

700 - 1000W, Rugged, Industrial Quality DC/DC Converter with Fan Cooling BAP 319F-FT Series

- Rugged industrial quality
- Field-proven design
- Regulated and adjustable output
- Full electronic protection
- N+1 redundancy by built in diode as option



This rugged, industrial quality DC/DC converter utilizes a field proven technology to generate the required output power. It is a mature design with a track record in numerous applications. Cooling is by three high quality fans and additional conduction via the baseplate. The fans are either enclosed within the chassis (FF4W) or are attached to the outside of the chassis (FF4). The fans draw air into the unit. Both mechanical formats have the same total footprint. 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 headroom, and the exclusive use of components with established reliability contribute to a high MTBF. All of our products are manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

24V, 48V, 72V, 110V or 125Vdc
For 24V input the output is limited to 550W output due to the max. 30A allowable input current

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

Corresponding to input/output configuration

Standards

Designed to meet EN60950-1 and related standards

EMI

Meets EN 55022 Class A with margins

Switching Frequency

55kHz \pm 3kHz

Output Voltage/Current

Any single DC output from 12V to 125Vdc
12V/50A (600W output only)

Redundancy diode

None
Available as option

Line/Load Regulation

\pm 1% combined for the non-redundant version

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% RMS of the output voltage (20MHz BW)

Overload Protection

Current limiting with hiccup type short circuit protection
Thermal shut-down with automatic recovery in case of insufficient cooling

Output Overvoltage Protection

Second regulator loop completely stable and independent of main regulator loop

Efficiency

Output voltage dependent
Typically 80% at full load

Operating Temperature

0 °C to 50 °C for full specification without derating
Extended temperature ranges available

Temperature Drift

0.03% per °C over operating temperature range

Cooling

Forced air by high quality built-in fans and conduction to customer heat sink or chassis
Fans draw air into the unit

Environmental Protection

Basic ruggedizing
Heavy ruggedizing and conformal coating available as an option

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

150,000 hours @ 45 °C
Demonstrated MTBF is significantly higher (Fans not included)

Indicators

Internal 'Output ON' LED visible through cooling slots

Control Input

None
Available as option

Alarm Outputs

None
Available as option

Package/Dimensions (W x H x L)

FF4W and FF4 chassis:
156 x 65 x 355 mm
(6.1" x 2.5" x 14") including terminal block, flanges and fans.
Mounting holes are clear

Weight

2.5 kg (5.5 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				DC INPUT							
+	+	-	-	NOT USED	NOT USED	NOT USED	GND	-	-	+	+
1	2	3	4	5	6	7	8	9	10	11	12



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