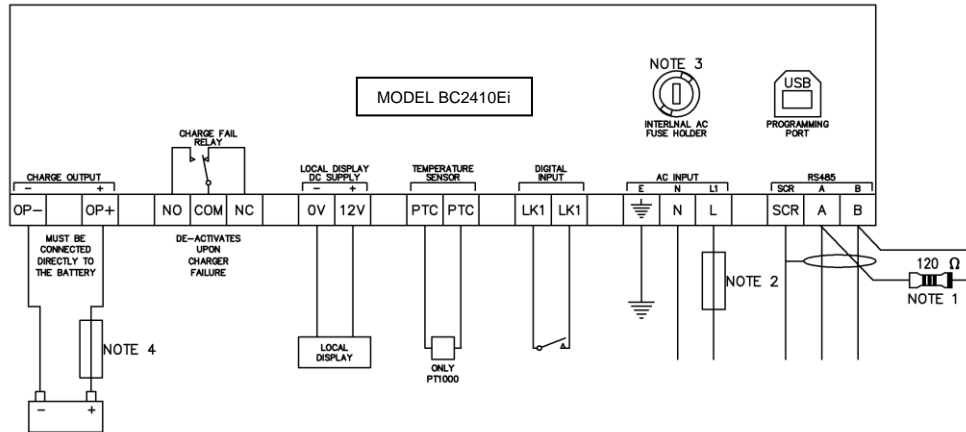


TYPICAL WIRING DIAGRAM

NOTE: A larger version of the Typical Wiring Diagram is available in the product's operator manual, refer to DSE Publication: 057-316 *DSE BC2410Ei Operator Manual* available from www.deepseaelectronics.com for more information.



NOTE 1
A 120 OHM TERMINATION RESISTOR MUST BE FITTED IF IT IS THE FIRST OR LAST DEVICE ON AN RS485 LINK

NOTE 2

AC INPUT	ANTI-SURGE FUSE RATING
110V	6.3A
230V	3.5A

FUSE APPROPRIATELY WHEN CURRENT LIMIT IS CONFIGURED BELOW 10A AND AS CLOSE TO THE BATTERY CHARGER AS POSSIBLE TO PROTECT THE CABLES

NOTE 3

FACTORY FITTED WITH 6.3A ANTI-SURGE FUSE, FUSE APPROPRIATELY

NOTE 4

FUSE APPROPRIATELY AND AS CLOSE TO THE BATTERY AS POSSIBLE TO PROTECT THE CABLES AND BATTERY

DANGER OF DEATH: LIVE PARTS exist within the enclosure. The enclosure cover must not be removed when connected to an AC supply

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DEEP SEA ELECTRONICS

DSE BC2410Ei Installation Instructions

053-251
ISSUE 2

INSTALLATION

The battery charger is wall mounted via four holes at the rear of the enclosure. Dimension and mounting details are given overleaf. The battery charger is designed as a fit-and-forget device therefore, is permanently connected to the supply and the load, with no requirement to disable the charger during heavy load, such as engine cranking, or when in parallel with a charge alternator.

BATTERY SUITABILITY

NOTE: With factory default settings, the battery charger produces 0 V until it is connected to a battery. Once connected it automatically configures to 12 V or 24 V operation.

The battery charger is factory set by DSE to suit Lead Acid batteries and automatically switches between 12 V or 24 V operation by measuring the battery voltage when connected. The battery charger can be adjusted to suit many battery types and has the option of fixing the output voltage range and characteristics using the Configuration Suite PC Software.

Care must be taken to ensure the batteries connected to the charger are of the correct technology to suit the setting of the charger.

INDICATIONS

The Battery Charger features an LCD display and depending on the variant, additional voltage and current meters may be fitted.

BOOST MODE

Boost mode is operated automatically or by activation of the digital input (if configured to perform this function). This raises the battery charger voltage to the *boost voltage* setting.

ACCESSING THE FRONT PANEL EDITOR

- The Front Panel Editor (FPE) is accessed by pressing and holding the (✓) button for 10 seconds.
- Press the (up) or (down) button to cycle through the *Adjustable Parameters* listed overleaf.
- Press the (✓) button to edit a parameter when it is being viewed on the screen. The value flashes to show edit mode is in progress.
- Press the (+) or (-) button to change the parameter to the required value.
- Press the (✓) button to save the currently selected value. The value ceases flashing to show editing is complete.
- Press and hold the (✓) button to exit the editor

NOTE: When the editor is left inactive for the duration of the *LCD Page Timer*, it is automatically exited to ensure security.

NOTE: Comprehensive module configuration is possible using the DSE Configuration Suite PC Software, refer to DSE publication 057-315 *DSE BC2410Ei Configuration Suite PC Software Manual* available from www.deepseaelectronics.com.

ADJUSTABLE PARAMETERS

Index	Parameter	Value
100	Contrast	0 %
101	Temperature Units	°C, °F
102	Backlight Brightness	0 %
103	Backlight and LCD Power save Timeout	0 s
104	Enable Alarm Popup Screen	Enable, Disable
105	Home Page Configuration	0 to 9 (Home Page List)
106	Home Page Timeout	0 s
107	Sleep Mode Timeout	0 s
108	Enable Engineering Page	Enable, Disable
109	Deep Sleep Mode Timout	0 s

Parameter 105 – Home Page Configuration has the following possible selections:

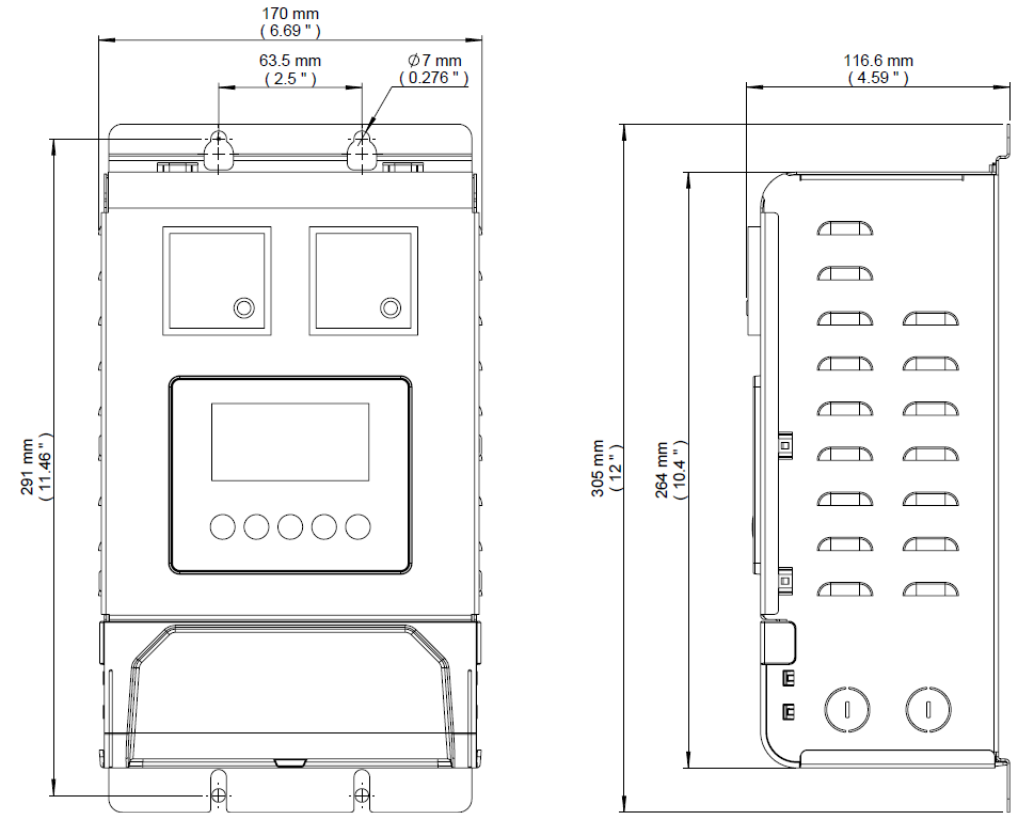
Value	Home Page List
0	Analogue Meters
1	Output Voltage And Current
2	Output Power And Battery Charger Temperature
3	Battery Sensed Voltage And Battery Temperature (when enabled)
4	Mains AC Voltage And Frequency
5	Battery Charger Model And Charger Software Version
6	Control Page
7	Alarms Page
8	Engineering Page 1
9	Engineering Page 2

REQUIREMENTS FOR UL CERTIFICATION

WARNING! More than one live circuit exists, see diagram overleaf for further information.

Parameter	Comment
Screw Terminal Tightening Torque	4.4 lb-in (0.4 Nm)
Conductors	<ul style="list-style-type: none"> Terminals suitable for connection of conductor size 20 AWG - 13 AWG (2.0 mm² to 2.5 mm²). Conductor protection must be provided in accordance with NFPA 70, Article 240. Low voltage circuits (35 V or less) must be supplied from the engine starting battery or an isolated secondary circuit. The communication, sensor, and/or battery derived circuit conductors shall be separated and secured to maintain at least ¼" (6 mm) separation from the generator and mains connected circuit conductors unless all conductors are rated 600 V or greater.
Communication Circuits	Must be connected to communication circuits of UL Listed equipment
Mounting	<ul style="list-style-type: none"> Suitable for use in type 1 Enclosure Type rating with surrounding air temperature -22 °F to +131 °F (-30 °C to +55 °C) Suitable for pollution degree 3 environments when voltage sensing inputs do not exceed 300 V. When used to monitor voltages over 300 V device to be installed in an unventilated or filtered ventilation enclosure to maintain a pollution degree 2 environment.
Operating Temperature	-22 °F to +131 °F (-30 °C to +55 °C)
Storage Temperature	-40 °F to +176 °F (-40 °C to +80 °C)

DIMENSIONS AND MOUNTING



Parameter	Comment
Cabinet Type	Custom cabinet for indoor use only
Overall Size	170 mm X 305 mm X 116.6 mm (6.69" X 12.0" X 4.59")
Perimeter Distance for Ventilation	100 mm (3.9")
Material	Sheet steel enclosure of all-round solid construction
Surface Finish	Powder-coated black
Protection Category	IP20, NEMA 1
Unboxed Weight	2.16 kg (4 lb 12 oz)
Boxed Weight	2.34 kg (5 lb 2 oz)
Mounting Type	Base mounted to a vertical surface with connection terminals to the bottom.
Mounting Holes	Diameter 7 mm (0.276"), 63.5 mm X 291 mm (2.5" x 11.46") centres
Cable Entry Cutout	Diameter 20 mm (0.78")
Operating Temperature	-30 °C to +55 °C (-22 °F to +131 °F)
Operating Temperature (With Derate To Output)	-30 °C to +80 °C (-22 °F to +176 °F)