

# BCH1K5F / BCH2KF SERIES

Battery Chargers: 1000 ~ 2000 Watts

**HELIOS**  
POWER SOLUTIONS



F6W Package



FF6 Package

## Features

- Three power levels: 1KW, 1.5KW & 2KW
- Industrial grade product
- Fully isolated input – output
- Over voltage protection
- Overload and short circuit protection
- Inrush current limiting
- MTBF > 150,000hrs
- Any output from 24vdc ~ 120vdc possible
- Customised mechanical solutions on request
- Power Fail / Charger Fail Alarm
- Battery Low Alarm

## Specifications

Input Voltage	230VAC ( 190 ~ 264 )
Input Frequency	47 ~ 63Hz
Input Current	9.5A 1kw, 14A 1.5kw, 19A 2kw
Input Protection	Inrush current limiting Transient protection / Varistors Internal safety fuse
Isolation	Input – Output: 4300vdc Input - Chassis 2250vdc Output – Chassis 500vdc
Efficiency	Typically 80%
Output voltage	See table
Output Power	1000 ~ 2000 watts
Voltage adjustment	24V: 24-28V 48V 48-56V 96V: 108-127V 108V: 108-127V
EMC	EN55022 Class A
Immunity	EN 61000-4-2 (ESD) EN 61000-4-3 (RF Immunity) EN 61000-4-4 (Fast Transients) EN 61000-4-6 (Conducted Imm.)
Switching Freq.	Typically 55KHz
Output Diode	Internally fitted output isolation diode
Parallel operation	Yes
Regulation	Line: ±1% Load: ±1.5%
Output Ripple/Noise	Typically <1% of output voltage
Overload Protection	Constant current limiting with short circuit protection. Battery must be externally fused.
Thermal Protection	Thermal shutdown with auto recovery, when unit cools down.
Oversupply Protection	Yes. Recycle mains input to re-set
Operating Temp.	0°C to +50°C at full load. Derate 2.5% per °C to +70°C.
Temperature Drift	0.03% per °C over operating range

## Description

The BCH1K ~ 2K series battery charger is a rugged, industrial-grade product, using field-proven design suitable for use in DC battery back-up applications.

It is a mature product providing excellent reliability and performance and delivering up to 2000 watts of output power.

The two alarms provide external monitoring of Power Fail / Charger Fail and Battery Low via voltage free contacts. The chassis-mount design feature allows for easy mounting.

Additional ruggedizing and conformal coating are available for applications requiring higher immunity to shock, vibration, humidity, moisture, dust and insects.

## Options

TBC	Temperature Battery Compensation Charging
TIM	Automatic Battery Testing
Boost	A variety of boost options
Package	FF6 & F6W

## Specifications Cont.

Cooling	Fan cooled
Shock & Vibration	IEC61373 Cat 1 A&B
Humidity	5-95% non-condensing
MTBF	>150,000hrs @ 45°C
Indicator	Green LED visible through cooling slots
Alarm Output	<ul style="list-style-type: none"><li>• Power Fail / Charger Fail Alarm</li><li>• Low Battery Alarm</li></ul> <p>Both Alarms are CLOSE FAIL with common return Low battery only operative if power / charger fails.</p>
Connections	Terminal block / barrier strip with 3/8"spacing
Dimensions	BCH1K5F/BCH2KF Varies 349 x 237 x 66mm (FF6 Package) 356 x 254 x 65mm (F6W Package)
Weight	3.6kg

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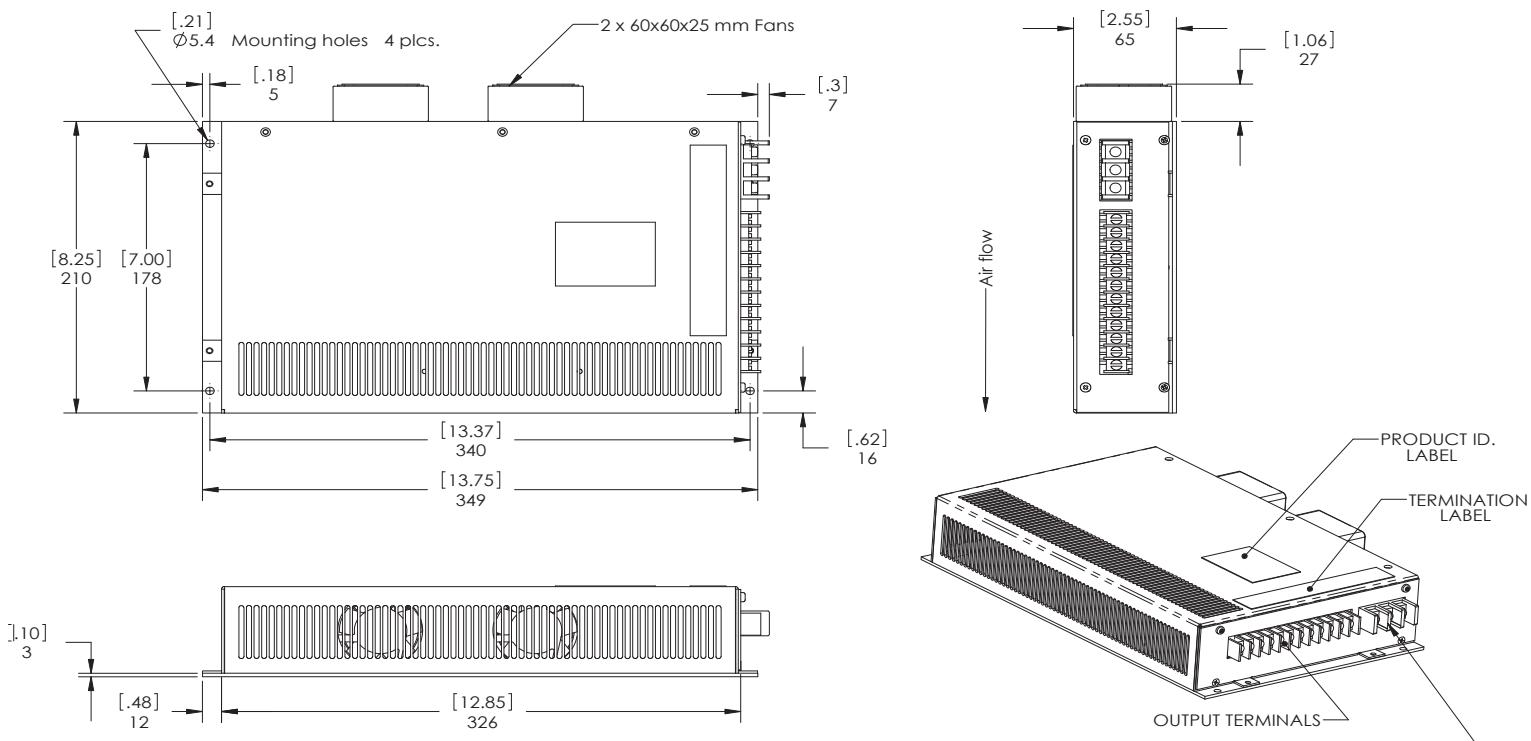
Model	Output			Power W
	Nom V	Float V	A	
<b>BCH1KF-28FT</b>	24V	27.6V	36A	1000W
<b>BCH1KF-55FT</b>	48V	55.2V	18A	1000W
<b>BCH1K5F-28FT</b>	24V	27.6V	50A	1400W
<b>BCH1K5F-55FT</b>	48V	55.2V	27A	1500W
<b>BCH1K5F-110FT</b>	96V	108.0V	12A	1500W
<b>BCH1K5F-110FT</b>	108V	124.0V	12A	1500W

Model	Nom V	Output	A	Power W
	Float V			
<b>BCH2KF-28FT</b>	24V	27.6V	70A	2000W
<b>BCH2KF-55FT</b>	48V	55.2V	36A	2000W
<b>BCH2KF-110FT</b>	96V	108.0V	16A	2000W
<b>BCH2KF-110FT</b>	108V	124.0V	16A	2000W

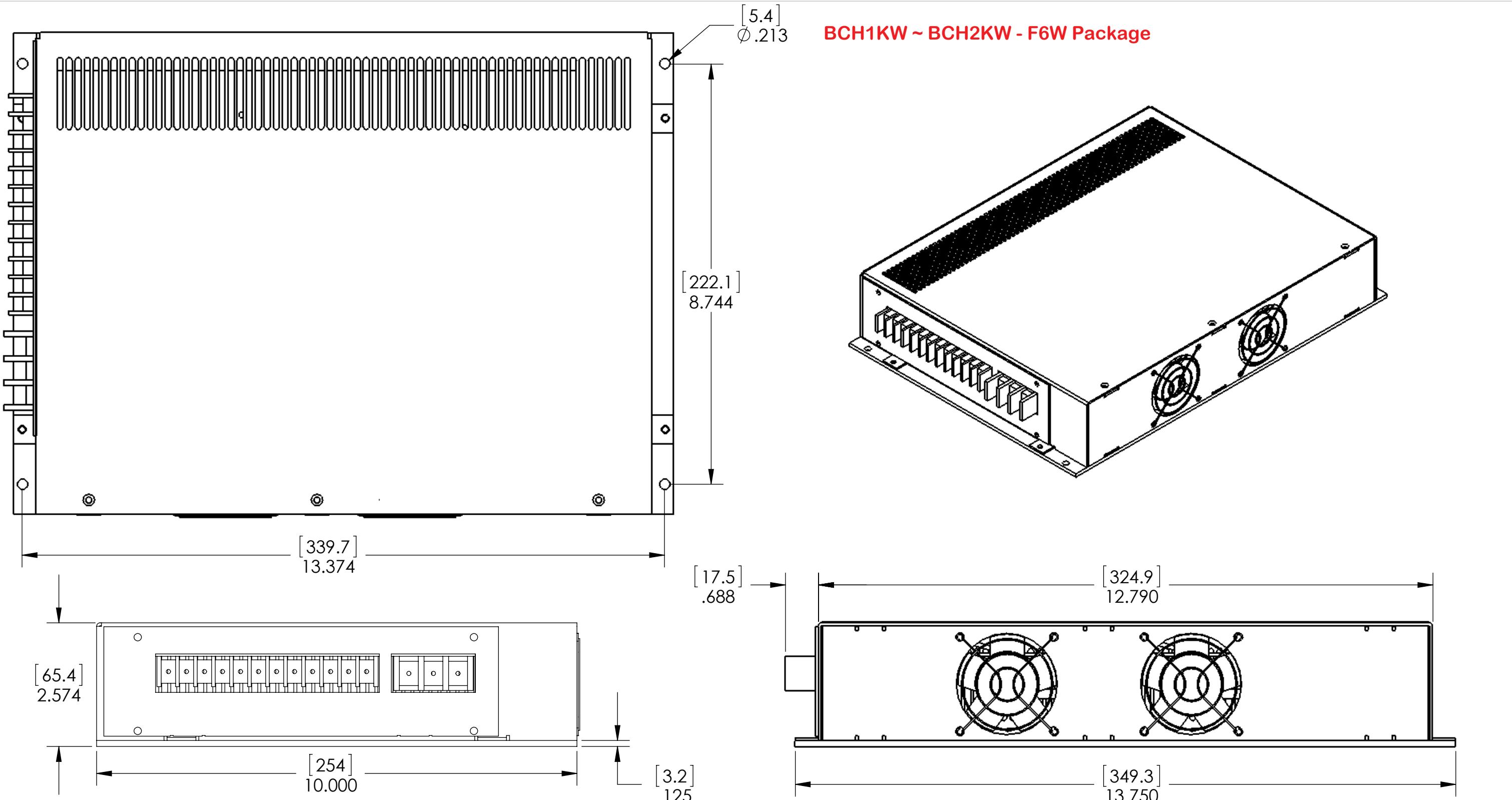
110V model adjustable for use on 96V or 108V nominal battery systems

110V model adjustable for use on 96V or 108V nominal battery systems

## BCH1KW ~ BCH2KW - FF6 Package



DC OUTPUT				ALARMS				230VAC INPUT							
+	+	+	+	+	LED	-	-	-	COM	LBA	CFA	GND	N	PH	
1	2	3	4	5		6	7	8	9	10	11	12	1	2	3



REV	DESCRIPTION:	DATE	MUST BE RoHS COMPLIANT	DIMENSIONS ARE IN INCHES TOLERANCES ON DECIMALS: XXX ± 0.010" EXCEPT MARKED OTHERWISE ANGLES: ± 2° FRACTIONS: ± 1/64" UNLESS OTHERWISE STATED	THIS DOCUMENT IS THE PROPERTY OF HELIOS POWER SUPPLIES PTY LTD. ITS CONTENTS ARE PROPRIETARY AND MAY NEITHER BE COPIED, REPRODUCED NOR ITS CONTENTS DISCLOSED TO OTHERS WITHOUT PRIOR WRITTEN AGREEMENT FROM hELIOS POWER SUPPLIES PTY LTD.	Title:  Part of:  Drawn by: B.Z.	OUTLINE DRAWING  F6W PACKAGE  Checked by: Approved by: Revision: 1	HELIOS POWER SOLUTIONS Date: JUL.07.17	Drawing No: ODR XXXXXXX
A	NEW ISSUE	07/07/17							
			EDGES & HOLES DEBURBED SURFACES FREE OF SCRATCHES						