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

FF4W chassis: internal side fans

FF4 chassis: external side fans

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. F 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 ±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
± 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

Please note that ABSOPULSE power supplies are designed and built to customer specifications. The specifications on this data sheet are generic and will vary depending on input/output configuration and other customer requirements. Generic 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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