

300W, Rugged, Industrial Quality DC/DC Converter BAP 65-FT Series

- Rugged industrial quality
- Field-proven design
- Regulated and adjustable output
- Conduction/convection cooling (no fans)
- Full electronic protection
- N+1 redundancy by built in diode as option
- Plug-in (Eurocard) version available



This rugged, industrial quality DC/DC converter uses field-proven topology to generate 300W output power. It is a mature design with a track record in numerous applications. Cooling is via base plate to a heat-sinking surface and by natural convection. An optional built-in redundancy diode allows for parallel and N+1 operation. Additional ruggedizing and conformal coating are available on request 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 unit is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

24Vdc (21-29V)
48Vdc (42-56V)
125Vd (105-145V)
For 12Vdc and other input voltages, consult factory.

Input Protection

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

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 with margins

Switching Frequency

80KHz +/- 5kHz

Output Voltages

12V, 24V, 48V or 125Vdc
Total output power 300W
continuous
Output is floating; either terminal can be grounded
Consult factory for other voltages

Redundancy diode

None
Installed on request

Line/Load Regulation

± 1% combined from zero load to full load

Dynamic Response

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

Output Ripple / Noise

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

Output 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 completely stable and independent of main loop

Efficiency

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

Operating Temperature Range

0°C to +50°C for full specification
Extended temperature ranges available

Temperature Drift

0.03% per °C over operating temperature range

Cooling

Conduction via base plate to customer heat-sink or chassis and natural convection

Environmental Protection

Basic ruggedizing
Heavy ruggedizing and conformal coating as option

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

150,000 hours at 45°C
Demonstrated MTBF is significantly higher

Indicators

Green 'Output ON LED' visible through cooling slots

Control Input

Optional

Alarm Output

None on standard version
Output fail alarm Form C contacts installed on request

Package/Dimensions (W x H x L)

F3: 132mm x 64mm x 300mm (5.2" x 2.5" 11.8") including terminal block and mounting flanges
Mounting holes are clear

Weight

2 kg (4.4 lb)

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-outs

| NOT USED | | DC OUTPUT | | | | NOT USED | | DC INPUT | | | |
|----------|---|-----------|---|---|---|----------|---|----------|----|----|----|
| 1 | 2 | + | + | - | - | 7 | 8 | GND | + | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |



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