



Total Power International, Inc.

UNIVERSAL AC INPUT HARMONIC CORRECTION AC-DC HOT-SWAP CompactPCI QUAD OUTPUT 301 WATTS ACTIVE CURRENT SHARING SWITCHING POWER SUPPLIES TPAC301P 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 at 230Vac.
Input Current: 3.34A at 115Vac/1.63A at 230Vac.
Dielectric Withstand: Meet IEC 60950-1 regulation.
EMI: Meet EN 55022 / FCC Class B.
Hold-up Time: 18.4mS at 115Vac/230Vac.
Earth Leakage Current: Less than 0.5mA at 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%.
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: (1)All measurement are at nominal input, full load and +25°C unless otherwise specifications.

(2)Due to requests in market and advances in technology, specifications subject to change without notification.



For the details of safety approval, please consult the factory



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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.
TPAC301P-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.

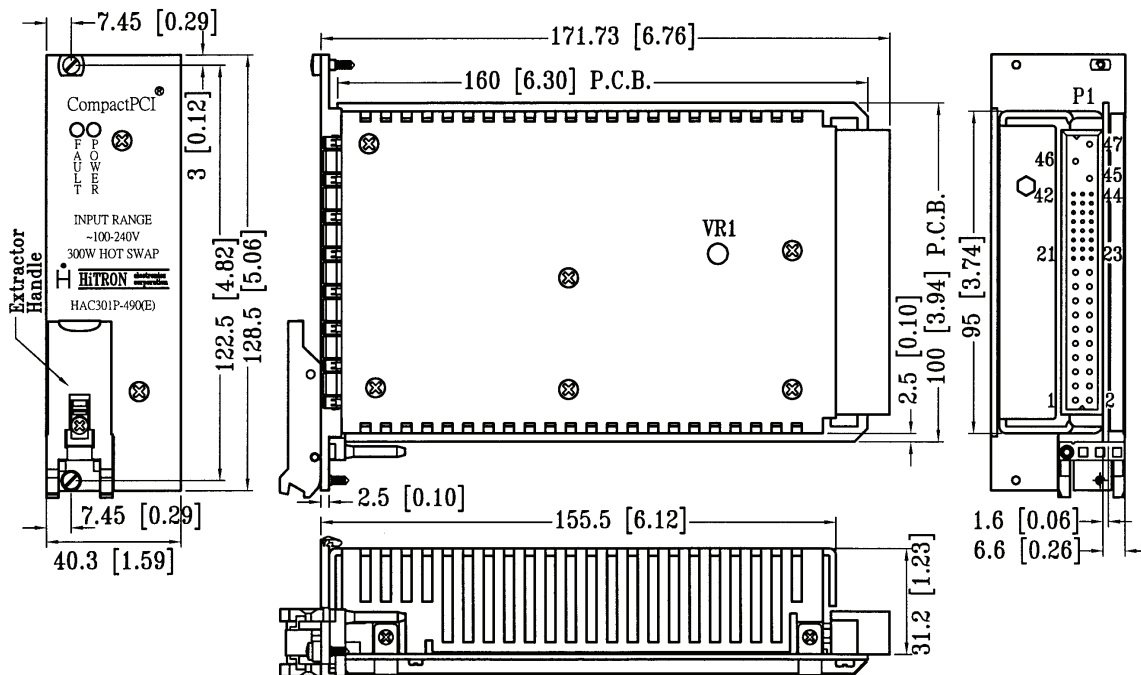
"⊙" Installed with Or-ing diode. "▲" Magnetic Amplifier. "※" Synchronous Rectifier.

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.