

300W, Rugged, Dual Output, Industrial Quality DC/DC Converter BAP 265-FT Series



- Rugged industrial quality
- Two individually regulated outputs
- Field-proven design
- Conduction/convection cooling
- Full electronic protection

This rugged, dual output, industrial quality DC/DC converter uses field-proven topology to generate the required output power. It has two individually regulated isolated outputs. This mature design has a track record in numerous applications. Cooling is via base plate to a heat-sinking surface and by natural convection. 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 headroom, and the use of components with established reliability result in a high MTBF. This 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

Isolation

1000Vdc input to chassis,
1500Vdc input to output,
500Vdc output to chassis
500Vdc between outputs

Standards

Designed to meet EN60950 and related standards

EMI

EN 55022 Class A with margins

Switching Frequency

55kHz +/- 3kHz

Output Voltages

Typical configuration:
V1: 12V±0.3V/20A or 24Vdc ±0.3V/10A or 48V±0.3V/5A
V2: 5V±0.2V/3A, 12Vdc ±0.2V/3A or 24V±0.2V/3A
Consult factory for required output combination
Derating may be required depending on input voltage
Both outputs are individually regulated, floating and isolated from each other.
Either terminal can be grounded

Redundancy diode

None
Available as option

Line/Load Regulation

± 1% combined from zero load to full load for both outputs.

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 of the output voltage (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 on V1
Transzorb installed across V2 output

Efficiency

Typically 80% at full load depending on input/output configuration

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 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

120,000 hours at 45 °C
Demonstrated MTBF is significantly higher

Indicators

Green 'Output ON' LED visible through cooling slots

Control Input

None

Alarm Output

None on standard version
Form C available as option

Package/Dimensions (W x H x L)

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

Weight

Approx. 2.2 kg (4.4 lb)

Connections

12-pole barrier type terminal block,
3/8" spacing

RoHS Compliance

Fully compliant

Warranty

Two years subject to application within good engineering practice

Terminal Block Pin-out

N/C		V1		V2		N/C		N/C		DC INPUT		
1	2	+	-	+	-	7	8	9	GND	-	+	
1	2	3	4	5	6	7	8	9	10	11	12	



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