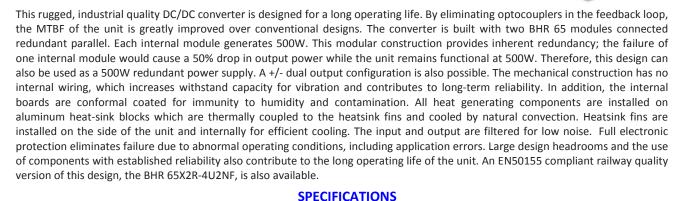
# 1000W, High Reliability, Convection Cooled, Industrial Quality DC/DC Converter BHR 65X2-4U2NF Series (Opto-less)

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



## **Input Voltage**

48Vdc (42-60V) 125Vd (105-145V) 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. 1000Vdc input to chassis Min. 2250Vdc input to output Min. 500VDC output to chassis

## Standards

Designed to meet EN 60950-1 and corresponding UL and CSA standards

#### EMI

EN55022 Class A with margins

Switching Frequency 55kHz ±3kHz

## **Output Voltages**

24V, 48V 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**

± 1% combined from 10% 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**

-20°C to 50°C for full specification Extended temperature ranges available on request

## **Temperature Drift**

0.03% per °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  $^{\circ}\mathrm{C}$  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**

Fully compliant

## Warranty

Two years subject to application within good engineering practice Contamination related failures not covered.

