

# TOTAL POWER INT'L

## UNIVERSAL AC INPUT HARMONIC CORRECTION AC-DC HOT-SWAP CompactPCI QUAD OUTPUT 200 WATTS ACTIVE CURRENT SHARING SWITCHING POWER SUPPLIES TPAC200P SERIES



### FEATURES:

- 200W 3U X 8HP EUROCARD PACKAGE
- MEET IEC1000-3-2 HARMONIC CORRECTION
- INTERNAL OR-ING DIODES FOR N+1 REDUNDANCY
- HOT-SWAPPABLE
- THIRD-WIRE CURRENT SHARING
- EMI MEET EN 55022 / FCC CLASS A
- CE MARKING COMPLIANCE
- FULLY COMPLIANT WITH PICMG

### SPECIFICATION

#### INPUT SPECIFICATION

**Input Voltage:** Typ. 90-264Vac.  
**Power Factor Correction:** Meet Harmonic Correction IEC1000-3-2. Power Factor typ. 0.96-0.98.  
**Input Connector:** Positronic 47-pin PCIH47M400A1.  
**Input Frequency:** 47-63Hz.  
**Inrush Current:** Less than 30.6A @ 230Vac.  
**Input Current:** 2.3A @115Vac/1.2A @230Vac.  
**Dielectric Withstand:** Meet IEC950 regulation.  
**EMI:** Meet EN55022 / FCC Class A.  
**Hold-up Time:** 10mS after power fail signal.  
**Turn-on Delay/Rise Time:** 1 Sec./20 mS.  
**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.  
**Leakage Current:** Typ. 0.5A.  
**Power OK Signal:** Available at all output.  
**Over Current Protection (OCP):** Installed in each rail.

#### OUTPUT SPECIFICATION

**Output Voltage:** See Ratings Chart.  
**Output Current:** See Ratings Chart.  
**Output Wattage:** Typ. 200W continuous.  
**Output Connector:** Positronic 47-PIN PCIH47M400A1 connector.  
**Line Regulation:** Typ. 0.1%.  
**Load Regulation:** VO1 & VO2 typ.  $\pm 1.0\%$ .  
VO3 & VO4 typ.  $\pm 2.0\%$ .  
**Noise & Ripple:** Typ. 1% peak to peak or 50mV, which is greater.  
**OVP:** Built-in at all outputs.  
**Adjustability:** Available at VO1,2&3.  
**Output Trim:** Electrical trim available at VO1&2. [ADJ #].  
**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.  
**Overload Protection (OLP):** Fully protected against output overload or short circuit. Typ. set at 130% max. load. Consult the factory for special OLP setting.

#### GENERAL SPECIFICATION

**Efficiency:** Typ. 76-79 %.  
**Switching Frequency:** 130K Hz.  
**Circuit Topology:** Forward circuit.  
**Transient Response:** Peak transient less than 100mV and recovers within 3mS after 25% load-change.  
**Safety Standard:** IEC60950 Class I.  
**Construction:** Eurocard 3U X 8HP X 160mm CompactPCI format. Front Panel with either Ordinary handle or Extractor handle.

**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 20cfm (600 lfm) moving air is required to achieve full rating power 200W in a confined area.  
**Power Density:** 3.73 Watts/ Cubic Inch.

Remark: All measurements are at nominal input, full load and +25°C unless otherwise specifications.



In application

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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.	Typ.	Volt.	Max.	Typ.	Volt.	Max.	Peak	Typ.	Volt.	Max.	Peak.
TPAC200P-490(E)	2.0A	25.0A	+5V	33.0A	10.0A	+3.3V	33.0A	3.0A	+12V	5.0A	6.0A	0.5A	-12V	1.0A	1.0A
TPAC200P-490(O)	2.0A	25.0A	+5V	33.0A	10.0A	+3.3V	33.0A	3.0A	+12V	5.0A	6.0A	0.5A	-12V	1.0A	1.0A

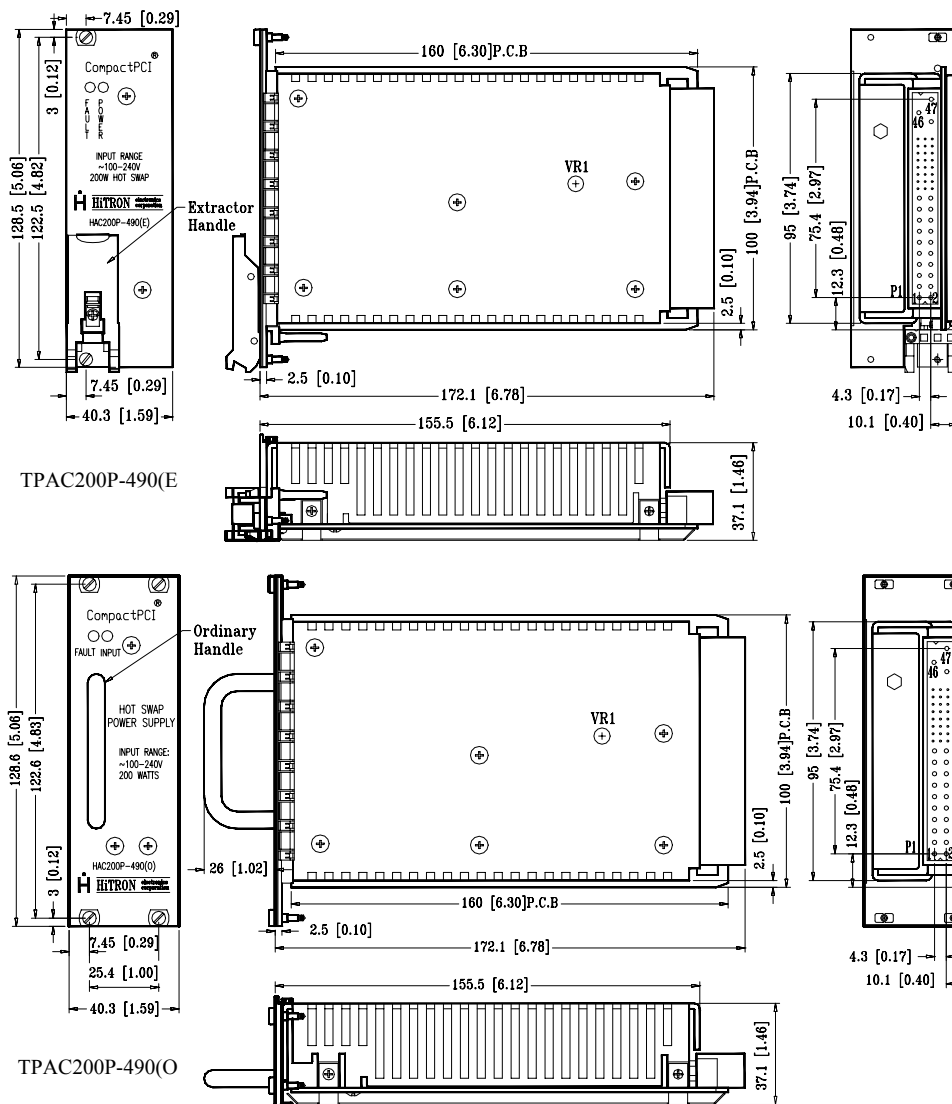
Symbol: "★" OVP built-in. "@" Adjustable. "#" Remote sensing. "≡" 3rd-wire Load Sharing. "=" Droop Current Sharing.  
 "○" Installed with Or-ring diode. "▲" Magnetic Amplifier. "●" Installed with Post-regulator. "■" Common Choke.

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.

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