

# HiTRON

## UNIVERSAL INPUT HARMONIC CORRECTION AC-DC OPEN FRAME SINGLE & MULTI-OUTPUT 100 WATTS INTERNAL SWITCHING POWER SUPPLIES HVP101 SERIES



### FEATURES:

- ACCOMMODATE UNIVERSAL AC SOURCES
- PCB VERSION FORMAT
- MEET IEC 61000-3-2 HARMONIC CORRECTION
- MEET UNIVERSAL SAFETY STANDARDS
- EMI MEET CISPR PUB. 22 & FCC CLASS B
- CE MARKING COMPLIANCE

### SPECIFICATION

#### INPUT SPECIFICATION

**Input Voltage:** Typ. 90-264Vac with PFC.  
**Input Connector:** V-M connector & GND tag.  
**Input Frequency:** 47-63Hz.  
**Inrush Current:** Typ. 29A@230Vac.  
**Input Current:** Typ. 1.3A @115Vac, 0.65A @230Vac.  
**Dielectric Withstand:** Meet IEC 60950-1.  
**EMI:** Meet CISPR EN 55022 & FCC Class B.  
**Hold-up Time:** Typ. 18-25mS @ 115Vac & 230Vac.  
**Power Factor & Harmonic Correction:**  
Meet IEC 61000-3-2, PF typ. 0.97-0.99 @ full load.  
**Power OK:** Installed in VO1 & VO2.  
**Over Temperature Protection (OTP):** By NTC at quad output only.  
**Earth Leakage:** Less than 0.75mA @230Vac.

#### OUTPUT SPECIFICATION

**Output Voltage:** See Ratings Chart.  
**Output Current:** See Ratings Chart.  
**Output Connector:** V-M connector.  
**Output Wattage:** Typ. 100 Watts.  
**Line Regulation:** Typ. 0.1%.  
**Load Regulation:** Main VO1 typ.  $\pm 1-2\%$ .  
Aux. VO2 typ.  $\pm 1-2\%$  (Magnetic Amp.).  
Aux. VO3 typ.  $\pm 1-2\%$  (Magnetic Amp.).  
Aux. VO4 typ.  $\pm 2-3\%$  (P.R.).  
**Noise & Ripple:** Typ. 1% peak to peak.  
**OVP:** Built-in at main VO1 & Aux. VO2 & VO3 (latch).  
**Remote Sensing:** Available at VO1 & VO2.  
**Adjustability:** Available at VO1, VO2 & VO3.  
**Over Current Protection:** Built-in at all output.  
**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. 75-80%.  
**Switching Frequency:** PFC ckt. 75K Hz.  
PWM ckt. 170-180K Hz.  
**Circuit Topology:** Fixed frequency forward circuit.  
**Transient Response:** Output voltage returns in less than 0.3mS following a 25% load change.  
**Safety Standard:** IEC 60950-1/UL 60950-1 Class I.  
**Operating Temperature:** 0 to +50°C under forced air flow for full load.  
**Storage Temperature:** -20 to +85°C.  
**Temperature Coefficient:** 0.04% /°C.  
**Cooling:** At least 30 cfm direct forward air flow is required to achieve full rating power.  
**Construction:** PCB format.  
**Power Density:** 5.6 Watts / Cubic Inch.

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 (Under forced air flow)

MODEL NO.	MAIN VO1 ★@#		
	Typ.	Volt.	Peak
HVP101-S033200	20.0A	3.3V	25.0A
HVP101-S050160	16.0A	5.0V	20.0A
HVP101-S120085	8.5A	12.0V	9.0A
HVP101-S150068	6.8A	15.0V	7.0A
HVP101-S240042	4.2A	24.0V	6.0A
HVP101-S280036	3.6A	28.0V	5.0A
HVP101-S360028	2.8A	36.0V	4.0A
HVP101-S480021	2.1A	48.0V	3.0A

### DUAL OUTPUT (Under forced air flow)

MODEL NO.	MAIN VO1 ★@#		AUX. VO2 ▲#	
	Typ.	Volt.	Typ.	Volt.
HVP101-D050E	12.0A	+5.0V	6.0A	+5.0V
HVP101-D050I	12.0A	+5.0V	4.0A	+12.0V
HVP101-D050K	12.0A	+5.0V	3.0A	+15.0V
HVP101-D050D	12.0A	+5.0V	8.0A	+3.3V
HVP101-D033I	15.0A	+3.3V	4.0A	+12.0V
HVP101-D033K	15.0A	+3.3V	3.0A	+15.0V

### QUAD OUTPUT (Under forced air flow)

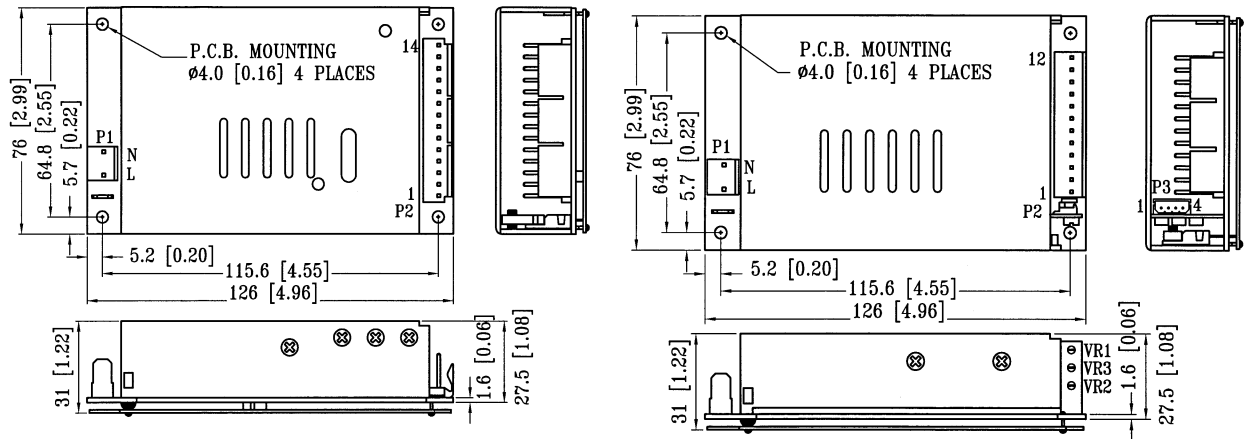
MODEL NO.	MAIN VO1 ★@#		AUX. VO2 ★@▲#		AUX. VO3 ★@▲		AUX. VO4 ●	
	Typ.	Volt	Typ.	Volt	Typ.	Volt	Typ.	Volt
HVP101-Q050DII	12.0A	+5.0V	6.0A	+3.3V	1.5A	+12V	0.5A	-12V
HVP101-Q050DIE	12.0A	+5.0V	7.0A	+3.3V	1.5A	+12V	0.5A	-5V
HVP101-Q050MII	10.0A	+5.0V	1.5A	+24.0V	1.5A	+12V	0.2A	-12V
HVP101-Q050KIE	10.0A	+5.0V	2.5A	+15.0V	1.5A	+12V	0.4A	-5V
HVP101-Q050KII	8.0A	+5.0V	2.5A	+15.0V	2.0A	+12V	0.2A	-12V

Symbol: "★" OVP built-in. "@" Adjustable. "#" Remote sense. "●" Installed with Post Regulator. "▲" Installed with magnetic amplifier.

Remark: Peak output, less than 60 Sec. with 10% duty cycle.

### MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 368.0g(12.97 Oz.)



SINGLE/DUAL OUTPUT

QUAD OUTPUT

### INPUT & OUTPUT CONNECTORS PIN ASSIGNMENTS

ASSIGNMENT	AC INPUT			SINGLE OUTPUT				DUAL OUTPUT					QUAD OUTPUT									
	L	N	GND	VO1	DC COM	+VO1#	P.OK	VO1	VO2	DC COM	+VO1#	+VO2#	P.OK	VO1	DC COM	VO2	VO3	VO4	VO1+#	VO2+#	VO1.2-#	P. OK
CONNECTOR & PIN #	P1-3	P1-1	Tab	P2-6,7,8, 9,10,11	P2-1,2, 3,4,5	P2-13	P2-14	P2-9, 10,11	P2-6, 7,8	P2-1,2, 3,4	P2-13	P2-12	P2-14	P2-1,2, 3,4	P2-5,6 7,8	P2-9,10	P2-11	P2-12	P3-3	P3-4	P3-1	P3-2

Matting connector: Molex 5195 or 5239 series.