

Model: BAP 3K-24/325-3U5-T5553
COSD: XXXX
Summary description: 3022W, Industrial Quality DC/DC Converter
 24V to 325Vdc/9.3A
Customer Name: Thiele KG/Germany (KS)
Customer Part Number: Same as above



Product description:

This rugged, industrial-quality power converter system uses field-proven technology to generate the required output power. The unit is built with five BAP65F internal modules, which are connected parallel via redundancy diodes. This modular construction also provides inherent redundancy; the failure of one internal module only causes a drop in output power while the unit remains operational. Built-in fans provide 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 headrooms, 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: Conformal coating.

SPECIFICATIONS

Input Voltage

24Vdc nominal
 19-28Vdc operating range (requested)
 Input Current: 189A 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

700Vdc input to chassis
 2250Vdc input to output
 2250Vdc 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

325Vdc ± 1V/9.3A
 Output is floating either terminal can be grounded

Redundancy Diode

Installed internally for separation of the internal modules

Line/Load Regulation

± 1% combined from zero load to full load including redundancy diode

Dynamic Response

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

Output Ripple / Noise

Better than 200mVrms and 900mVpp (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: 10A ± 0.7A

Output Overvoltage Protection

Second regulator loop. Second loop completely stable and independent of main regulator loop
 OVP setting: 360V ± 20V

Efficiency

83% 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 fans

Environmental Protection

Basic ruggedizing
 Conformal coating

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5-95% non-condensing

MTBF

Min. 160,000 hours @ 45°C per internal module (Fans excluded)

Indicators

Green Output ON LED on each internal module visible through cooling slots

Control Input

None

Alarm Output

Not installed

Package / Dimensions (W x H x L)

3U5: 355 x 132 x 406mm
 (14" x 5.2" x 16")
 Mounting holes are clear

Weight

10kg (22 lbs)

Connections


Input: Threaded studs Dual M6
 Output: Terminal block

RoHS Compliance

Compliant

Warranty

Two years subject to application within good engineering practice
 Contamination related failures and shipping costs are excluded

Drawn by TS/kv	Date Aug. 19, 2019
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Approved by TS	

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