

### UNIVERSAL AC INPUT HARMONIC CORRECTION AC-DC HOT-SWAP CompactPCI QUAD OUTPUT 400 WATTS ACTIVE CURRENT SHARING SWITCHING POWER SUPPLIES APS400ACP SERIES



#### FEATURES:

- 400W 6U X 8HP EUROCARD PACKAGE
- MEETS IEC1000-3-2 HARMONIC CORRECTION
- INTERNAL OR-ING DIODES FOR N+1 REDUNDANCY
- HOT-SWAPPABLE
- THIRD-WIRE CURRENT SHARING
- EMI MEETS EN 55022 / CLASS B
- CE MARKING COMPLIANCE
- FULLY COMPLIANT WITH PICMG

#### SPECIFICATION

##### INPUT SPECIFICATION

**Input Voltage:** Typ. 90-264Vac.  
**Input On/Off switch:** Option.  
**Power Factor Correction:** Meet Harmonic Correction IEC1000-3-2. Power Factor typ. 0.99.  
**Input Connector:** Positronic 47-pin PCIH47M400A1.  
**Input Frequency:** 47-63Hz.  
**Inrush Current:** Typ. 30A @ 230Vac.(Active).  
**Input Current:** 4.65A@115Vac/2.3A @230Vac.  
**Dielectric Withstand:** Meet IEC950 regulation.  
**Transient Protection:** MOV withstands transient as specified by EN61000-4-4 level 3.  
**EMI:** Meet EN55022 Class B.  
**Hold-up Time:** 30mS @ 115Vac, 34mS @ 230Vac.  
**Remote ON/OFF:** Available at [INH#] & [EN#] pins.  
**Power Fail Signal:** Available at [FAL#] pin.  
**Status LED:** <Green>=valid input; <Amber> = critical fault  
**Thermal Protection (OTP):** Installed NTC and thermostat for thermal sensor at [DEG#] pin.  
**Power OK:** Installed at all outputs.  
**Leakage Current:** Typ. 0.7A @ 230Vac.

##### OUTPUT SPECIFICATION

**Output Voltage & Current:** See Ratings Chart.  
**Output Power:** Typ. 400-450W continuous.  
**Output Connector:** Positronic 47-pin PCIH47M400A1.  
**Line Regulation:** Typ. 0.1%.  
**Load Regulation:** VO1 & VO2 typ.  $\pm 0.5\%$ .  
VO3 typ.  $\pm 1.0\%$ , VO4 typ.  $\pm 3.0\%$ .  
**Noise & Ripple:** Typ. 1% peak-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:** Internal OR-ing diodes at all outputs and third-wire current sharing method for N+1 redundant operation  
**Current Sharing:** Third-wire current sharing at VO1, 2 & 3.  
**DC OK Signal:** Available for all outputs.  
**Power OK Signal:** Available for all outputs.  
**Over Current Protection (OCP):** Installed at each rail.  
**Overload Protection (OLP):** Fully protected against output overload or short circuit. Typ. 120-130% max. load. Consult the factory for special OLP setting.

##### GENERAL SPECIFICATION

**Efficiency:** Typ. 80-83 %.  
**Switching Frequency:** 120KHz.  
**Circuit Topology:** Forward circuit.  
**Transient Response:** Peak <200mV;  
returns to within 1% less than 250 $\mu$ S for 25% load-change.  
**Construction:** Eurocard 6U X 8HP X 160mm  
CompactPCI format. Front Panel with 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.  $\pm 0.04\%$  / °C.  
**Cooling:** min. 400lfm / 20cfm at full load in confined area.  
**Power Density:** 3.98 Watts/ Cubic Inch.  
**Safety Standard:** IEC60950.

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

# OUTPUT VOLTAGE/CURRENT RATINGS CHART

## QUAD OUTPUT

MODEL NO.	MAIN +VO1 @ * # ≡ •				AUX. +VO2 ▲ @ * # ≡ •				AUX. +VO3 ▲ ≡ # • * @					AUX. -VO4 ▲ • *				
	Min.	Typ.	Volt.	Max.	Min.	Typ.	Volt.	Max.	Min.	Typ.	Volt.	Max.	Pk.	Min.	Typ.	Volt.	Max.	Pk.
APS400ACP-490	2.0A	40A	+5V	55.0A	0A	30A	+3.3V	55A	0A	10A	+12V	14A	15A	0A	2A	-12V	4A	5A

Symbol: "\*" OVP built-in. "@" Adjustable. "#" Remote sensing. "≡" 3rd-wire Load Sharing.

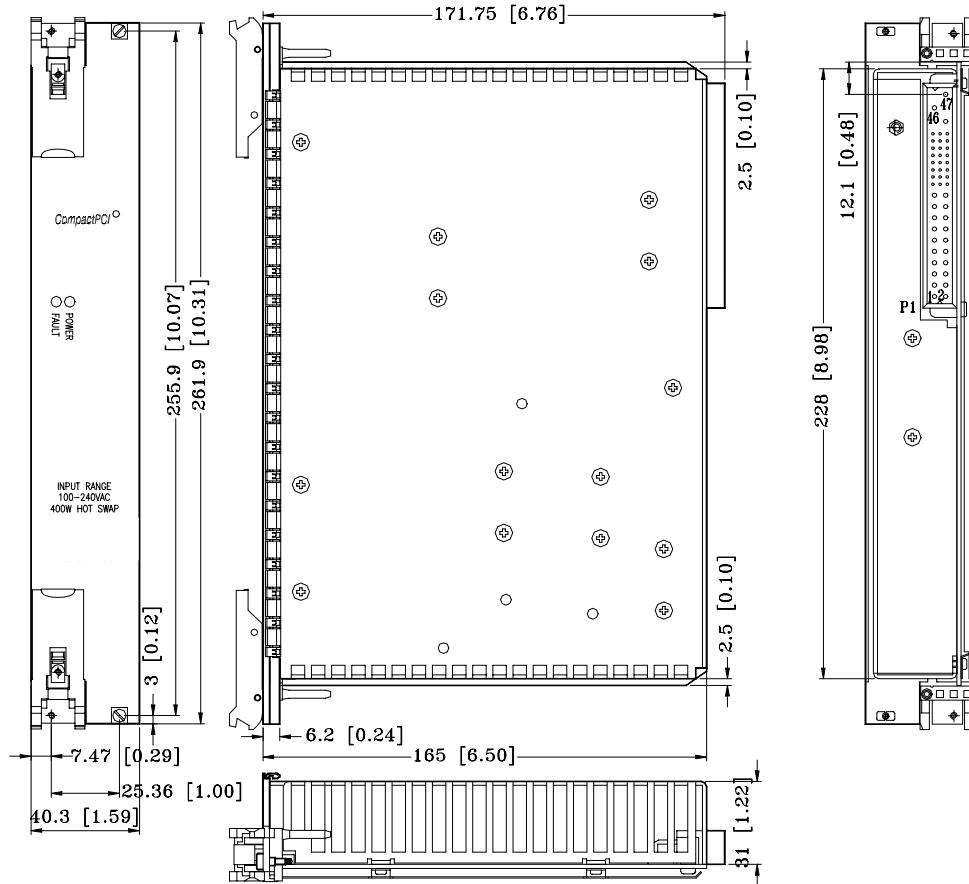
"•" Installed with Or-ing diode. "▲" Magnetic Amplifier.

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: 1.7kg (3.75 lb.)



## INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

	AC INPUT			QUAD OUTPUT														STATUS/CONTROL			
ASSIGNMENT	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	5,6,7,8,9,10,11,12,19,24	27	38	39	42

Mating connector: PCIH47F400A1.