

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



- Rugged industrial quality
- Regulated and adjustable output
- Full electronic protection
- Field-proven design
- N+1 redundancy available

This rugged, industrial quality DC/DC converter uses field-proven design concept with a track record in numerous of applications. Cooling is via baseplate to a heat-sinking surface and by natural convection. A built-in redundancy diode allows for parallel and N+1 operation. The unit has two output terminals: a *Redundant* via the built-in redundancy diode, and a *Direct*, which bypasses the redundancy diode. Additional ruggedizing and conformal coating are available for applications requiring higher immunity to 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. The series 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 by Series diode  
Internal safety fuse  
Lower input voltages than specified minimum 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 corresponding standards

#### EMI

EN55022 Class A with margins

#### Switching Frequency

55KHz +/- 3KHz

#### Output Voltage/Current

12V, 24V, 48V or 125Vdc  
Consult factory for other voltages

#### Redundancy Diode

Installed on *Redundant* output

#### Line/Load Regulation

± 1% combined from no load to full load on the *Direct* output

#### 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 with automatic reset in case of insufficient cooling

#### Output Overvoltage Protection

Double regulator loop. Second loop completely stable and independent of main regulator loop

#### Efficiency

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

#### Operating Temperature Range

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

#### Temperature Drift

0.03% per °C, over operating temperature range

#### Cooling

Conduction via base plate and 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

None

#### Alarm Output

Output Fail Form C contacts

#### 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-Out

DC OUTPUT				ALARM			DC INPUT				
DIRECT	REDUNDANT	-	-	FAIL OPEN	COM	FAIL CLOSED	GND	-	+		
+	+	+	+	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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