

**LTBDC SERIES  
ONE TO FOUR OUTPUTS  
DC-DC CONVERTERS  
150-600 WATTS - 2.56" x 5.50" x 11.50"  
WITH BATTERY BACK UP OPTION**

**APPLICATIONS**

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

**STANDARD FEATURES**

- Compact, Light Weight
- Up to 4 outputs.
- All Outputs Tightly Regulated.  
MTBF > 150,000 hours
- LED Indicators (each module)  
Input/Output Power Good
- OV/OL/OT Protected
- Remote Inhibit
- $\pm 5\%$  Output Adjustment
- Terminal Block Input
- Sub-D Conn. for Output
- Meets FCC Docket 20780
- Level A and VDE 0871/6.78 Level A  
UL1950, CSA, 22.2  
No.950/IEC950 Pending

**AVAILABLE OPTIONS**

- Redundant Operation (N+1) Configuration
- Low Voltage Battery Disconnect (LVBD) for battery back-up operation.
- Ruggedized for Severe Environment
- Wide Temp. Operation (-30°C to +75°C)
- Conformal Coating
- Rack Mount/ Panel Mount



**SPECIFICATIONS**

**ELECTRICAL:**

Input: 22-32VDC or 42-56VDC  
Regulation: Line  $\pm 0.3\%$  Load  $\pm 2\%$   
Ripple: 25mV peak, not to exceed 100mV  
Efficiency: 80% typical single output units.  
70% typical for multiple output units.  
Hold-up time: 20ms (minimum)  
In Rush Current: 30A max. 1/2 cycle  
Protections: OV, OL and OT

**ENVIRONMENTAL SPECIFICATIONS**

Operating Temperature: 0°C to +50°C  
Storage Temperature: -30°C to +85°C  
Cooling: Internal ball bearing DC fan  
DC fan and/or conduction to base plate  
Weight: ~ 6 lbs. (2.7 kg) max.  
Size: 2.56" x 5.50" x 11.50"

# MODEL SELECTION

SINGLE OUTPUT MODULES		
MODEL NO.	OUTPUT	MAX. LOAD
LTBDC-5-60	5	60
LTBDC-12-40	12	40
LTBDC-24-24	24	24
LTBDC-28-20	28	20
LTBDC-48-12	48	12

MULTIPLE OUTPUT MODULES								
OUTPUT #1 (V1)			OUTPUT #2 (-V2)	CODE	OUTPUT #3 (+V3)	CODE	OUTPUT #4 (V4)	CODE
VDC	MAX AMP	MODEL	VDC @ MAX AMP		VDC @ MAX AMP		VDC @ MAX AMP	
5	60	LTBDC-5-60	-5V @ 3A	A 1	+5V @ 6A*	B 1	5V @ 2A*	C 1
12	40	LTBDC-12-40	-12V @ 3A	A 2	+12V @ 3A	B 2	12V @ 2A	C 2
24	24	LTBDC-24-24	-15V @ 3A	A 3	+15V @ 6A	B 3	15V @ 2A	C 3
28	20	LTBDC-28-20	-24V @ 3A	A 4	+24V @ 3A	B 4	24V @ 2A	C 4
48	12	LTBDC-24-12					48V @ 1A	C 5

Note: Other voltages and currents available, contact the factory. Maximum total output power cannot exceed 600 watts. Maximum current cannot be exceeded.

\* This output can be optionally increased to 10 Amps.

LTBDC SERIES MULTIPLE OUTPUT SELECTION GUIDE
• Select first, second, third or fourth output from the tables below.
• Second and third output must be equal in voltage and share common ground.
• Output four is floating and may be used as positive or negative.
EXAMPLE: P/N LTBDC 5-60 A2B2C1-Suffix +5V 60A, -12V 3A, +12V 3A, +5V 2A

## OPTION DESIGNATIONS

-ORD	REDUNDANT OPERATION
-RK/PNL	RACK MOUNT / PANEL MOUNT
-CC	CONFORMAL COATING
-MIL	RUGGEDIZED/MILITARIZED
-LVBD	BATTERY BACK-UP

### Low Voltage Battery Disconnect

The LVBD module adds a new dimension to battery backup power supplies. The power supply simultaneously charges the battery and powers the load. If the AC power fails, the battery continues to support the load. However, when the battery voltage drops below a predetermined level, the LVBD module disconnects the battery from the load, thereby protecting the battery from the damaging effects of complete discharge.

Backs up main output only. Battery is connected to output.

## MECHANICAL OUTLINE

