

## 1500W, Portable 400V Lithium Battery Charger for Field Applications BCH 1K5T-400



- Rugged industrial quality
- Field-proven design
- Fan cooled
- Full electronic protection

The BCH 1K5T-400 is a rugged, industrial quality battery charger that uses high-frequency conversion technology to deliver up to 1500W continuous output power. It is built with three field-proven internal CAC 285 power modules. The unit has an automatic two step charge mode: it applies full 4A charging current until the pre-set voltage threshold of 380Vdc is reached and then switches to a lower 1A maintenance current. A built-in output separation diode prevents battery discharge back into the charger if the AC is disconnected. The input accepts either 115Vac or 230Vac, factory set. Power factor correction is available on request. This charger is conformal coated, heavily ruggedized and is housed in a water-proof Pelican case with a sturdy handle for easy use in the field. Cooling is by built-in fans. 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. Custom options, as well as versions with higher output power and for different battery voltages, are also available.

### SPECIFICATIONS

#### Input Voltage

115 or 230Vac  $\pm 15\%$   
Factory setting according to request  
47 - 63Hz

#### Input Protection

Inrush current limiting  
Varistor  
Input breaker  
Lower voltage than the specified minimum input will not damage the unit

#### Input Isolation

2250VDC input to chassis  
4300VDC input to output  
8mm spacing  
500VDC output to chassis

#### Standards

Designed to meet IEC 62103 Ed. 1, IEC 60950-1 Ed. 2 and related standards  
Meets requirement for CE marking

#### EMI

Meets EN 55022 Class A with margins

#### Switching Frequency

55kHz +/- 2kHz

#### Charging Current and Voltage

4A under 380V and 1A above 380V with automatic switch-over  
Max 1500W continuous  
Open circuit voltage 410V  
The output is floating, either terminal can be grounded  
**Note: Battery must be fused externally, directly at the battery**  
Other voltages on request

#### Output Separation Diode

Installed internally

#### Line Regulation

+/- 2% for charging current  
+/- 1% for open circuit voltage

#### Output Ripple/Noise

Better than 1% of output voltage peak to peak or 0.2% RMS of the output voltage (20MHz BW)

#### Overload Protection

Rectangular current limiting with short circuit protection  
Current limit: 4A +/- 0.3A, and 1A +/- 0.1A  
Output breaker and crossbar diode for reverse battery protection.

#### Output Overvoltage Protection

Double regulator loop. Second regulator loop, completely stable and independent of main regulator loop.

#### Efficiency

82% at full load

#### Operating Temperature

0°C to +50°C without de-rating.  
Optional extended temperature range available

#### Temperature Drift

0.03% per °C over operating temperature range

#### Cooling

Built-in fans

#### Environmental Protection

Heavy ruggedizing  
Conformal coating

#### Shock/Vibration

IEC61371 Cat 1 A&B

#### Humidity

5 - 95% non-condensing

#### MTBF

100,000 hours at 45°C (fan not included)  
Demonstrated MTBF significantly higher

#### Indicators

Analog voltmeter and ammeter on the front-panel (upper surface).

#### Control Input

None

#### Alarm Outputs

None

#### Package/Dimensions (W x H x D)

Pelican Case #1520  
502 x 188 x 400 mm  
(19.8" x 7.5" x 15.8")

#### Weight

12kg. (26lbs).

#### Connections

AC-input: IEC receptacle  
Output: Anderson Spec Pak, 4 positions

#### RoHS Compliance

Fully compliant

#### Warranty

Two years subject to application within good engineering practice

Enhancements to these general specifications and customizing can be accommodated upon request. Specifications are subject to change.

*Designer and manufacturer of quality converters, inverters, UPS systems, complete rack mount systems and DC-input fluorescent lamp inverters since 1982. Custom or standard. Absopulse is a BABT-approved facility*



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