

36-72VDC INPUT RANGE DC-DC CONVERTER HOT-SWAP CompactPCI QUAD OUTPUT 300 WATTS ACTIVE CURRENT SHARING SWITCHING POWER SUPPLIES TPDC300P-48B SERIES



FEATURES:

- 300W 6U 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. 8.5A @ nominal input 48Vdc.
Input Current: 6.5A @ nominal input 48Vdc.
Dielectric Withstand: Meet IEC950 regulation.
Transient Protection: MOV withstands transient as specified by EN61000-4-4 level 3.
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. Typ. set at 120-130% max. load. Consult the factory for special OLP setting.

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.
Output Current: See Ratings Chart.
Output Wattage: Typ. 300W continuous.
Output Connector: Positronic 47-pin PCIH47M400A1.
Line Regulation: Typ. 0.1%.
Load Regulation: VO1 & VO2 typ. ±1.0-1.5%.
 VO3 & VO4 typ. ±0.5-1.0%.
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.
Redundancy/Hot-Swap: Available 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 in each rail.

GENERAL SPECIFICATION

Efficiency: Typ. 80%.
Switching Frequency: 114K Hz.
Circuit Topology: Forward circuit.
Transient Response: Peak transient 35mV and recovers within 0.5mS after 25% load-change.
Safety Standard: IEC60950.
Construction: Eurocard 6U X 8HP X 160mm. CompactPCI format. 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 to +85 °C.
Temperature Coefficient: Typ. ±0.02% / °C.
Cooling: At least 200cfm moving air through the PSU is required to achieve full rating power 300W in a confined area.
Power Density: 2.71 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. |
| TPDC300P-48B-490 | 2.0A | 20A | +5V | 35A | 0A | 20A | +3.3V | 25A | 0A | 10A | +12V | 12A | 15A | 0A | 0.8A | -12V | 1A | 1.5A |

Symbol: "★" OVP built-in. "@#≡○" Adjustable. "#≡○" Remote sensing. "≡" Droop Load Sharing. "○" Installed with Or-ing diode.

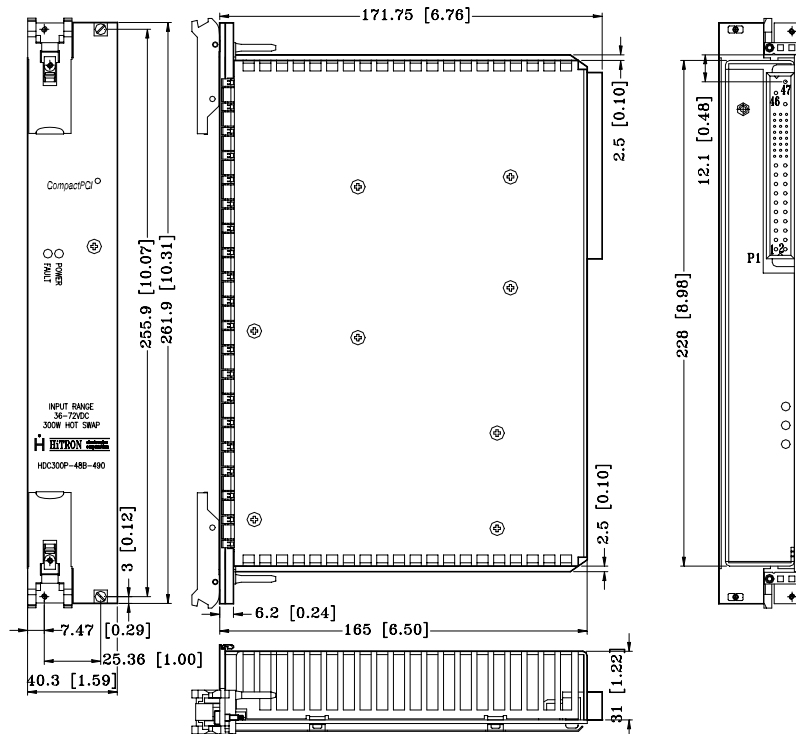
"▲" Magnetic Amplifier. "●" Installed with Post-regulator. "≡" 3rd-wire Load Sharing.

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: 1.42Kg (3.13 lb.)



INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

| ASSIGNMENT | DC INPUT | | | QUAD OUTPUT | | | | | | | | | | | | STATUS/CONTROL | | | | | | |
|--------------|----------|------|----|-------------|----|-------|------|------|-------------------|----|------|------|-----|----|------|----------------|--------------------------|-----|------|------------|------|------|
| | -Vin | +Vin | G | VO1 | S+ | S RTN | Adj. | C.S. | VO2 | S+ | Adj. | C.S. | VO3 | S+ | C.S. | VO4 | DC COM | EN# | DEG# | Signal RTN | 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 | 5,6,7,8,9,10,11,12,19,24 | 27 | 38 | 22 | 39 | 42 |

Mating connector: PCIH47F400A1.