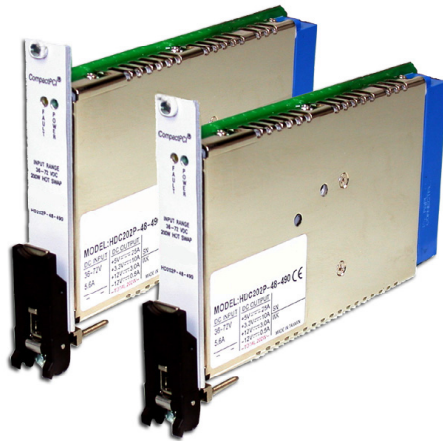


## 36-72VDC INPUT RANGE DC-DC CONVERTER HALF SIZE HOT-SWAP CompactPCI QUAD OUTPUT 202 WATTS ACTIVE CURRENT SHARING SWITCHING POWER SUPPLIES TPDC202P-48B SERIES



### 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 @ nominal input 48Vdc. (Active)  
**Input Current:** 5.6A @ nominal input 48Vdc.  
**Dielectric Withstand:** Meet IEC950 regulation.  
**EMI:** Meet CISPR EN55022 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.  
**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.

#### OUTPUT SPECIFICATION

**Output Voltage:** See Ratings Chart.  
**Output Current:** See Ratings Chart.  
**Output Wattage:** Typ. 202W 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, which is greater.  
**OVP:** Built-in at all outputs.  
**Adjustability:** Available at VO1,2&3.  
**Remote Sensing:** Available at VO1, VO2 & VO3.  
**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.

#### GENERAL SPECIFICATION

**Efficiency:** Typ. 77%.  
**Switching Frequency:** 305-330 KHz.  
**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:** IEC60950.  
**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.  $\pm 0.02\%$  /°C.  
**Cooling:** At least 30 cfm (800lfm) moving air is required to achieve full rating power 200W in a confined area.  
**Power Density:** 7.40 Watts /Cubic Inch.

**Note:** All measurements are at nominal input, full load, and +25°C unless otherwise specified.

# 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.

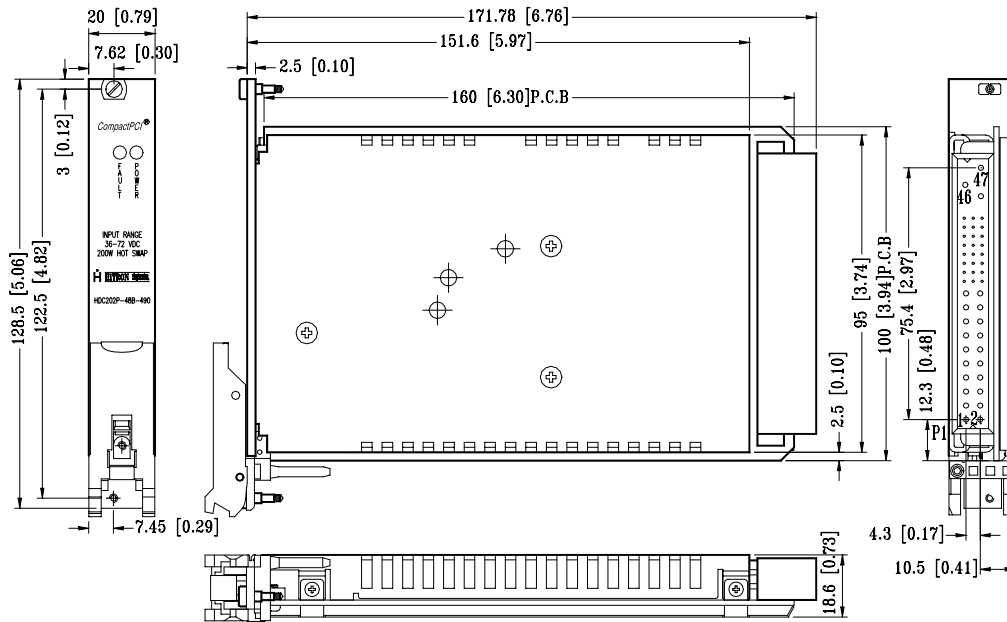
"▲" Magnetic Amplifier. "●" Installed with Post Regulator.

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.