

Redundant, Industrial Quality DC/DC Converter System with 200W Plug-in Modules BAP 236 System Series

- Rugged industrial quality
- 3U x 19" x 13" shelf
- Up to 1200W per 19" shelf
- Up to 200W per module
- Front panel adjustment & LED status
- Cooling by natural air convection
- Full electronic protection
- Field-proven design
- Hot swappable, N+1 redundant



BAP 236-EH plug-in module (200W)
3U x 14HP x 220mm



Fully loaded BAP 236 system
3U x 19" x 13"

This modular, industrial quality DC/DC converter system uses field-proven topology with a track record in numerous heavy-duty applications. It is built with up to six 200W, BAP 236-EH plug-in converter modules assembled in a 3U x 19" card-frame and delivers up to 1200W or 1000W with N+1 redundancy. Each hot-insertable module has a built-in redundancy diode which allows for parallel connection and N+1 redundant operation. Modules with different outputs can be combined in one shelf to create a multi-output system. The plug-in modules are cooled 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 headrooms and the use of components with established reliability contribute to high demonstrated MTBF. The system is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

24Vdc (21 – 30V)
48Vdc (42 – 60V)
125Vdc (88 – 140V)
Please consult factory for other voltages and ranges

Input Protection

On each plug-in module:
Inrush current limiting
Varistor
Reverse polarity protection
Internal safety fuse
Lower voltage than the specified minimum input will not damage the unit

Input Isolation

According to input and output voltage minimum of:
1500Vdc input to chassis
2250Vdc input to output,
500VDC output to chassis
Isolation voltages correspond to input/output combination

Standards

Designed to meet EN60950-1 and corresponding standards

EMI

EN 55022 Class A as a minimum

Switching Frequency

55KHz ±3KHz

Output Voltages/Currents

12V/16A, 24V/8A, 48V/4.2A or 125V/1.6A
200W per plug-in module with convection cooling
Consult factory for other voltages

Redundancy Diode

Installed on each plug-in module
Hot insertion allowed

Line/Load Regulation

Typically ±1% combined from no 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

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

Temperature Drift

0.03% per °C over operating temperature range

Cooling

Natural air convection

Environmental Protection

Basic ruggedizing
Conformal coating and full ruggedizing as option

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 – 95%, non condensing

MTBF

150,000 hours at 45°C per plug-in module.
Demonstrated MTBF is significantly higher

Indicators

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

Controls

Adjustment potentiometer on front-panel of each module

Alarm Output

Form C module fail alarm on the shelf.
Optocoupler alarm on the module

Package/Dimensions (H x W x D)

3U x 19" x 13" (shelf) including connections
3U x 14HP x 220mm (module)

Weight

Shelf fully loaded with six modules: 10.2kg (22.5lb)
Frame: 3.4kg (7.5 lb)
Module: 1.2 kg (2.5 lb)

Connections:

H15 DIN connector on modules
Terminal block for shelf
Other terminations on request

RoHS Compliance

Fully compliant

Warranty

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

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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