

## TCPDC SERIES SINGLE OUTPUT DC TO DC CONVERTER

400-600 Watts - 2.6" x 5.0" x 11.5"  
RUGGED HIGH POWER

### APPLICATIONS

The TCPDC family of power supplies was designed to satisfy a market for low cost, high reliability applications. The TCPDC is especially suitable for critical systems in remote locations, severe environment, redundant (N+1) or battery back-up uninterruptable operation. This versatile design is loaded with options, making it particularly suitable to custom applications.

### STANDARD FEATURES

- Compact, Light Weight
- Tightly Regulated Output
- OV/OL/OT Protected
- $\pm 5\%$  Output Adjustment
- LED Indicator (Each Module): Output Power Good
- Remote Inhibit
- Input via D-Sub Connector
- MTBF > 150,000 Hours
- Internal Fan
- "Rugged" Construction

### AVAILABLE OPTIONS

- Redundant Operation (N+1)
- Ruggedized For Severe Environment
- Hot Pluggable in a 3.5" High Rack
- Low Voltage Battery Disconnect.
- (LVBD) for Battery Back-Up Operation
- Conformal Coating (High Humidity)

### SAFETY AND EMISSIONS

- Meets FFC DOC. 20780 LEV. A
- Meets VDE 0871/6.78 LEV. A
- Designed to meet UL1950, CSA 22.2



### SPECIFICATIONS

#### INPUT SPECIFICATIONS:

Input: 22-32 VDC (PREFIX P) 42-56VDC (PREFIX Q)  
Efficiency: 85% Typical  
DC Current: (22V/400W) 22A (22V/600W) 32A  
(42V/400W) 11A (42V/600W) 17A  
Inrush Current: 40A MAX 1/2 Cycle

#### OUTPUT SPECIFICATIONS

Voltage Adjustment:  $\pm 5\%$   
Line Regulation:  $\pm .3\%$   
Load Regulation:  $\pm 2\%$   
Hold Up Time: 20 mS Min.  
Set Point Accuracy:  $\pm 1\%$  (except 5V= $\pm 2\%$ ) (maximum)  
Protections: Overcurrent, Overvoltage, Overtemperature

#### ENVIRONMENTAL SPECIFICATIONS

Operating Temperature:  $-20^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$ . Derate to 50% at  $+70^{\circ}\text{C}$   
Storage Temperature:  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  max Relative Humidity  
Cooling: External Ball Bearing DC Fan  
Humidity: 20-90% RH Non Condensing  
Vibration: 10-500Hz, 2G 10min/1Cycle for 60 min (3 axes)  
Shock: 20G Peak Acceleration  
Weight: 6.6 LBS  
Size: 11.5" x 5" x 2.62"

# MODEL SELECTION

400 WATTS			600 WATTS		
Model	Nominal Voltage (VDC)	Maximum Current (ADC)	Model	Nominal Voltage (VDC)	Maximum Current (ADC)
TCPDC-5-60	3.3/5V	60A	TCPDC-5-80	3.3/5V	80A
TCPDC-12-34	12V	34A	TCPDC-12-50	12V	50A
TCPDC-15-27	15V	27A	TCPDC-15-40	15V	40A
TCPDC-24-17	24V	17A	TCPDC-24-25	24V	25A
TCPDC-36-11	36V	11A	TCPDC-36-16	36V	16A
TCPDC-48-8	48V	8A	TCPDC-48-12	48V	12A

NOTE: PREFIX "P" = 22-32 VDC INPUT

NOTE: PREFIX "Q" = 42-56 VDC INPUT

## OPTION DESIGNATIONS

-ORD	REDUNDANT OPERATION
-MIL	RUGGEDIZED/MILITARIZED
-HSP	HOT SWAP
-LVBD	BATTERY BACK-UP
-CC	CONFORMAL COATING

### Low Voltage Battery Disconnect

The LVBD module adds a new dimension to battery back-up power supplies. The power supply simultaneously charges the battery and powers the load. If the input power fails, the battery continues to support the load, thereby protecting the battery from the damaging effects of complete discharge.

## MECHANICAL OUTLINE

