

**Model:** BAP 3K-80/24-3U4-T6263  
**COSD:** XXXX  
**Summary description:** 3000W, Industrial Quality DC/DC Converter  
 80V to 24V/125A  
**Customer Name:** Thiele/Germany (KS)  
**Customer Part Number:** Same as above



**Product description:**

This rugged, industrial quality power converter utilizes field proven technology to generate the required output power. It is a mature design with a track record in numerous applications. The unit is built with four 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. The input and output are filtered for low noise. High quality built-in fans provide sufficient airflow for operation within the specified temperature range without de-rating. The fans draw air into the unit, and exhaust at the terminal side of the unit. All heat generating components are installed on aluminum heatsink blocks which are thermally connected to the base plate. This also ensures exceptional mechanical ruggedness. Conformal coating provides protection against humidity and airborne contaminants. Full electronic protection, low component count, large design headrooms, and the exclusive use of components with established reliability contribute to a high MTBF. The unit is manufactured at our plant under strict quality control.

**Special Features:** Conformal coating

**SPECIFICATIONS**

**Input Voltage**

80Vdc nominal  
 60-100Vdc operating range  
 Input Current: 60A 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**

1500Vdc input to chassis  
 2250Vdc input to output  
 500Vdc output to chassis

**Standards**

Designed to meet EN60950-1 and related standards

**EMI**

EN55032 Class A with margins

**Switching Frequency**

55kHz ±3kHz

**Output Voltage/Current**

24Vdc ±0.3V/125A  
 Output is floating either terminal can be grounded

**Redundancy Diode**

Installed internally for separation of the modules

**Line/Load Regulation**

±1.5% 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 60mVrms and 300mVpp (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: 130A ± 5A

**Output Overvoltage Protection**

Second regulator loop. Second loop completely stable and independent of main regulator loop  
 OVP setting: 28V ± 2V

**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**

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 the cooling slots

**Control Input**

None

**Alarm Output**

Not installed

**Package / Dimensions**

3U4: 244 x 132 x 432mm  
 (9.6" x 5.2" x 17")  
 Chassis mount

**Weight**

10kg (22 lbs)

**Connections**


Input: Threaded studs, M6  
 Output: Threaded studs, M6

**RoHS Compliance**

Compliant

**Warranty**

Two years subject to application within good engineering practice  
 Contamination related failures and

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TS	

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