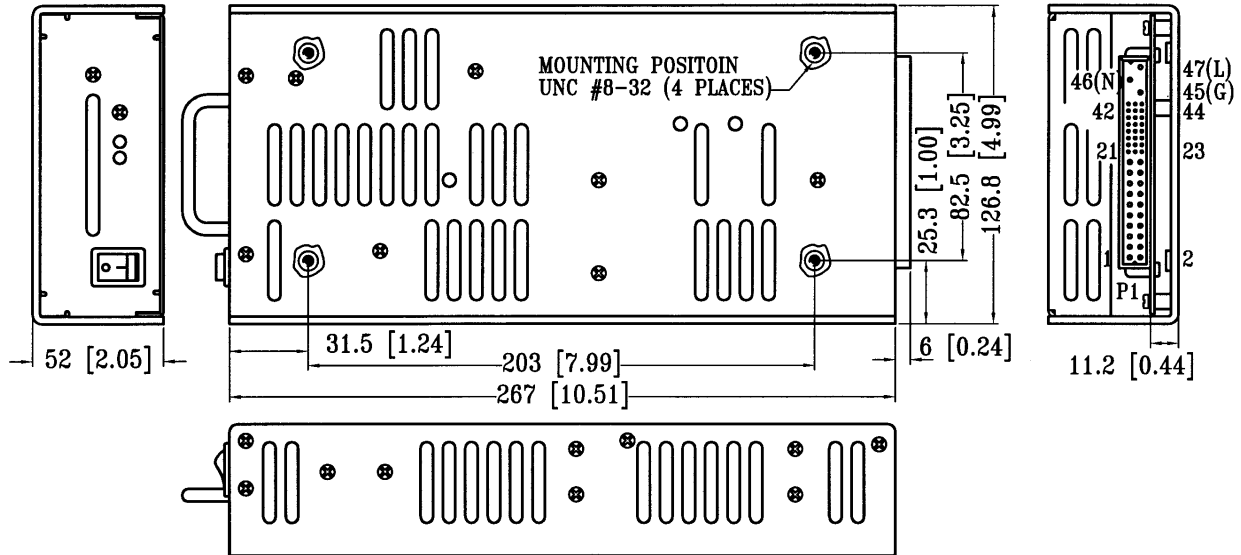
## QUAD OUTPUT (Under 30 cfm forced air flow)

MODEL NO.	MAIN VO1 @★#≡⊙		AUX. VO2 @★#≡▲⊙		AUX. VO3 @★≡⊙▲#		AUX. VO4 ●	
	Typ.	Volt.	Typ.	Volt.	Typ.	Volt.	Typ.	Volt.
HVP351-Q033BEI	35.0A	+3.3V	40.0A	+1.8V	16.0A	+5.0V	2.0A	+12V
HVP351-Q050DBI	35.0A	+5.0V	30.0A	+3.3V	16.0A	+1.8V	2.0A	+12V
HVP351-Q050DII	35.0A	+5.0V	30.0A	+3.3V	6.0A	+12V	2.0A	+12V
HVP351-Q050DMI	35.0A	+5.0V	30.0A	+3.3V	3.0A	+24V	2.0A	+12V

Symbol: "★" OVP built-in. "@" Adjustable. "●" Installed with Post Regulator(PR). "#" Remote sensing. "⊙" Installed with OR-ing diode.  
 "▲" Installed with magnetic amplifier. "≡" Active circuit current sharing.

## MECHANICAL DIMENSIONS: MM [INCHES]

**WEIGHT:** 2.1Kg (4.4 lb.)



## INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

ASSIGNMENT	AC INPUT			QUAD OUTPUT					ASSORTED SIGNALS											
	AC-LINE	AC-NEUTRAL	AC-GROUND	VO1	VO2	VO3	VO4	DC COM	VO1≡	-VO1#	+VO1#	VO2≡	-VO2#	+VO2#	VO3≡	-VO3#	+VO3#	Power Good	Power Fail	DC COM
CNTR & PIN#	47	46	45	3,4,5,6	17,18,19,20	1,2	8	7,9,10,11,12,13,14,15,16	27	33	30	24	34	28	21	25	22	23	31	26,29,32,35,36,37,38

Mating connector: PCIH47F400A1.