



Total Power International, Inc.

36-72VDC INPUT RANGE DC-DC CONVERTER HALF SIZE HOT-SWAP CompactPCI QUAD OUTPUT 202 WATTS ACTIVE CURRENT SHARING SWITCHING POWER SUPPLIES TPDC202P-48B SERIES



FEATURES:

- 202W HALF SIZE 3U X 4HP 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 A
- 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 at nominal input 48Vdc.(Active)
Input Current: 5.6A at nominal input 48Vdc.
Dielectric Withstand: Meet IEC 60950-1 regulation.
EMI: Meet CISPR EN 55022 Class A.
Remote ON/OFF: Available at [INH#] & [EN#] pins.
Power Fail Signal: Available at [FAL#] pin.
Status LED: <Green> means valid input or output 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. 202Watt continuous.
Output Connector: Positronic 47-pin PCIH47M400A1.
Line Regulation: Typ. 0.2%.
Load Regulation: Typ. $\pm 1-2.0\%$.
Noise & Ripple: Typ. 1% peak to peak or 50mV, whichever is greater.
OVP: Built-in at all outputs.
Adjustability: Available at VO1,2&3.
Remote Sensing: Available at VO1,2&3.
Hot-Swap: Available.
N+1 Redundancy: Installed 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.
Overload Protection (OLP):
 Fully protected against output overload or short circuit.
 Typ. set at 105-130% max. load.
 Consult the factory for special OLP setting.

GENERAL SPECIFICATION

Efficiency: Typical 77%.
Switching Frequency: 305-330KHz.
Circuit Topology: Forward circuit.
Transient Response: Peak transient less than 200mV and returns to within 1% less than 200uS for 25% load-change.
Safety Standard: IEC 60950-1 Class I.
Construction: Eurocard 3U x 4HP x 160mm half-size CompactPCI 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°C to +85°C.
Temperature Coefficient: Typ. $\pm 0.02\% / ^\circ\text{C}$.
Cooling: At least 30CFM (800LFM) moving air is required to achieve full rating power 200W in a confined area.
Power Density: 7.40 Watts /Cubic Inch.

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..



In application



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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.
TPDC202P-48B-490	2.0A	25A	+5V	30A	0A	10A	+3.3V	20A	0.3A	3A	+12V	5A	5.5A	0A	0.5A	-12V	1A	1.5A

Symbol: "★" OVP built-in. "@" Adjustable. "#" Remote sensing. "≡" 3rd- wire Load Sharing. "=" Droop Current Sharing. "⊙" Installed with Or-ing diode.

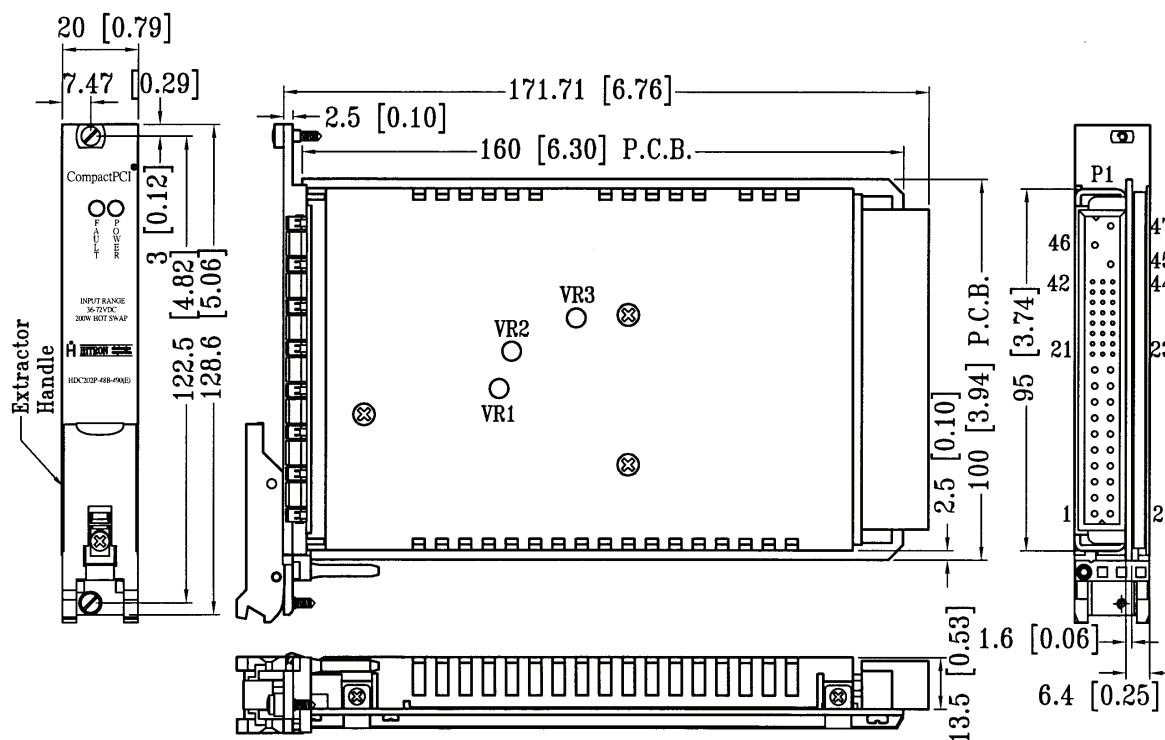
"▲" Magnetic Amplifier. "●" Installed with Post Regulator.

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: 469.0g (16.5 Oz.)



INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

ASSIGNMENT	DC INPUT			QUAD OUTPUT											STATUS/CONTROL				
	-Vin	+Vin	G	VO1	S+	S-	C.S.	VO2	S+	C.S.	VO3	S+	C.S.	VO4	DC COM	EN#	DEG#	INH#	FAL#
CNTR & PIN #	47	46	45	1,2,3,4	30	34	35	13,14,15,16,17,18	33	41	20	36	44	21	5,6,7,8,9,10,11,12,19,24	27	38	39	42

Mating connector: PCIH47F400A1.