

# BCH300-500 SERIES ( 19in Rack Mount )

Battery Charger / Power Supply: 300 ~ 500 Watts

**HELIOS**  
POWER SOLUTIONS



## Features

- ♦ 2U x 19in Rack Mount
- ♦ Convection cooled: No fans
- ♦ Two power levels: 300 & 500 watts
- ♦ Fully isolated input – output
- ♦ Over voltage protection
- ♦ Overload and short circuit protection
- ♦ MTBF > 150,000hrs
- ♦ Any output from 12vdc ~ 120vdc possible
- ♦ Power Fail / Charger Fail Alarm
- ♦ Battery Low Alarm
- ♦ Distribution / Battery Circuit Breakers - Option
- ♦ Digital Meters - Option

## Specifications

Input Voltage	230VAC ( 190 ~ 264 )
Input Frequency	47 ~ 63Hz
Input Current	BCH300 @ 2.8A, BCH500 @ 4.7A
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	300 ~ 500 watts
Voltage adjustment	12V: 12-14V. 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 BCH300 & BCH500 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 300 / 500 watts of output power with convection/conduction cooling. ...NO Fans.

The two alarms provide external monitoring of Power Fail / Charger Fail and Battery Low via voltage free contacts.

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
CB	Various Circuit Breaker options

## Specifications Cont.

Cooling	Conduction / convection cooled.
Shock & Vibration	IEC61373 Cat 1 A&B
Humidity	5-95% non-condensing
MTBF	>150,000hrs @ 45°C
Indicator	LED front panel
Alarm Output	♦ Power Fail / Charger Fail Alarm ♦ Low Battery Alarm  Both Alarms are CLOSE FAIL with common return Low battery only operative if power / charger fails.
Connections	AC Input: IEC Socket & Power Cord DC Output: Screw Terminals Alarms: Screw Terminals
Dimensions	2U x 19in x 420mm Rack Mount
Weight	2.5 / 3.5kg

# BCH300-500 SERIES ( 19in Rack Mount )

Battery Chargers: 300 ~ 500 Watts

Model	Output			Power W
	Nom V	Float V	A	
RM-BCH300-14FT	12V	13.8V	20A	300W
RM-BCH300-28FT	24V	27.6V	11A	300W
RM-BCH300-55FT	48V	55.2V	5.5A	300W
RM-BCH300-110FT	96V	108.0V	2.5 A	300W
RM-BCH300-110FT	108V	124.0V	2.5A	300W

Notes:

1. For Digital Meters, change part no to: RMM-BCH300-xxx
2. 110V model adjustable for use on 96V or 108V nominal battery systems

Model	Output			Power W
	Nom V	Float V	A	
RM-BCH500-28FT	24V	27.6V	18A	500W
RM-BCH500-55FT	48V	55.2V	9A	500W
RM-BCH500-110FT	96V	108.0V	4.0A	500W
RM-BCH500-110FT	108V	124.0V	4.0A	500W

Notes:

1. For Digital Meters, change part no to: RMM-BCH500-xxx
2. 110V model adjustable for use on 96V or 108V nominal battery systems



Fig 1: Example of 2U x 19in Rack Mount model, with optional Digital Meters

Dimensions: 2U x 19in x 420mm depth.

Rear panel Connections:

- ♦ IEC socket for mains AC Supply
- ♦ Screw terminals for DC Output ( Load & Battery )
- ♦ Screw terminals for Alarms