

## 700 - 1000W, Rugged, Industrial Quality DC-DC Converter with Fan Cooling BAP 319F-F4W Series



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

#### 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 corresponding standards

#### EMI

Meets EN 55032 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 from zero load to full load 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

Less 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 (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 Outputs

None on standard version  
Available as option

#### Package/Dimensions (W x H x L)

F4W: 156 x 65 x 356 mm  
6.2" 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

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

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



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