

150W, Rugged DC-DC Converter for Heavy-duty Industrial Applications

BAP 150-F1 Series

- Rugged industrial quality
- Field-proven design
- Regulated and adjustable output
- Conduction/convection cooling (no fans)
- Full electronic protection
- N+1 redundancy available as option
- Plug-in (Eurocard) version available



This rugged, industrial quality DC-DC power converter utilizes field-proven technology to generate the required output power. It is a mature design with a track record in numerous applications. Cooling is by conduction via baseplate. Additional cooling is achieved by natural convection through the cooling slots. All heat generating components are installed on aluminum heatsink blocks which are thermally connected to the base plate. This also provides exceptional mechanical ruggedness. Conformal coating provides protection against humidity and airborne contaminants. An optional built-in redundancy diode allows for parallel and N+1 operation. A Form C output fail alarm is available on request. Full electronic protection, low component count, large design headroom and the exclusive use of components with established reliability contribute to a high MTBF. The unit is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

24Vdc (21-29V)
48Vdc (42-56V)
125Vdc (105-145V)
For 12Vdc and other input voltages, consult factory.

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 voltage minimum of:
1000VDC input to chassis,
1500VDC input to output,
500VDC output to chassis

Standards

Designed to meet EN62368-1 and corresponding standards

EMI

EN 55032 Class A with margins

Switching Frequency

55kHz $\pm$ 3kHz

Output Voltages

24V, 48V or 125Vdc
150W continuous output
Output is floating; either terminal can be grounded
Consult factory for other voltages

Redundancy diode

None
Installed on request

Line/Load Regulation

$\pm$ 1% combined from zero load to full load

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% Vrms (20MHz BW)

Output Overload Protection

Rectangular current limiting with short-circuit protection (hiccup).
Thermal shutdown in case of insufficient cooling (self -resetting)

Output Overvoltage Protection

Double regulator loop completely stable and independent of main 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 available

Temperature Drift

0.03% per °C, over operating temperature range

Cooling

Conduction via base plate to customer heat-sink or chassis and natural convection

Environmental Protection

Basic ruggedizing
Conformal coating

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

Green 'Output ON LED' visible through cooling slots

Control Input

None

Alarm Output

Output fail alarm Form C contacts installed on request

Package/Dimensions (W x H x D)

F1: 113 x 51 x 198 mm
4.45" x 2" x 7.8"
Includes baseplate, excludes terminals
Mounting holes are clear

Weight

0.8 kg (1.8 lb)

Connections

9-pole barrier type terminal block, 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	-	+	NOT USED	GND	-	+
1	2	3	4	5	6	7	8	9

ABSOPULSE power supplies are designed and built to customer requirements. The specifications on this data sheet are generic guidelines only and 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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