

## 200W Rugged, Industrial Quality Plug-in DC/DC Converter

### BAF 236-EH Series



- 3U x 14HP x 220mm plug-in module
- Rugged, industrial quality
- Convection cooling
- Full electronic protection
- Field-proven design
- Hot swappable, N+1 redundant

#### Please note

**This design has been replaced by the pin compatible BAP 236 Series.**

This rugged, industrial quality, plug-in DC/DC converter uses field-proven technology to generate up to 200W output power. It is a mature design with large design headrooms and is rated for operation over the specified temperature range without de-rating. Cooling is by natural air convection. Heat generating components are installed on an aluminum heat-sink block, which is connected to the large heat-sink on the side of each module. The module is hot insertable and has a built-in redundancy diode which allows for parallel connection and N+1 redundant operation. A fail open type optocoupler output fail alarm is included. This design is optimized for low component count and high efficiency. Full electronic protection and the use of components with established reliability results in a high demonstrated MTBF confirmed by a track record in numerous applications. The module is manufactured at our plant under strict quality control.

### SPECIFICATIONS

#### Input Voltage/Operating Range

24Vdc (21 – 30V)  
48Vdc (42 – 60V)  
110Vdc (90-145V)  
Please consult factory for other voltages and ranges

#### 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

Depending on the input/output configuration. At a minimum:  
1000Vdc input to chassis  
1500Vdc input to output  
500Vdc output to chassis

#### Standards

Designed to meet EN60950 and corresponding CSA and UL standards

#### EMI

EN55022 Class A with margins

#### Switching Frequency

55kHz +/-3kHz

#### Output Voltage/Current

12V/16A, 24V/8A or 48Vdc/4.2A  
200W continuous per plug in module.  
Output is floating, either terminal can be grounded  
Other outputs available on request

#### Redundancy Diode

Installed internally  
Hot swap allowed

#### Line/Load Regulation

± 1.5% combined from zero load to full load including redundancy diode

#### 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 (20HZ BW)

#### Output Overload Protection

Rectangular current limiting with short circuit protection (No hiccup)  
Self-resetting thermostat for thermal protection

#### Output Overvoltage Protection

Second regulator loop completely stable and independent of main regulator loop

#### Efficiency

85 - 90% at full load depending on input/output combination

#### Operating Temperature Range

0°C to +50°C for full specification with proper air convection  
Extended temperature ranges available

#### Temperature Drift

0.03% per °C over operating temperature range

#### Cooling

Natural air convection

#### Environmental Protection

Basic ruggedizing  
Full ruggedizing and conformal coating as option

#### Shock/Vibration

IEC61371 Cat 1 A&B

#### Humidity

5 - 95% non-condensing

#### MTBF

110,000 hours @45°C  
Demonstrated MTBF is significantly higher.

#### Indicators

Green "Output ON" LED on front panel

#### Control Input

None

#### Alarm Output

Optocoupler C-E Module Fail alarm (fail open)

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

Plug-in module 3Ux14HPx220mm

#### Weight

1.2kg (2.6 lb)

#### Connections

H15 connector

#### RoHS Compliance

Fully compliant

#### Warranty

Two years subject to application within good engineering practice

#### Pin-out:

PinNo.	H15 DIN CONNECTOR		
4	GND	DC OUTPUT	
6	-S		
8	-		
10	-		
12	-		
14	+S		
16	+		
18	+		
20	+		
22	E		ALARM
24	C		
26	-		
28	-		
30	+	DC INPUT	
32	+		

Enhancements to these general specifications and customizing 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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