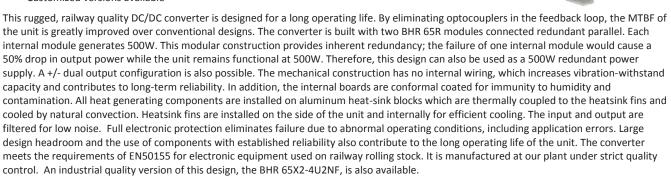
1000W, High Reliability, Convection Cooled, Railway Quality DC/DC Converter BHR 65X2R-4U2NF Series (Opto-less)

- No optocouplers, low component count
- Rugged, railway quality
- Cooling by convection only (no fans or forced air)
- Rugged construction
- Conformal coating
- High input/output isolation
- Full electronic protection
- Customized versions available



SPECIFICATIONS

Input Voltage

72Vdc (43 – 101V), 96Vdc (58 – 135V), 110Vdc (66 – 154V) For other input voltages, please 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

Corresponding to input/output voltage:

Min. 1500Vdc input to chassis Min. 3000Vdc input to output Min. 1500VDC output to chassis

Standards

Designed to meet EN 60950-1 and EN50155

Immunity

Meets criteria as requested in EN50155 and EN50121-3-2 according to the following standards:

EN61000-4-2 (ESD) EN61000-4-3 (RF Immunity) EN61000-4-4 (Fast Transients) EN 50155 (Surge) EN 61000-4-6 (Conduction Immunity)

EN50155 (Voltage Variations)

EMI

EN50121-3-2

Switching Frequency 55kHz ±3kHz

Output Voltages

24V, 48V, 110V or 125Vdc 1000W continuous 12Vdc at 800W continuous Output is floating; either terminal can be grounded Consult factory for other voltages

Redundancy diode

Internal boards are connected parallel via redundancy diode

Line/Load Regulation

± 2% combined from 5% 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
Thermal shutdown in case of insufficient cooling (self-resetting)

Output Overvoltage Protection

Second control loop

Efficiency

Typically 80-90% at full load depending on input/output combination

Operating Temperature Range

-25 °C to 55 °C for full specification Extended temperature ranges available on request

Temperature Drift

0.03% per $\,^{\circ}$ C, over operating temperature range

Cooling

By natural air convection

Environmental Protection

Ruggedizing Conformal coating

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

175,000 hours at 45 °C Demonstrated MTBF is significantly higher

Indicators

Green 'Output ON LED' visible through cooling slots

Control Input

Optional

Alarm Output

None on standard version Output fail alarm Form C contacts installed on request

Package/Dimensions (H x W x D)

4U2NF: 191 x 191 x 305 mm (7.5 x 7.5 x 12") Dimensions include heatsink fins and flanges, exclude connectors. Mounting holes are clear

Weight

6.8 kg (15 lb)

Connections

Barrier type terminal blocks or threaded studs

RoHS Compliance

Compliant

Warranty

Two years subject to application within good engineering practice



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