

HiTRON

UNIVERSAL AC INPUT HARMONIC CORRECTION AC-DC HOT-SWAP CompactPCI QUAD OUTPUT 500 WATTS ACTIVE CURRENT SHARING SWITCHING POWER SUPPLIES HAC500P SERIES



FEATURES:

- 500W 6U 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 55032 / CLASS A
- 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. 0.97-0.99.
Input Connector: Positronic 47-pin PCIH47M400A1.
Input Frequency: 47-63Hz.
Inrush Current: $\leq 20A$ (rms) at 230Vac.
Input Current: 6A at 115Vac/2.9A at 230Vac.
Dielectric Withstand: Meet IEC 60950-1/62368-1 regulation.
Transient Protection: MOV withstand transient as specified by IEC 61000-4-4 Level 2.
EMI: Meet EN 55032 Class A.
Hold-up Time: 15ms at 115Vac/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. 0.7mA at 230Vac.

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.
Output Current: See Ratings Chart.
Output Power: Typ. 500W continuous.
Output Connector: Positronic 47-pin PCIH47M400A1.
Line Regulation: Typ. 1%.
Load Regulation: VO1 & VO2 typ. $\pm 5\%$.
VO3 typ. $\pm 3\%$, VO4 typ. $\pm 3.0\%$.
Noise & Ripple: Typ. 1% peak-peak.
OVP: Built-in at all outputs.
Adjustability: Available at VO1,2,3 & 4.
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 and third-wire current sharing method for N+1 redundancy 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. 120-135% max. load. Consult the factory for special OLP setting.

GENERAL SPECIFICATION

Efficiency: Typ. 75%.
Switching Frequency: 120K Hz.
Circuit Topology: Forward circuit.
Transient Response: Peak transient less than 250mV and returns to within 1% less than 0.5ms for 50% load-change.
Construction: 6U X 8HP CompactPCI format.
Front Panel with Extractor handle.

Operating Temperature: -30 °C to +50 °C at full load with specified air flow. Derates linearly to 50% power at +70 °C.
Storage Temperature: -40°C to +85 °C.
Cooling: At least 800LFM moving air is required to achieve full rating power 500W in a confined area.
Power Density: 5.0 Watts/ Cubic Inch.
Safety Standard: IEC 60950-1/IEC62368-1 Class I.

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.
(3) A warm-up time less than 3 minutes is required after cold start at temperature -30°C.



For the details of safety approval, please consult the factory.
edited on July 15, 2024

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.
HAC500P-490	4A	50A	+5V	60A	0A	30A	+3.3V	60A	0A	10A	+12V	14A	15A	0A	3A	-12V	4A	5A

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

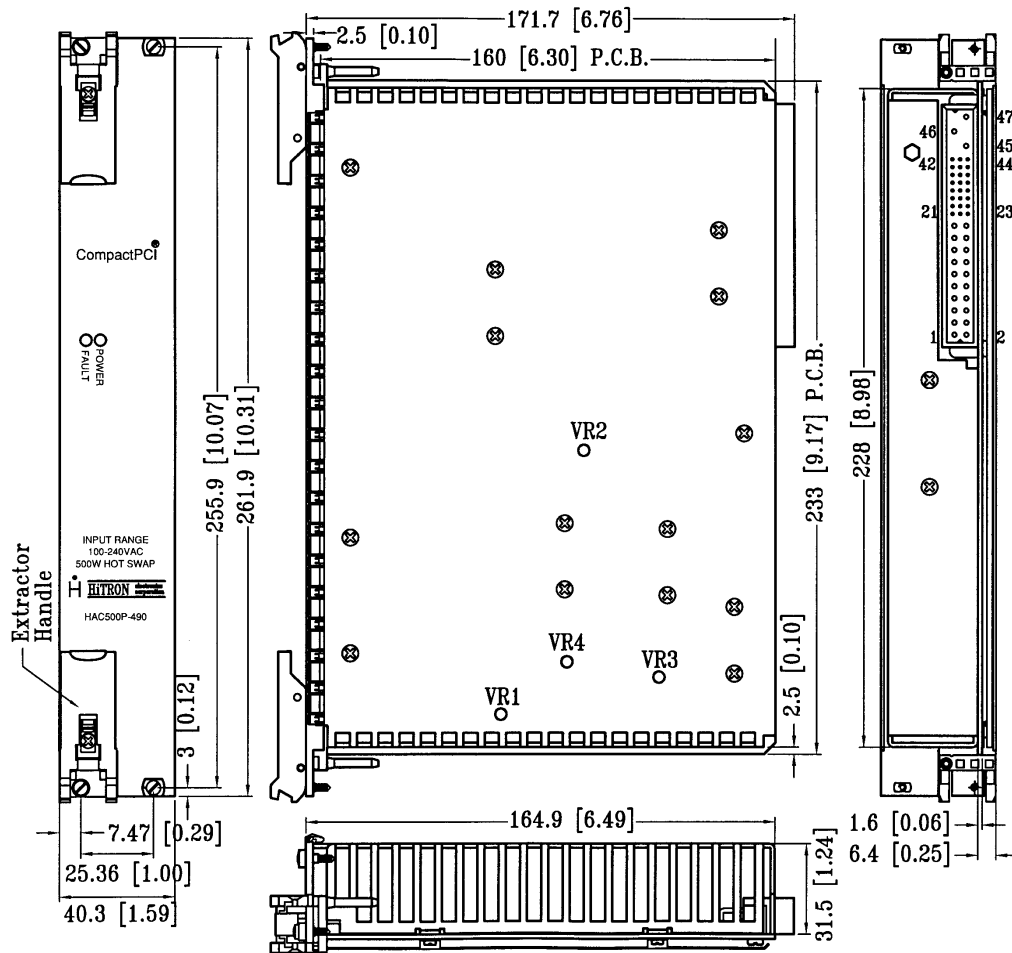
"○" Installed with Or-ing diode. "▲" Magnetic Amplifier. "●" Installed with Post-regulator.

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

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.