

# TOTAL POWER INT'L

## 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.  $\pm 1.0-1.5\%$ .  
 VO3 & VO4 typ.  $\pm 0.5-1.0\%$ .  
**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.  $\pm 0.02\%$  / °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.

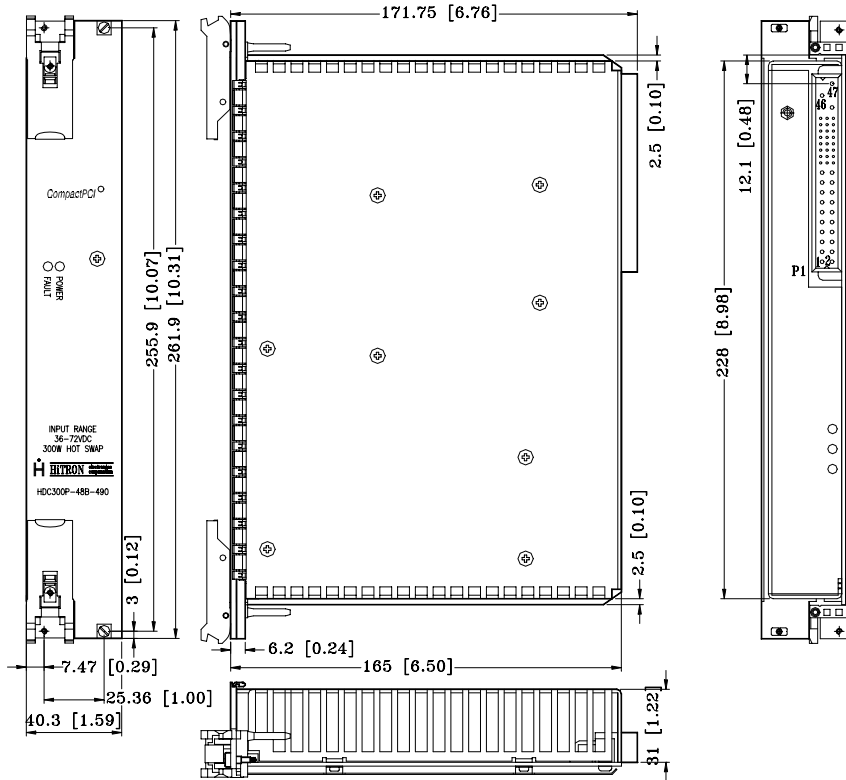
"▲" Magnetic Amplifier. "●" Installed with Post-regulator. "≡" 3rd-wire Load Sharing.

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.