

APS

Advanced Power Solutions

36-72VDC INPUT RANGE DC-DC CONVERTER HOT-SWAP CompactPCI QUAD OUTPUT 400 WATTS ACTIVE CURRENT SHARING SWITCHING POWER SUPPLIES APS400DCP-48B SERIES



FEATURES:

- 400W 6U X 8HP EUROCARD PACKAGE
- 36-72VDC NOMINAL 48VDC INPUT
- 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. 36-72Vdc, nominal input 48Vdc.
OVP shutdown at 75Vdc & UVP shutdown at 36Vdc.
Input Connector: Positronic 47-pin PCIH47M400A1.
Soft Start: Installed.
Inrush Current: Typ. 7.2A @ 72Vdc.(Active).
Input Current: 11.8A @ nominal input 48Vdc.
Dielectric Withstand: Meet IEC950 regulation.
Transient Protection: MOV withstands transient as specified by EN61000-4-4 level 3.
EMI: Meet CISPR EN55022 Class B.
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 for thermal sensor at [DEG#] pin. Thermostat will shutdown the PSU if >100°C.
Overload Protection (OLP): Fully protected against output overload or short circuit. Typ. set at 120-150% max. load. Consult the factory for special OLP setting.

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.
Output 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. ± 0.5 -1.0%.
VO3 & VO4 typ. ± 1.0 -4.0%.
Noise & Ripple: Typ. 1% peak-peak or 50mV, which is greater.
OVP: Built-in at all outputs.(Latch).
Adjustability: Available at VO1, VO2 & VO3.
Output Trim: Electrical trim available at VO1/VO2.[ADJ #].
Remote Sensing: Available at VO1, VO2 & VO3.
Hot-Swap: Available.
N+1 Redundancy: Available with OR-ing diodes at all outputs for N+1 redundancy.
Current Sharing: Third-wire current sharing at VO1,2&3.
Power OK Signal: Available for all outputs.
Over Current Protection (OCP): Installed at each rail.

GENERAL SPECIFICATION

Efficiency: Typ. 81-82 %.
Switching Frequency: 120KHz.
Circuit Topology: Forward circuit.
Transient Response: Peak transient less than 220mV and recovers within 0.1mS after 25% load-change.
Safety Standard: IEC60950.
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. $\pm 0.02\%$ / °C.
Cooling: At least 400lfm/20cfm moving air is required to achieve full rating power 400W in a confined area.
Power Density: 4.01 Watts/ Cubic Inch.

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.
APS400DCP-48B-490	4A	40A	+5V	55A	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.

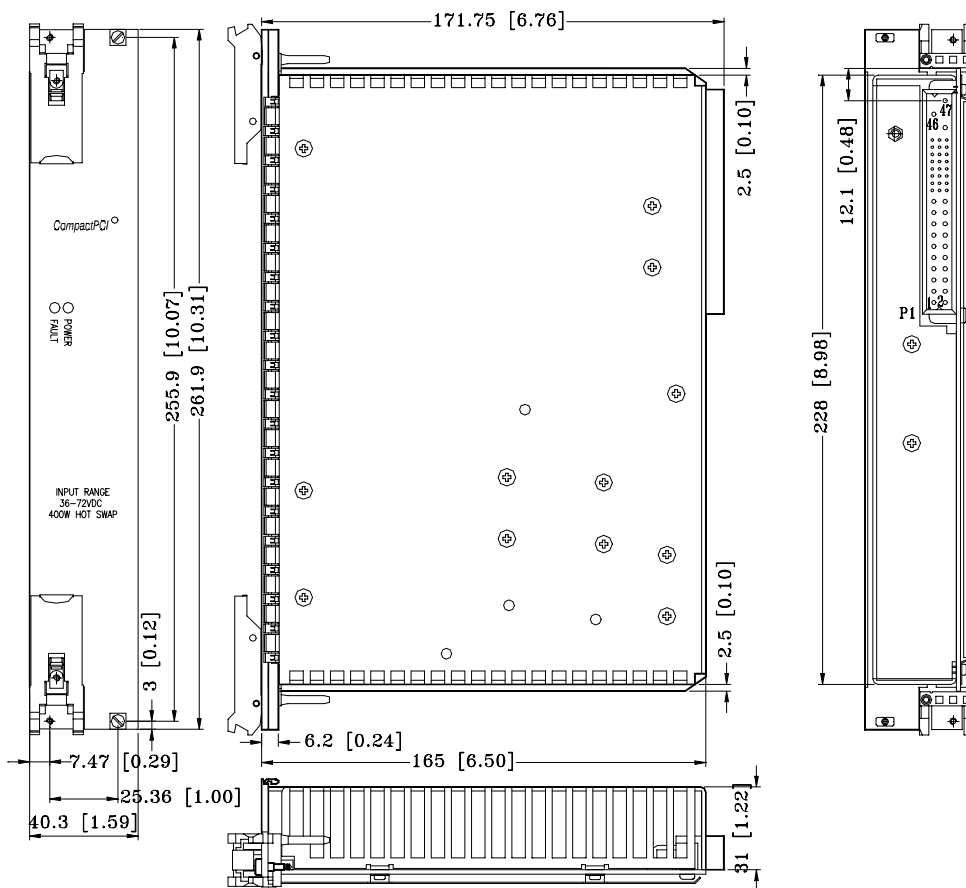
"•" Installed with Or-ing diode. "▲" Magnetic Amplifier.

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: 1.42kg (3.13 lb.)



INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

ASSIGNMENT	DC INPUT			QUAD OUTPUT												STATUS/CONTROL					
	+Vin	-Vin	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 #	46	47	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.