



36-72VDC INPUT RANGE DC-DC CONVERTER HOT-SWAP CompactPCI QUAD OUTPUT 250 WATTS ACTIVE CURRENT SHARING SWITCHING POWER SUPPLIES HDC250P-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 MEET 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: Meet IEC 60950-1 regulation.

EMI: Meet EN 55022 / 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.

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% Pk.-Pk. or 50mV, whichever 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.

Over Current Protection (OCP): Installed in each rail.

Overload Protection (OLP): Fully protected against output overload or short circuit. Typical 120% max. load. Consult the factory for special OLP setting.

GENERAL SPECIFICATION

Efficiency: Typ. 79 %.

Switching Frequency: 120K Hz.

Circuit Topology: Forward circuit.

Transient Response: Peak transient less than 100mV and recovers within 2mS for 25% load-change.

Safety Standard: IEC 60950-1 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. $\pm 0.02\%$ / °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.

Note: Due to requests in market and advances in technology, specifications subject to change without notification.



For the details of safety approval, please consult the factory.

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.
HDC250P-48B-490(E)	0A	25A	+5V	33A	0A	18A	+3.3V	33A	0A	5A	+12V	5.5A	6A	0A	0.5A	-12V	1A	1.5A
HDC250P-48B-490(O)	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.

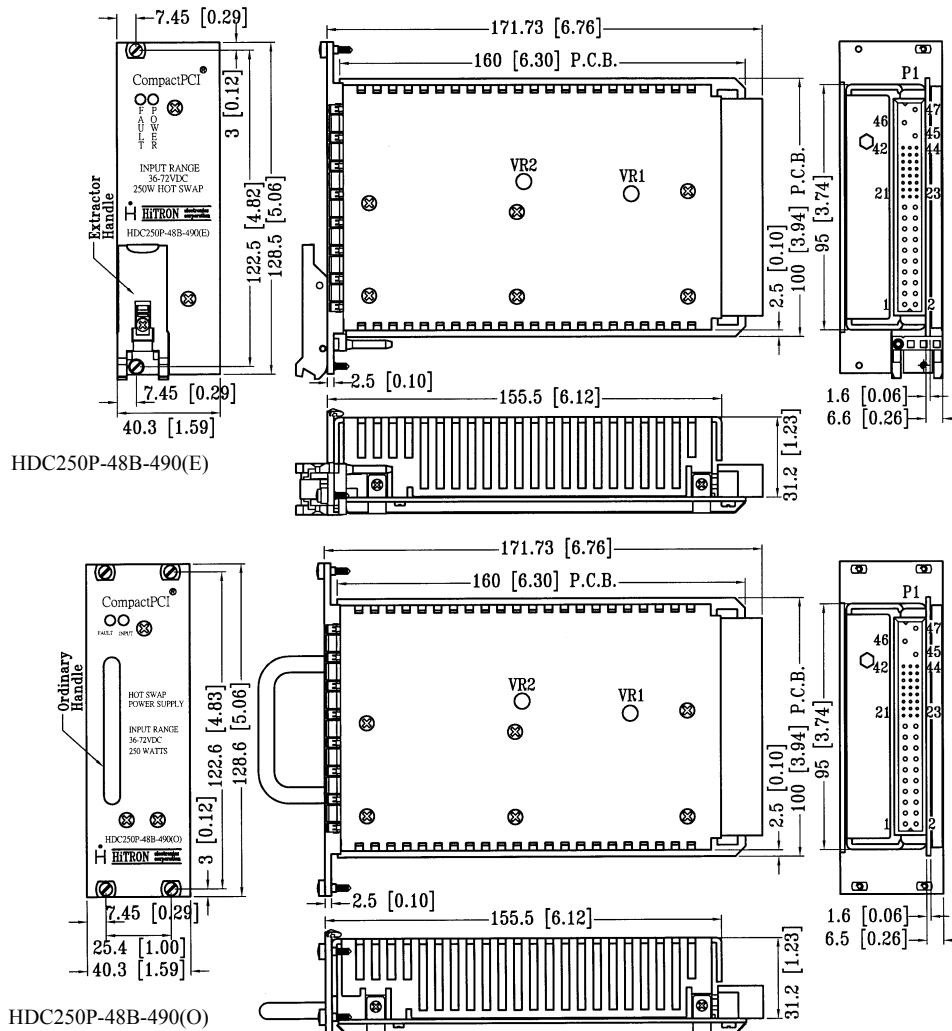
"▲" Magnetic Amplifier. "●" Installed with Post-regulator. "■" Common Choke.

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: 666.0 g (23.5 Oz.)



INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

	DC INPUT			QUAD OUTPUT														STATUS/CONTROL			
ASSIGNMENT	-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.