

## 300W, Rugged Convection/Conduction Cooled DC/DC Converter for Railway and other Heavy-Duty Applications BAP 65R-FT Series



- Field-proven rugged design
- For train and mobile applications
- Conduction/convection cooled
- Full electronic protection
- Wide selection of input/output combinations
- N+1 redundancy available

The BAP 65R Series rugged, single output DC/DC converter uses field proven topology to generate 300W output power. It is a mature design with a track record in hundreds of applications. The standard version is rated for operation over a -25°C to +55°C temperature range. A -40°C to +70°C version is also available. It is cooled by conduction via baseplate to a heatsinking surface and by natural convection. These models are fully ruggedized and conformal coated for immunity to shock, vibration, humidity, moisture, dust and insects. 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 chassis-mount design is optimized for low component count and high efficiency. The use of components with established reliability results in a demonstrated high MTBF. The BAP 65R is manufactured at our plant under strict quality control. Customized versions are also available.

### SPECIFICATIONS

<p><b>Input Voltage</b> 36Vdc (22 – 51V) 48Vdc (29 – 67V) 72Vdc (43 – 101V) 96Vdc (58 – 135V) 110Vdc (66 – 154V) Other inputs upon request</p> <p><b>Input Protection</b> Inrush current limiting. Reverse polarity protection Varistor Internal safety fuse Lower voltage than specified minimum input will not damage unit</p> <p><b>Isolation</b> 1500Vdc input to chassis 3000Vdc input to output 1500Vdc output to chassis</p> <p><b>Standards</b> Meets EN60950 and EN50155</p> <p><b>Immunity</b> 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)</p>	<p><b>EMI</b> EN55022 Class B and EN50121-3-2 conducted and radiated</p> <p><b>Switching Frequency</b> 55kHz +/- 3kHz</p> <p><b>Output Voltage</b> Any single DC output up to 130Vdc</p> <p><b>Redundancy diode</b> Optional</p> <p><b>Line/Load Regulation</b> +/-1% from no load to full load</p> <p><b>Dynamic Response</b> Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time</p> <p><b>Output Ripple/Noise</b> Better than 1% of output voltage peak to peak or 0.2% RMS of the output voltage (20MHZ BW)</p> <p><b>Overload Protection</b> Current limiting with short circuit protection. Self-resetting thermostat for thermal protection</p> <p><b>Output Overvoltage Protection</b> Double regulator loop</p>	<p><b>Efficiency</b> 80 - 90% depending on input/output configuration</p> <p><b>Operating Temperature</b> -25 to +55°C cold-plate temperature. Extended temperature ranges available</p> <p><b>Temperature Drift</b> 0.03% per °C over operating temperature range</p> <p><b>Cooling</b> Conduction to customer heatsink or chassis and natural convection</p> <p><b>Environmental Protection</b> Heavy ruggedizing Conformal coating</p> <p><b>Shock/Vibration</b> IEC 61373 Cat 1 A&amp;B</p> <p><b>MTBF</b> 150,000 hours @ 45 °C Demonstrated MTBF is significantly higher.</p>	<p><b>Indicators</b> Output ON green LED visible through the cooling slot</p> <p><b>Control Input</b> Optional</p> <p><b>Alarm Outputs</b> Optional</p> <p><b>Package/Dimensions (W x H x L)</b> F3: 132mm x 62mm x 300mm (5.2" x 2.4" 11.8") including terminal block and mounting flanges. Mounting holes are clear</p> <p><b>Weight</b> 2kg (4.4 lb)</p> <p><b>Connections</b> 12-pole barrier type terminal block with 3/8" spacing</p> <p><b>RoHS Compliance</b> Fully compliant</p> <p><b>Warranty</b> Two years subject to application within good engineering practice</p>
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**Enhancements to these general specifications and customizing can be accommodated upon request.**

*Designer and manufacturer of quality ac-dc power supplies and battery chargers, converters, inverters, dc-output UPS systems, complete rack mount systems and DC-input fluorescent lamp inverters since 1982. Custom or standard. Absopulse is a ABBT-approved Facility.*



**ABSOPULSE ELECTRONICS LTD**  
110 Walgreen Road  
Ottawa, Ontario. K0A 1L0. CANADA  
Tel: (613) 836-3511 Fax: (613) 836-7488  
E-mail: [absopulse@absopulse.com](mailto:absopulse@absopulse.com)  
[www.absopulse.com](http://www.absopulse.com)