

5000W, Industrial Quality, Redundant DC/DC Converter System BAP 5K Series

- 19" Rack- or chassis-mount, 3U
- Rugged, industrial quality
- Fan cooling
- Full electronic protection
- Field-proven design
- Redundant, modular



Chassis-mount



Rack-mount

The BAP 5K Series is a modular, industrial quality DC/DC converter system that uses a field technology to deliver up to 5000W output power, depending on the input/output configuration. It is a mature design with a track record in numerous applications. The fully loaded shelf can hold up to seven internal modules, which also provide inherent redundancy; the failure of one module would only cause a minor loss in output power. Several shelves can be paralleled for higher output power. Multiple output versions can also be achieved by combining various internal modules. Full electronic protection eliminates failure due to abnormal operational conditions, including application errors. The system has input and output filtering in compliance with EN 55022 EMI standards. Built-in fans provide sufficient airflow for operation without de-rating to the specified temperature. Low component count, large design headrooms, and the use of components with established reliability result in a high MTBF. Additional ruggedizing and conformal coating are available for operation in humid environments. Other options include module fail alarm, extended temperature ranges and remote shut down. The unit is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

24Vdc, 48Vdc, 125Vdc \pm 15% are standard.

Contact factory for other inputs

Input Protection

Inrush current limiting.
Reverse polarity protection
Varistor
Internal safety fuse
Lower voltage than specified minimum input will not damage unit

Input Isolation

Depends on the required input/output Combination. At minimum:
1000Vdc input to chassis
1500Vdc input to output
500Vdc output to chassis

Standards

Designed to meet EN60950 and related UL & CSA standards

EMI

EN 55022 Class A with margins
Class B filtering as option

Switching Frequency

55kHz +/- 3kHz

Output Voltage

Any DC output from
12V to 300Vdc
Consult factory for other outputs

Redundancy diodes

Installed on each internal module for separation and redundancy

Line/Load Regulation

\pm 1% to \pm 2% combined depending on output voltage

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 (20MHz BW)

Overload Protection

Current limiting with short circuit protection
Self-resetting thermostat for thermal protection

Output Overvoltage Protection

Double regulator loop

Efficiency

75 - 94% depending on input/Output configuration

Operating Temperature

0°C to +50°C with built-in fan cooling. Extended temperature range available

Temperature Drift

0.03% per °C over operating temperature range

Cooling

Forced air by built in fans

Environmental Protection

Basic ruggedizing
Optional heavy ruggedizing and conformal coating is available

Shock/Vibration

IEC61371 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

150,000 hours @ 45°C per internal module.
Demonstrated MTBF is significantly higher.

Indicators

None
Available as option

Control Input

None
Available as option

Alarm Outputs

Not on standard version
Optional module fail alarm or output fail alarm

Package/Dimensions (H x W x D)

Chassis-mount:
3U7: 132 x 432 x 407mm
(5.2" x 17" x 16") including connectors
Rack-mount:
3U7: 132 x 483 x 407mm
(5.2" x 19" x 16") including connectors

Weight

Approx. 14 kg (30 lb)

Connections

Terminal blocks or threaded studs.
Other connectors according to customer requirements

RoHS Compliance

Fully compliant

Warranty

Two years subject to application within good engineering practice

Enhancements to these general specifications and customizing can be accommodated upon request. Specifications 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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