

# HiTRON

## UNIVERSAL AC INPUT HARMONIC CORRECTION AC-DC HOT-SWAP CompactPCI QUAD OUTPUT 301 WATTS ACTIVE CURRENT SHARING SWITCHING POWER SUPPLIES HAC301P SERIES



### FEATURES:

- 300W 3U X 8HP EUROCARD PACKAGE
- MEET IEC 61000-3-2 HARMONIC CORRECTION
- INTERNAL OR-ING DIODES FOR N+1 REDUNDANCY
- HOT-SWAPPABLE
- THIRD-WIRE CURRENT SHARING
- EMI MEET EN 55022 / FCC CLASS B
- CE MARKING COMPLIANCE
- FULLY COMPLIANT WITH PICMG

### SPECIFICATION

#### INPUT SPECIFICATION

**Input Voltage:** Typ. 90-264Vac.  
**Power Factor Correction:** Meet Harmonic Correction IEC 61000-3-2. Power Factor typ. 0.98-0.99.  
**Input Connector:** Positronic 47-pin PCIH47M400A1.  
**Input Frequency:** 47-63Hz.  
**Inrush Current:** 6.96Arms @ 230Vac.  
**Input Current:** 3.34A @115Vac/1.63A @230Vac.  
**Dielectric Withstand:** Meet IEC 60950-1 regulation.  
**EMI:** Meet EN 55022 / FCC Class B.  
**Hold-up Time:** 18.4ms @115Vac/230Vac.  
**Earth Leakage:** Less than 0.5mA @230Vac.  
**Remote ON/OFF:** Available at [INH#] & [EN#] pins.  
**Power Fail Signal:** Available at [FAL#] pin.  
**Status LED:** <Green> means valid input voltage.  
<Amber> means a critical fault.  
**Thermal Protection (OTP):** Installed NTC and thermostat for thermal sensor at [DEG#] pin.

#### OUTPUT SPECIFICATION

**Output Voltage:** See Ratings Chart.  
**Output Current:** See Ratings Chart.  
**Output Wattage:** Typ. 300W continuous.  
**Output Connector:** Positronic 47-pin PCIH47M400A1.  
**Line Regulation:** Typ. 0.5%.  
**Load Regulation:** Typ.  $\pm 1-5\%$ .  
**Noise & Ripple:** Typ. 1% peak to peak or 50mV, whichever is greater.  
**OVP:** Built-in at all outputs.  
**Adjustability:** Available at VO1,2&3.  
**Volt. Tolerance:** VO1/2 typ. 1%, VO3 typ. 3%, VO4 typ. 5%.  
**Remote Sensing:** Available at VO1, VO2 & VO3.  
**Hot-Swap:** Available.  
**N+1 Redundancy:** Installed with internal OR-ing diodes at all outputs for N+1 redundancy operation.  
**Current Sharing:** Third-wire current sharing at VO1,2 &3.  
**Power OK Signal:** Available for all output.  
**Over Current Protection (OCP):** Installed at each rail.  
**Overload Protection (OLP):** Fully protected against output overload or short circuit. Typical 105-130% max. load. Consult the factory for special OLP setting.

#### GENERAL SPECIFICATION

**Efficiency:** Typ. 78-83 %.  
**Switching Frequency:** 120K Hz.  
**Circuit Topology:** Forward circuit.  
**Transient Response:** Peak transient less than 200mV and recovers within 0.5mS after 25% load-change.  
**Safety Standard:** IEC 60950-1 Class I.  
**Construction:** Eurocard 3U X 8HP X 160mm CompactPCI format.

**Operating Temperature:** 0 to +50 °C at full load with specified air flow. Derates linearly to 50% at +70 °C.  
**Storage Temperature:** -40 to +85 °C.  
**Temperature Coefficient:** Typ.  $\pm 0.02\% / ^\circ\text{C}$ .  
**Cooling:** At least 60CFM(800 LFM) moving air is required to achieve full rating power 300W in a confined area.  
**Power Density:** 7.7 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

## QUAD OUTPUT

MODEL NO.	MAIN +VO1 @★#≡⊙					AUX. +VO2 ▲@★#≡⊙※					AUX. +VO3 ▲≡#⊙★@					AUX. -VO4 ⊙★▲				
	Min.	Typ.	Volt.	Max.	Pk.	Min.	Typ.	Volt.	Max.	Pk.	Min.	Typ.	Volt.	Max.	Pk.	Min.	Typ.	Volt.	Max.	Pk.
HAC301P-490(E)	0A	25A	+5V	40A	45A	0A	25A	+3.3V	40A	45A	0A	7A	+12V	10A	12A	0A	1A	-12V	2A	2A

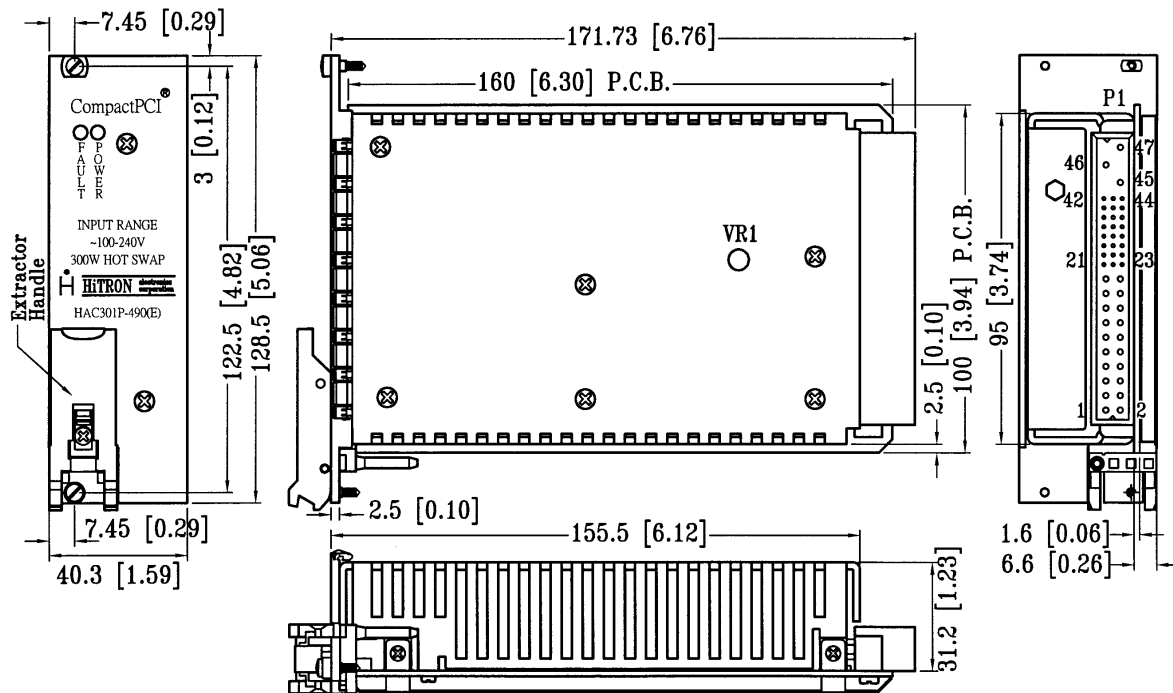
Symbol: "★" OVP built-in. "@" Adjustable. "#" Remote sensing. "≡" 3rd-wire Load Sharing. "=" Droop Current Sharing.  
 "⊙" Installed with Or-ing diode. "▲" Magnetic Amplifier. "※" Synchronous Rectifier.

Remark: Peak load less than 60sec. with duty cycle <10%.

Max. load is the continuous operating load of each rail. But the max. load of each rail can't be drawn from all outputs at the same time.

## MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 666.0 g (23.5 Oz.)



## INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

ASSIGNMENT	AC INPUT			QUAD OUTPUT												STATUS/CONTROL					
	L	N	G	VO1	S+	S-	Adj.	C.S.	VO2	S+	Adj.	C.S.	VO3	S+	C.S.	VO4	DC COM	EN#	DEG#	INH#	FAL#
CNTR & PIN #	47	46	45	1,2,3,4	30	34	29	35	13,14,15,16,17,18	33	32	41	20	36	44	21	5,6,7,8,9,10,11,12,19,22,24	27	38	39	42

Mating connector: PCIH47F400A1.