



## DSEBC1205 12 Volt, 5 Amp Battery Charger & DSEBC2405 24 Volt, 5 Amp Battery Charger

Part Numbers: BC1205-01, BC1205-02, BC2405-01, BC2405-02



### Overview

The DSEBC1205 and DSEBC2405 are 12 V and 24 V, 5 A switched-mode battery chargers with adjustable charging voltages, making them suitable for multiple different battery chemistry types. The battery charger output is adjusted via a potentiometer and is mounted direct to a chassis or onto DIN rail for ease of integration and installation. There are also LEDs mounted to the battery charger to indicate current charger status and on the DSEBC1205-02 / DSEBC2405-02 variants, battery connection status.

The battery charger has no moving parts, delivering additional durability and reliability, and continues to operate when the engine is running.

### Key Features

- Adjustable charging voltages provides compatibility for a wide range of different battery chemistries.
- Manual boost function to help maintain battery condition.
- Switched-mode power supply technology to provide high operating efficiency with low charge output ripple and superb line regulation.
- Status indication provided by LED.
- Automatic battery connection test and status LED with DSEBC1205-02 and DSEBC2405-02.
- Designed to be permanently connected to a battery and AC Supply. There is no need to disconnect during high load conditions such as when an engine is cranking or running.

### Product Documentation

053-267 – DSEBC1205 / DSEBC2405 Installation Instructions  
057-355 – DSEBC1205 / DSEBC2405 Operator Manual



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Specifications	
<b>AC Supply</b>	
Supply Voltage Range	90 V <sub>AC</sub> to 305 V <sub>AC</sub>
Frequency Range	45 Hz to 65 Hz
Maximum Operating Current	DSEBC1205: 1.4 A <sub>AC</sub> at 110 V <sub>AC</sub> ; 0.9 A <sub>AC</sub> 230 V <sub>AC</sub> DSEBC2405: 2.5 A <sub>AC</sub> at 110 V <sub>AC</sub> ; 1.5 A <sub>AC</sub> 230 V <sub>AC</sub>
Typical Standby Current (DC Charge Output Off)	0.05 A <sub>AC</sub> regardless of Supply Voltage
Efficiency	Greater than 82 %
<b>Charge Output</b>	
Voltage Range	DSEBC1205: 12.5 V <sub>DC</sub> to 14.5 V <sub>DC</sub> DSEBC2405: 25.6 V <sub>DC</sub> to 30.3 V <sub>DC</sub>
Voltage Ripple and Noise	Less than 2 % of configured Request Output Voltage
Voltage Load Regulation	Less than 3.3 % of configured Request Output Voltage
Voltage Line Regulation	Less than 0.4 % of configured Request Output Voltage
Current Range	0 A <sub>DC</sub> to 5.1 A <sub>DC</sub> without Charge Output De-rate
Maximum Current Limit	5.16 A <sub>DC</sub>
<b>Boost Input</b>	
Number	1
Type	Contact between terminals
Maximum Resistance	400 Ω between BOOST terminals (includes cable and switch contact resistance)
<b>Charger Fail Output</b>	
Number	1
Type	Normally Closed Volt-Free Contact
Volt-Free Contact Output Rating	3 A <sub>DC</sub> resistive at 30 V <sub>DC</sub>

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Part Numbers: BC1205-01, BC1205-02, BC2405-01, BC2405-02

Specifications	
<b>Protections</b>	
<b>AC Supply</b>	Under Voltage
<b>Charge Output</b>	Reverse Polarity Over Current Short Circuit
<b>Battery</b>	DSEBC1205-02 / DSEBC2405-02: Disconnection
<b>Temperature</b>	
<b>Operating Temperature</b>	-25 °C to +55 °C / -13 °F to +131 °F
<b>Operating Temperature with De-rate (DSEBC2405)</b>	-25 °C to +80 °C / -13 °F to +176 °F
<b>Storage Temperature</b>	-40 °C to +85 °C / -40 °F to +185 °F
<b>Dimensions</b>	
<b>Overall (W x H x D)</b>	129.6 mm x 138.5 mm x 49 mm / 5.10 " x 5.45 " x 1.93 "
<b>Weight</b>	0.42 kg (0.93 lb 14.81 oz)
<b>Mounting</b>	
<b>Type</b>	DIN Rail or Chassis Mounting
<b>DIN Rail</b>	35 mm
<b>Chassis</b>	<b>Option One:</b> 2 x M4 mounting holes with 140.8 mm / 5.54 " centres <b>Option Two:</b> 2 x M4 mounting holes with 128.4 mm x 119.4 / 5.05 " x 4.70 " centres

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Environmental Testing Standards	
<b>Electro-Magnetic Compatibility</b>	
BS EN 61000-6-2	EMC Generic Immunity Standard for the Industrial Environment
BS EN 61000-6-4	EMC Generic Emission Standard for the Industrial Environment
<b>Electrical Safety</b>	
BS EN 60335-2-29:2004	Household and Similar Electrical Appliances. Particular Requirements for Battery Chargers.
<b>Temperature</b>	
BS EN 60068-2-1	Ab/Ae Cold Test -25 °C
BS EN 60068-2-2	Bb/Be Dry Heat +80 °C
<b>Vibration</b>	
BS EN 60068-2-6	Ten sweeps in each of three major axes 5 Hz to 8 Hz at ±7.5 mm, 8 Hz to 500 Hz at 2 Gn
<b>Humidity</b>	
BS EN 60068-2-30	Db Damp Heat Cyclic 20/55 °C at 95% Relative Humidity 48 Hours
BS EN 60068-2-78	Cab Damp Heat Static 40 °C at 93% Relative Humidity 48 Hours
<b>Shock</b>	
BS EN 60068-2-27	Three shocks in each of three major axes 15 Gn in 11 ms
<b>Degrees of Protection Provided by Enclosures</b>	
BS EN 60529	IP21

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Terminal Description	
Pin	Description
-OP	Charge Output Negative
+OP	Charge Output Positive
BOOST	Boost Digital Input
BOOST	Boost Digital Input
CF	Normally Closed Charger Fail Relay
CF	Normally Closed Charger Fail Relay
⏏	AC Supply Earth
N	AC Supply Neutral
L	AC Supply Live

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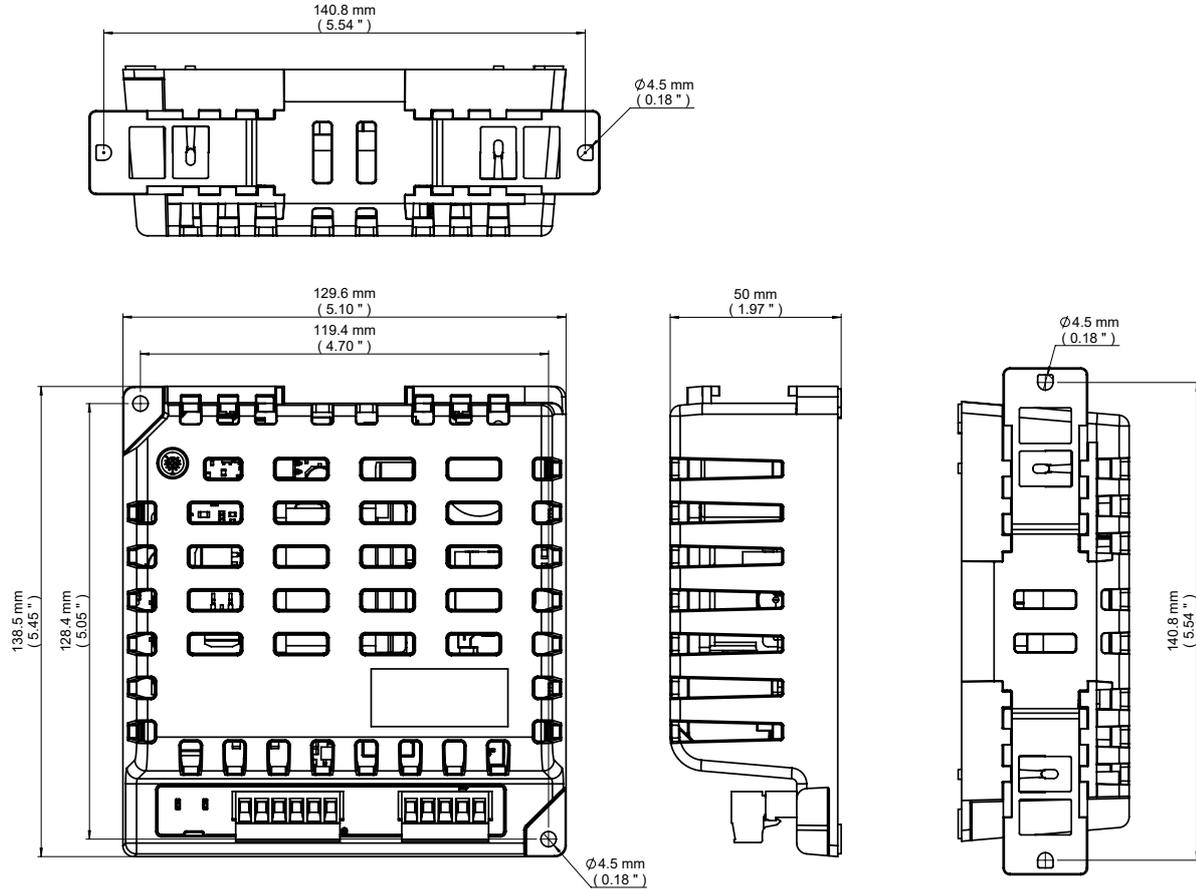
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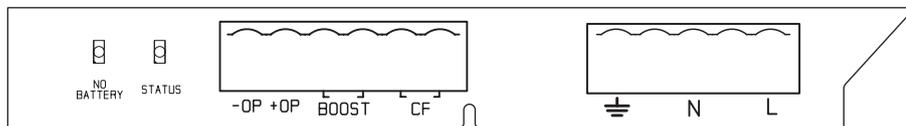
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#### Technical Drawing



#### Connection Label



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