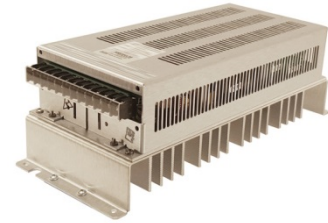


300W, Rugged DC-DC Converter with Convection Cooling by Heatsink Assembly Fins for Railway and other Heavy-Duty Applications BAP 65R-F3-HSA Series

- Field-proven rugged design
- For train and mobile applications
- Convection cooling via heatsink assembly
- Full electronic protection
- Wide input range (EN50155)
- N+1 redundancy available



This rugged, railway quality power converter utilizes field-proven technology to generate the required output power. It is a mature design with a track record in numerous applications. Convection cooling is achieved by installing the unit on a heatsink assembly block which is specifically designed for the unit. The heatsink assembly also allows for mounting on uneven and thermally non-conductive surfaces. Conformal coating provides protection against humidity and airborne contaminants. An optional redundancy diode allows parallel connection to achieve higher output power or N+1 redundancy. Other options include a Form C output fail alarm and remote shutdown. This design is optimized for low component count and high efficiency. 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 meets the requirements of EN50155 for electronic equipment used on railway rolling stock. It is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage
36Vdc (22 – 51V)
48Vdc (29 - 67V)
72Vdc (43 – 101V)
96Vdc (58 – 135V)
110Vdc (66 - 154V)
Other inputs upon request

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

Isolation
1500Vdc input to chassis
3000Vdc input to output
1500Vdc output to chassis

Standards
Designed to meet EN60950-1 and EN50155

Immunity
Meets criteria as requested in EN50155 and EN50121-3-2 according to:
EN61000-4-2 (ESD)
EN61000-4-3 (RF Immunity)
EN61000-4-4 (Fast Transient)
EN50155 (Surge)
EN61000-4-6 (Conducted immunity)
EN50155 (Voltage variation)

EMI
EN50121-3-2

Switching Frequency
55kHz \pm 3kHz

Output Voltage
Any single DC output up to 400Vdc

Redundancy diode
Not included.
Available as option

Line/Load Regulation
 \pm 1% from no 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% RMS of the output voltage (20MHZ BW)

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

Output Overvoltage Protection
Dual regulator loop

Efficiency
80 - 90% depending on input/output configuration

Operating Temperature
-25°C to +55°C cold-plate temperature range for full specification without derating. Consult factory for extended temperature range

Temperature Drift
0.03% per °C over operating temperature range

Cooling
Natural air convection

Environmental Protection
Ruggedizing
Conformal coating

Shock/Vibration
IEC 61373 Cat 1 A&B

Humidity
5 – 95% non-condensing

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

Indicators
Output ON green LED visible through the cooling slot

Control Input
Optional

Alarm Outputs
Form C output fail alarm as option

Package/Dimensions (W x H x L)
F3 enclosure on HAS heatsink assembly with fins:
132mm x 102mm x 323mm (5.2" x 4" x 12.7")
Mounting holes are clear

Weight
3 kg (6.6 lb)

Connections
12-pole barrier type terminal block with 9.5mm spacing

RoHS Compliance
Compliant

Warranty
Two years subject to application within good engineering practice

Terminal Block Pin-out

NOT USED		VDC OUTPUT				NOT USED			VDC INPUT		
1	2	+	+	-	-	7	8	9	GND	-	+
1	2	3	4	5	6	7	8	9	10	11	12

The specifications on this data sheet are generic and are subject to change. Enhancements to these specifications can be provided upon request.

OEM of industrial and railway AC/DC power supplies and battery chargers, DC/DC converters, DC-AC sine-wave inverters, phase & frequency converters, DC-output UPS systems and complete power systems in 19" and 23" racks since 1982. Custom & standard. ABSOPULSE is a BAPT-approved facility



ABSOPULSE ELECTRONICS LTD

110 Walgreen Road, Ottawa, Ontario, K0A 1L0, CANADA
Tel: +1-613-836-3511 | Fax: +1-613-836-7488

<https://absopulse.com/contact> | <https://www.absopulse.com>