

Model: BAP2K5-48W/24-3U3-U1248
COSD: XXXX
Summary description: 2500W, Industrial Quality DC/DC Converter
 48Vdc to 24Vdc/104A
Customer Name: Thiele KG/Germany
Customer Part No.: Same as above



Product description:

This rugged, industrial quality power converter system uses field proven technology to generate the required output power. The system has three BAP65F internal modules. Built-in fan provides sufficient airflow for operation at the specified temperature without de-rating. The fans draw air into the unit and the exhaust exits at the rear of the unit. The system has full electronic protection. The input and output are filtered for low noise. Large design headroom, and the use of components with established reliability result in a high MTBF. The unit is manufactured at our plant under strict quality control.

Special Features: 36-60Vdc input range. Conformal coating.

SPECIFICATIONS

Input Voltage

48Vdc nominal
 36-60Vdc operating range
 Input Current: 83A max.

Input Protection

Inrush current limiting
 Varistor
 Reverse polarity protection
 Internal safety fuses
 Lower input voltages than the specified minimum will not damage the unit

Isolation

1000Vdc input to chassis
 1500Vdc input to output
 1000Vdc output to chassis

Standards

Designed to meet EN 60950-1 and related standards

EMI

EN55032 Class A with margins

Switching Frequency

55kHz ± 3kHz

Output Voltage/Current

24Vdc ± 0.3V / 104A
 Output is floating, either terminal can be grounded

Redundancy Diode

Installed internally for separation of the internal modules

Line/Load Regulation

±1.5% combined from zero load to full load including redundancy diode

Dynamic Re sponse

Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time

Output Ripple / Noise

Better than 80mVrms and 400mVpp (@20MHz BW)

Output Overload Protection

Rectangular current limiting with short-circuit protection
 Thermal shutdown with automatic reset in case of insufficient cooling (self-resetting)
 Current Limit set to: 110A ± 5A

Output Overvoltage Protection

Second regulator loop. Second loop completely stable and independent of main regulator loop
 OVP setting: 28V ± 3V

Efficiency

85% at full load

Operating Temperature Range

0°C to +50°C for full specification

Temperature Drift

0.03% per °C over operating temperature range

Cooling

By built-in high quality fan

Environmental Protection

Basic ruggedizing
 Conformal coating

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 – 95% non-condensing

MTBF

110,000 hours @ 45°C
 Demonstrated MTBF is significantly higher (Fan excluded)

Indicators

Green Output ON LED on each internal module visible through the rear perforation

Control Input

None

Alarm Output

Not installed

Package / Dimensions (W x H x L)

3U3: 187 x 132 x 407mm
 (7.4" x 5.2" x 16")
 Four L-brackets included for mounting

Weight

6.5kg (14 lbs)

Connections


Input: Threaded studs M6
 Output: Threaded studs M6

RoHS Compliance

Compliant

Warranty

Two years subject to application with good engineering practice
 Contamination related failures and shipping cost excluded

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