

300 - 750W, Rugged Industrial Quality DC/DC Converter with High Output Current BAL 65F-FT Series



- Rugged industrial quality
- Field-proven design
- Cooling by built in fans
- Low noise output
- Full electronic protection

The BAL 65F Series rugged, industrial quality DC/DC converter is specifically designed for lower output voltages with high output current, up to 60A. It uses a field proven technology to generate up to 750W, depending on input/output combination. The basic design topology has a track record in numerous custom applications. Cooling is by built-in fans, with additional conduction via baseplate. Other options include a Form C output fail alarm and remote shutdown. Additional ruggedizing and conformal coating are available for applications that require immunity to high levels of shock, vibration and humidity. Full electronic protection, low component count, large design headrooms, and the use of components with established reliability result in a high MTBF. The series is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

24Vdc (21-29V)
48Vdc (42-56V)
125Vd (105-145V)
Consult factory for other voltages

Input Protection

Inrush current limiting
Varistor
Reverse polarity protection
Internal safety fuse
Lower voltage than the specified minimum input will not damage the unit

Input Isolation

According to input voltage minimum of:
1000VDC input to chassis
1500VDC input to output
500VDC output to chassis

Standards

Designed to meet EN60950 and related standards

EMI

EN 55022 Class A as a minimum

Switching Frequency

55kHz +/- 3kHz

Output Voltage

5V/60A, 12V/60A, 15V/50A
(300 – 750W depending on input/output combination)
Output is floating; either terminal can be grounded
Other outputs on request

Redundancy diode

None
Available as option

Line/Load Regulation

+/-1% combined

Dynamic Response

Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time

Output Ripple/Noise

Better than 0.2% rms or 1% peak-to-peak of the output voltage (20MHz BW)

Overload Protection

Rectangular current limiting with short-circuit protection (no hiccup)
Thermal shutdown in case of insufficient cooling (self-resetting)

Output Overvoltage Protection

Double regulator loop

Efficiency

Typically 85% at full load depending on input/output combination

Operating Temperature

0°C to 50°C full specification with proper airflow.
Extended temperature ranges available as an option.

Temperature Drift

0.03% per °C over operating temperature range

Cooling

Forced air by two high quality built-in fans and conduction to customer heatsink or chassis

Environmental Protection

Basic ruggedizing
Optional heavy ruggedizing and conformal coating is available

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

130,000 hours @ 45 °C (fans excluded)
Demonstrated MTBF is significantly higher.

Indicators

None

Control Input

None
Available as option

Alarm Outputs

None
Available as option

Package/Dimensions (W x H x L)

FF3: 155 x 64 x 300 mm
(6.1" x 2.5" x 11.8") including terminal block and flanges

Weight

2.3kg (5 lbs.)

Connections

12 pole barrier type terminal block with 3/8" spacing

RoHS Compliance

Fully compliant

Warranty

Two years subject to application within good engineering practice

Terminal Block Pin-out

DC OUTPUT							DC INPUT				
+	+	+	-	-	-	N/A	GND	-	-	+	+
1	2	3	4	5	6	7	8	9	10	11	12

Enhancements to these general specifications can be accommodated upon request. Specifications are subject to change.

Designer and manufacturer of quality converters, inverters, UPS systems, complete rack mount systems and DC-input fluorescent lamp inverters since 1982. Custom or standard. Absopulse is a BABT-approved Facility



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