

## 200W, Rugged, Industrial Quality Plug-in DC/DC Converter Module BAP 236-EH Series



- Rugged industrial quality
- 3U x 14HP x 220mm plug-in module
- Front panel adjustment & LED status
- Cooling by natural air convection
- Full electronic protection
- Field-proven design
- Hot swappable, N+1 redundant

This rugged, industrial quality DC/DC plug-in module uses field proven topology to deliver up to 200W output power. It is a mature design with a track record in numerous heavy-duty applications. 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. 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. Full electronic protection, large design headroom and the use of components with established reliability contribute to high demonstrated MTBF. The system is manufactured at our plant under strict quality control. The unit is also available as a stand-alone chassis mount module in our F2 size package with a terminal block (please see BAP 236FT and BAP 236TH).

### SPECIFICATIONS

#### Input Voltage

24Vdc (21-30V)  
48Vdc (42-60V)  
125Vdc (105-145V)  
Other inputs on request

#### 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

According to input and output voltage minimum of:  
1500Vdc input to chassis  
2250Vdc input to output,  
500VDC output to chassis

#### Standards

Designed to meet EN60950-1 and corresponding standards

#### EMI

EN 55022 Class A as a minimum

#### Switching Frequency

55kHz ± 3kHz

#### Output Voltages

12V/16A, 24V/8A, 48V/4.2A  
or 125V/1.6A  
Output is floating; either terminal can be grounded  
Other outputs on request

#### Redundancy diode

Installed internally  
Hot insertion allowed

#### Line/Load Regulation

Typically ±1% 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 0.2% RMS or 1% of output voltage peak to peak (20HZ BW)

#### Output Overload Protection

Rectangular current limiting with short-circuit protection (no hiccup)  
Thermal shutdown in case of insufficient cooling (self -resetting)

#### Output Overvoltage Protection

Double regulator loop. Second loop completely stable and independent of main regulator loop

#### Efficiency

Typically 85% at full load depending on input/output combination

#### Operating Temperature Range

0°C to + 50°C for full specification  
Extended temperature ranges with derating

#### Temperature Drift

0.03% per °C over operating temperature range

#### Cooling

Natural air convection

#### Environmental Protection

Basic ruggedizing  
Heavy ruggedizing and conformal coating as option

#### Shock/Vibration

IEC 61373 Cat 1 A&B

#### Humidity

5 - 95% non-condensing

#### MTBF

150,000 hours at 45 °C  
Demonstrated MTBF is significantly higher

#### Indicators

On front panel of the module:  
Green "Output ON" LED connected before redundancy diode

#### Control Input

Adjustment potentiometer on front-panel

#### Alarm Output

Module Fail alarm by optocoupler  
C-E fail open

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

3U x14HP x 220mm

#### Weight

1.2 kg (2.5 lb)

#### Connections

H15 DIN connector

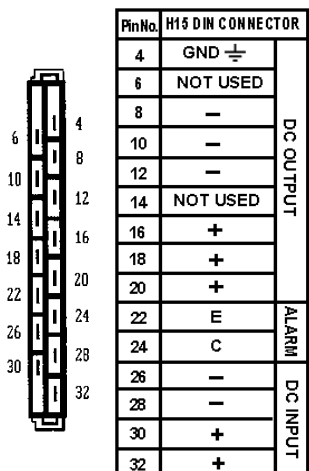
#### RoHS Compliance

Fully compliant

#### Warranty

Two years subject to application within good engineering practice  
Contamination and shipping related failures not covered.

#### Pin-out drawing: H15 connector



**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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