

Model: BAP 3K-125W/220-3U3-U2393
COSED: 26W1-1 (26W1-2)
Summary Description: 3000W, Industrial Quality DC/DC Converter
 125Vdc to 220V/13.6A
Customer Name: Thiele KG/Germany
Project Name: Siemens



Preliminary

Product Description:

This rugged, industrial quality DC/DC power converter uses field proven technology to generate the required output power. The system contains three CDC500 internal modules. Built-in fans provide sufficient airflow for operation at the specified temperature without de-rating. The fans draw air into the unit and 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: 90-150Vdc input range. Conformal coating. CE Mark, CE DoC, CofC

SPECIFICATIONS

Input Voltage

125Vdc nominal
 90-150Vdc operating range
 Input current: 40A max.

Input Protection

Inrush current limiting
 Varistors
 Reverse polarity protection
 Internal safety fuse
 Lower voltage than the specified minimum input will not damage the unit

Isolation

2250Vdc input to chassis
 3000Vdc input to output
 2250Vdc output to chassis

Standards

Designed to meet EN62368-1 and related standards

EMI

EN55032 Class A with margins

Switching Frequency

55kHz ± 3kHz

Output Voltage/Current

220Vdc ± 0.5V / 13.6A
 3000W continuous
 Output is floating, either terminal can be grounded

Output Separation Diode

Installed internally for separation of the internal modules

Line/Load Regulation

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

1	2	3
+	-	GND
125VDC INPUT		

220VDC OUTPUT		
+	-	GND
1	2	3

Dynamic Response

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

Output Ripple/Noise

Better than 150mVrms or 800mVpp (@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: 15A ± 1.3A

Output Overvoltage Protection

Second regulator loop. Second loop completely stable and independent of main regulator
 OVP limit: 250V ± 10V

Efficiency

88% at full load

Operating Temperature Range

0°C to +50°C ambient 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

120,000 hours @ 45°C (Fans excluded)

Indicators

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

Control Input

None

Alarm Output

Not installed

Package/ Dimensions (WxHxL)

3U3: 187 x 132 x 432mm (7.4" x 5.2" x 17")
 Chassis mount

Weight

7kg (15 lbs)

Connections


Input: Terminal block 3 pole 1/2" spacing
 Output: Terminal block 3 pole 1/2" spacing

RoHS Compliance

Compliant

Warranty

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

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