

36-72VDC INPUT RANGE DC-DC CONVERTER HOT-SWAP CompactPCI QUAD OUTPUT 250 WATTS ACTIVE CURRENT SHARING SWITCHING POWER SUPPLIES APS250DCP-48B SERIES



FEATURES:

- 250W 3U 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 / FCC CLASS B
- CE MARKING COMPLIANCE
- FULLY COMPLIANT WITH PICMG

SPECIFICATION

INPUT SPECIFICATION

Input Voltage: Typ. 36-72Vdc, nominal input 48Vdc
Input Connector: Positronic 47-pin PCIH47M400A1
Inrush Current: Typ. 20A @ nominal 48Vdc
Input Current: 6.6A @ nominal input 48Vdc
Dielectric Withstand: Meets IEC950 regulation
EMI: Meet EN55022 / FCC 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
Overload Protection (OLP): Fully protected against output overload or short circuit. Typical 120% max. load
 Consult the factory for special OLP setting
Over Current Protection (OCP): Installed in each rail

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart
Output Current: See Ratings Chart
Output Wattage: Typ. 250W continuous
Output Connector: Positronic 47-pin PCIH47M400A1
Line Regulation: Typ. 0.1%.
Load Regulation: Typ. $\pm 2.0\%$
Noise & Ripple: Typ. 1% ppk 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
Power OK Signal: Available for all outputs

GENERAL SPECIFICATION

Efficiency: Typ. 79%
Switching Frequency: 120KHz
Circuit Topology: Forward circuit.
Transient Response: Peak transient less than 100mV and recovers within 2mS for 25% load-change
Safety Standard: IEC60950
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
 De-rate linearly to 50% at +70°C
Storage Temperature: -40 to +85 °C
Temperature Coefficient: Typ. $\pm 0.02\%$ / per °C
Cooling: At least 16 cfm (500 lfm) moving air is required to achieve full rating power 250W in a confined area
Power Density: 4.58 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.
APS250DCP-48B-490(E)	2.0A	25A	+5V	33A	0A	18A	+3.3V	33A	0A	5A	+12V	5.5A	6A	0A	0.5A	-12V	1A	1.5A
APS250DCP-48B-490(O)	2.0A	25A	+5V	33A	0A	18A	+3.3V	33A	0A	5A	+12V	5.5A	6A	0A	0.5A	-12V	1A	1.5A

Symbol: "*" OVP built-in. "@" Adjustable. "#" Remote sensing. "≡" 3rd wire Load Sharing. "◆" Installed with Or-ing diode.

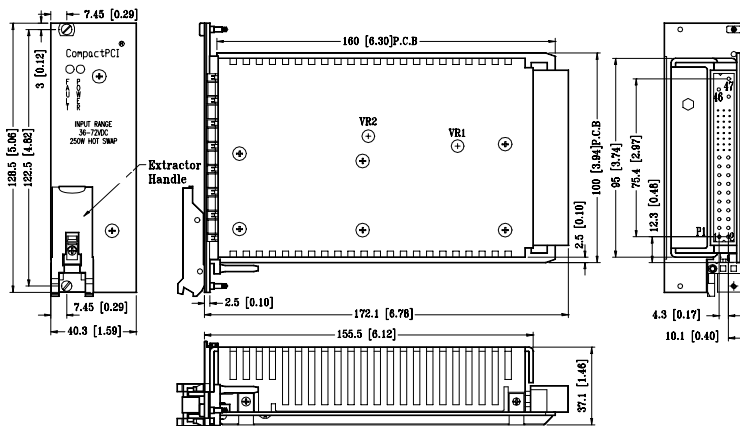
"▲" Magnetic Amplifier. "◆" Installed with Post-regulator. "■" Common Choke.

Remark: Peak load less than 60sec. with duty cycle <10%.

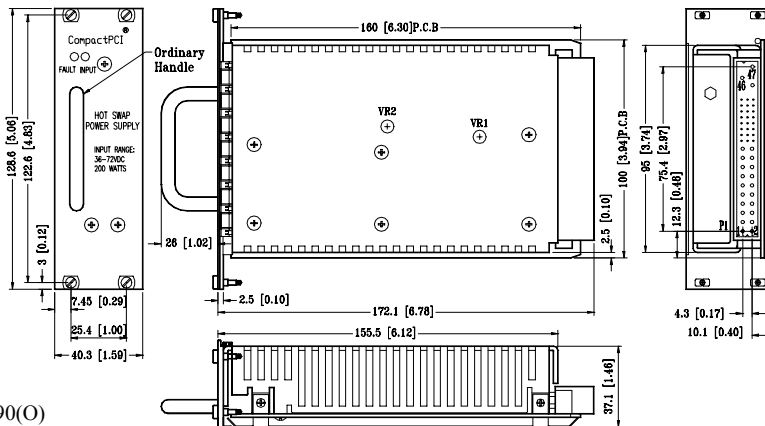
Max. load is the continuous operating load of each rail. But the max. load of each rail can't be drawn from all outputs at the same time.

MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 666.0g (23.5 Oz.)



APS250DCP-48B-490(E)



APS250DCP-48B-490(O)

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 #	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.