

700-1000W, Rugged DC-DC Converter with Fan Cooling for Heavy-duty Industrial Applications BAP 319F-F4W Series

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



This rugged, industrial quality DC-DC converter utilizes field proven technology to generate the required output power. It is a mature design with a track record in numerous applications. An optional built-in redundancy diode allows for paralleling and N+1 operation or back-up battery connected. Cooling is by high quality built-in fans which draw air into the unit, and by conduction via the baseplate. All heat generating components are installed on aluminum heatsink blocks which are thermally connected to the base plate. This also ensures exceptional mechanical ruggedness. Additional ruggedizing and conformal coating are available for applications that require 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 unit is manufactured at our plant under strict quality control. Customized versions are available.

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
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

Corresponding to input/output configuration

Standards

Designed to meet EN60950-1 and related standards

EMI

EN 55032 Class A as a minimum

Switching Frequency

80KHz ±5KHz

Output Voltages

Any single DC output from 12V to 125Vdc
12V/50A (600W output only)
Consult factory for other voltages

Redundancy diode

Not installed
Available as option

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

Less than 1% of output voltage peak to peak or 0.2% RMS of the output voltage (20MHz BW)

Output 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 Range

0°C to 50°C for full specification
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

Ruggedizing
Conformal coating

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

150,000 hours at 45°C (Fans excluded)
Demonstrated MTBF is significantly higher

Indicators

Internal 'Output ON' LED visible through cooling slots

Control Input

None on standard version
Available as option

Alarm Output

None
Available as option

Package/Dimensions (W x H x L)

F4W: 155 x 65 x 351 mm
6.1" x 2.55" x 13.82"
Includes baseplate, excludes terminals
Mounting holes are clear

Weight

2.5 kg (5.5 lb)

Connections

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

RoHS Compliance

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

ABSOPULSE power supplies are designed and built to customer requirements. The specifications on this data sheet are generic guidelines only and are subject to change.

OEM of industrial and railway quality DC-DC converters, AC-DC power supplies and battery chargers, DC-AC sine-wave inverters, phase and frequency converters, DC-output UPS systems and complete power systems in 19" and 23" racks since 1982. Custom or standard. ABSOPULSE is a BABT-approved Facility.



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