



DSEBC2415i 24 Volt, 15 Amp Intelligent Battery Charger

Part Numbers: BC2415i-01



Overview

The DSEBC2415i is an intelligent 24 volt, 15 amp switched-mode battery charger that has fully programmable charging curves, making it suitable for multiple different battery chemistry types. The battery charger is programmed using the DSE Configuration Suite PC Software and is mounted direct to a chassis or onto DIN rail for ease of integration and installation. There are also three integrated LEDs mounted to the battery charger to indicate current charging status and fault conditions.

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

Key Features

- Fully configurable charging voltages and current limit provides compatibility for a wide range of different battery chemistries.
- Fully configurable two, three or four stage charging profiles to optimisation charging efficiency.
- Automatic and / or manual boost, and storage charge functions to help maintain battery condition.
- Configurable temperature compensation on charging voltage to optimisation charging efficiency and battery condition.
- Digital microprocessor and switched-mode power supply technology to provide high operating efficiency with low charge output ripple and superb line regulation.
- Automatic and / or manual battery connection test.
- 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.
- Status and fault indication provided by three multi-colour LEDs.
- PC configuration using DSE Configuration Suite
- Integrated DSENet® / RS485 port providing ability to be connected to a DSEgenset module as an expansion module, or Modbus RTU support

Product Documentation

053-265 – DSEBC2415i Installation Instructions

057-352 – DSEBC2415i Operator Manual

057-353 – DSEBC2415i Configuration Suite PC Manual



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Specifications	
AC Supply	
Minimum Supply Voltage	95 V _{AC} with Charge Output De-rate 110 V _{AC} without Charge Output De-rate
Maximum Supply Voltage	305 V _{AC}
UL Voltage Approval Rating	100 - 305 V _{AC}
Frequency Range	48 Hz to 64 Hz
Maximum Operating Current	4.0 A _{AC} at 110 V _{AC} , 2.3 A _{AC} 230 V _{AC}
Typical Standby Current (DC Charge Output Off)	0.05 A _{AC} regardless of Supply Voltage
Efficiency	Greater than 89 %
Charge Output	
Voltage Range	24 V _{DC} to 29.5 V _{DC}
Voltage Ripple and Noise	Less than 1 % of configured Boost Voltage
Voltage Load Regulation	2 %
Voltage Line Regulation	Less than 0.01 % requested Charge Output Voltage
Current Range	0 A _{DC} to 5 A _{DC} with maximum Charge Output De-rate 0 A _{DC} to 15 A _{DC} without Charge Output De-rate
Maximum Current Limit	7.5 A _{DC} to 15 A _{DC}
Current Limit Accuracy	±10 % of configured Maximum Current Limit
Digital Input	
Number	1
Type	Contact between terminals
Closed Voltage Threshold	Less than 2.1 V _{DC}
Open Voltage Threshold	Greater than 6.6 V _{DC}
Temperature Sensor Input	
Number	1
Type	PT1000
Charger Fail Output	
Number	1
Type	Changeover Volt-Free Contact

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Specifications	
Protections	
AC Supply	Over and Under Voltage Over and Under Frequency
Charge Output	Reverse Polarity Under and Over Voltage Over Current Short Circuit
Battery Charger	Battery Charger Over Temperature Battery Charger Self Test
Battery	Disconnection Over Temperature
Communications	
USB B	1 Programming Port
RS485 / DSENet®	1 Modbus RTU Port / 1 Expansion Port
Temperature	
Operating Temperature	-30 °C to +50 °C / -22 °F to +122 °F
Operating Temperature with De-rate	-30 °C to +70 °C / -22 °F to +158 °F
Storage Temperature	-40 °C to +80 °C / -40 °F to +176 °F
Dimensions	
Overall (W x H x D)	204.0 mm x 134.0 mm x 80.0 mm / 8.00 " x 5.27 " x 3.00 "
Weight	0.78 kg (1.7 lb 27.5 oz)
Mounting	
Type	DIN Rail or Chassis Mounting
DIN Rail	35 mm
Chassis	4 x M4 mounting holes with 191.0 mm x 121.0 mm / 7.50 " x 4.76 " centres

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Related Products		
DSEgenset®		
DSEG8900	7" Colour Parallel Genset Controller	G8900-01
DSEG8660	Mains (Utility) Controller	G8660-01
DSEG8600	Parallel Genset Controller with Integral Heater	G8600-01
DSE8660 MKII	Auto Transfer Switch & Mains (Utility) Control Module	8660-02
DSE8620 MKII	Synchronising Auto Mains (Utility) Failure Load Share Control Module	8620-02
DSE8610 MKII	Synchronising & Load Sharing Auto Start Control Module	8610-02
DSE7420 MKII	Auto Mains (Utility) Failure Control Module	7420-03
DSE7410 MKII	Auto Start Control Module	7410-03
DSE7320 MKII	Auto Mains (Utility) Failure Control Module	7320-03
DSE7310 MKII	Auto Start Control Module	7310-03
DSE6120 MKIII	Auto Mains (Utility) Failure Control Module	6120-05
DSE6110 MKIII	Auto Start Control Module	6110-05
DSEControl®		
DSEE400	Engine Only Control Module	E400-01

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Environmental Testing Standards	
Electro-Magnetic Compatibility	
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
Electrical Safety	
BS EN 60335-2-29	Household and Similar Electrical Appliances. Particular Requirements for Battery Chargers.
Temperature	
BS EN 60068-2-1	Ab/Ae Cold Test -30 °C
BS EN 60068-2-2	Bb/Be Dry Heat +80 °C
Vibration	
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
Humidity	
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
Shock	
BS EN 60068-2-27	Three shocks in each of three major axes 15 Gn in 11 ms
Degrees of Protection Provided by Enclosures	
BS EN 60529	IP21

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Terminal Description	
Pin	Description
OP-	Charge Output Negative
OP+	Charge Output Positive
LK1	Configurable Digital Input
LK1	Configurable Digital Input
NC	Normally Closed Contact of Charger Fail Changeover Relay
COM	Common Contact of Charger Fail Changeover Relay
NO	Normally Open Contact of Charger Fail Changeover Relay
SCR	DSENet® / RS485 Screen
A	DSENet® / RS485 A
B	DSENet® / RS485 B
PTC	Temperature Sensor Input
PTC	Temperature Sensor Input
E	AC Supply Earth
N	AC Supply Negative
L	AC Supply Live

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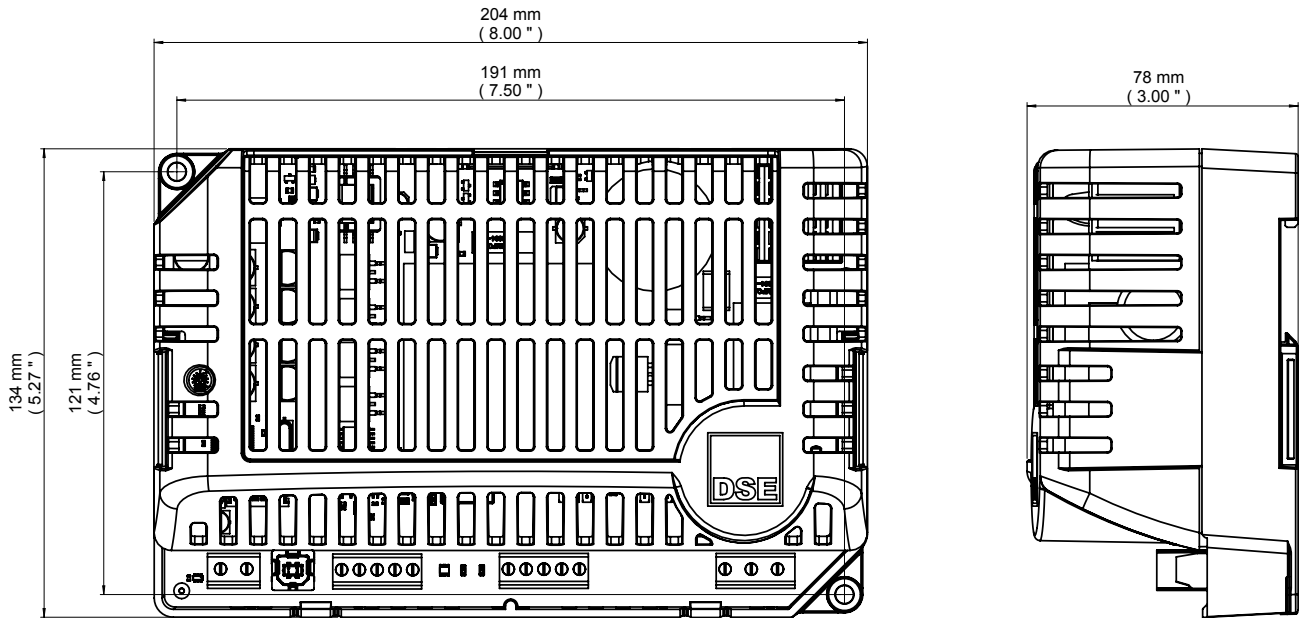
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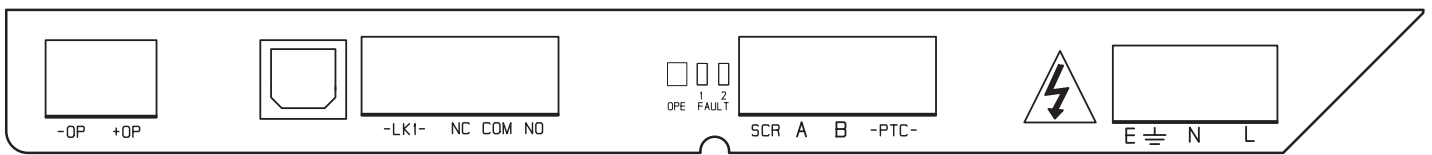
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Technical Drawing



Connection Label



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