

1500W, Portable Battery Charger for 400V Lithium Battery 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 designed to charge a 400V lithium-ion battery. Other versions with different battery configurations are available. 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, 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 ± 2 kHz

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

$\pm 2\%$ for charging current
 $\pm 1\%$ 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 ± 0.3 A, and 1A ± 0.1 A
Output breaker and crossbar diode for reverse battery protection.
Charger output is protected against reverse battery connection by built-in crossbar diode and output breaker.

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.

Control Input

None

Alarm Outputs

None

Package/Dimensions (WxHxD)

Pelican Case #1520
502 x 401 x 190 mm
(19.8" x 15.8" x 7.4")

Weight

12kg. (26lbs).

Connections

AC-input: IEC receptacle
Outputs: Anderson
Spec Pak 4 position

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 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

ABSOPULSE
ELECTRONICS LTD.

ABSOPULSE ELECTRONICS LTD
110 Walgreen Road
Ottawa, Ontario. K0A 1L0. CANADA
Tel: (613) 836-3511 Fax: (613) 836-7488
E-mail: absopulse@absopulse.com
www.absopulse.com