

TOTAL POWER INT'L

36-72VDC INPUT RANGE DC-DC CONVERTER HOT-SWAP

CompactPCI QUAD OUTPUT 250 WATTS ACTIVE CURRENT SHARING SWITCHING POWER SUPPLIES TPDC250P-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 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% Pk.-Pk. 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: 120K Hz.
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. 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.

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.
TPDC250P-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
TPDC250P-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.

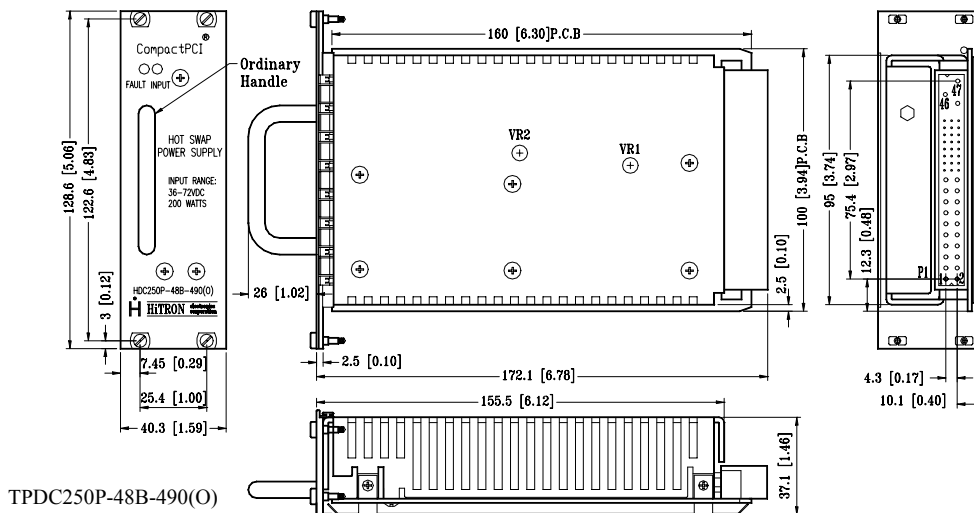
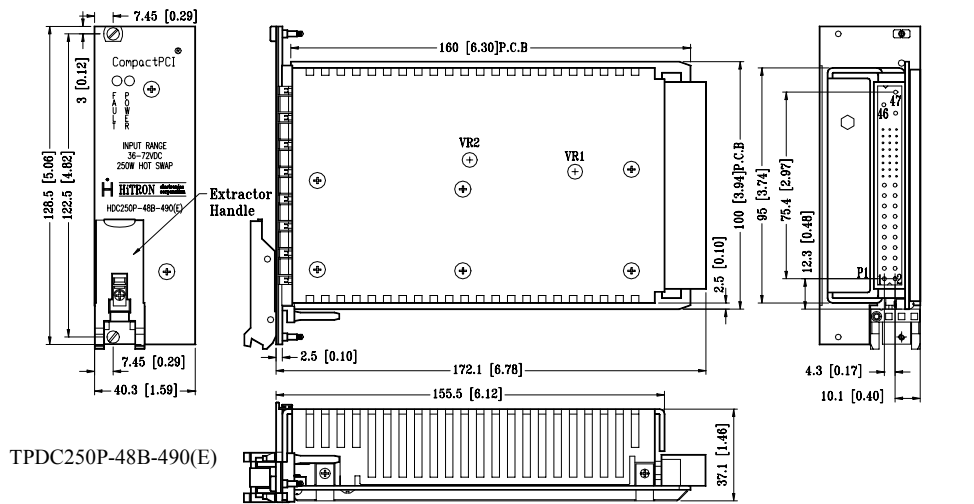
"▲" Magnetic Amplifier. "●" Installed with Post-regulator. "■" Common Choke.

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: 666.0 g (23.5 Oz.)



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.