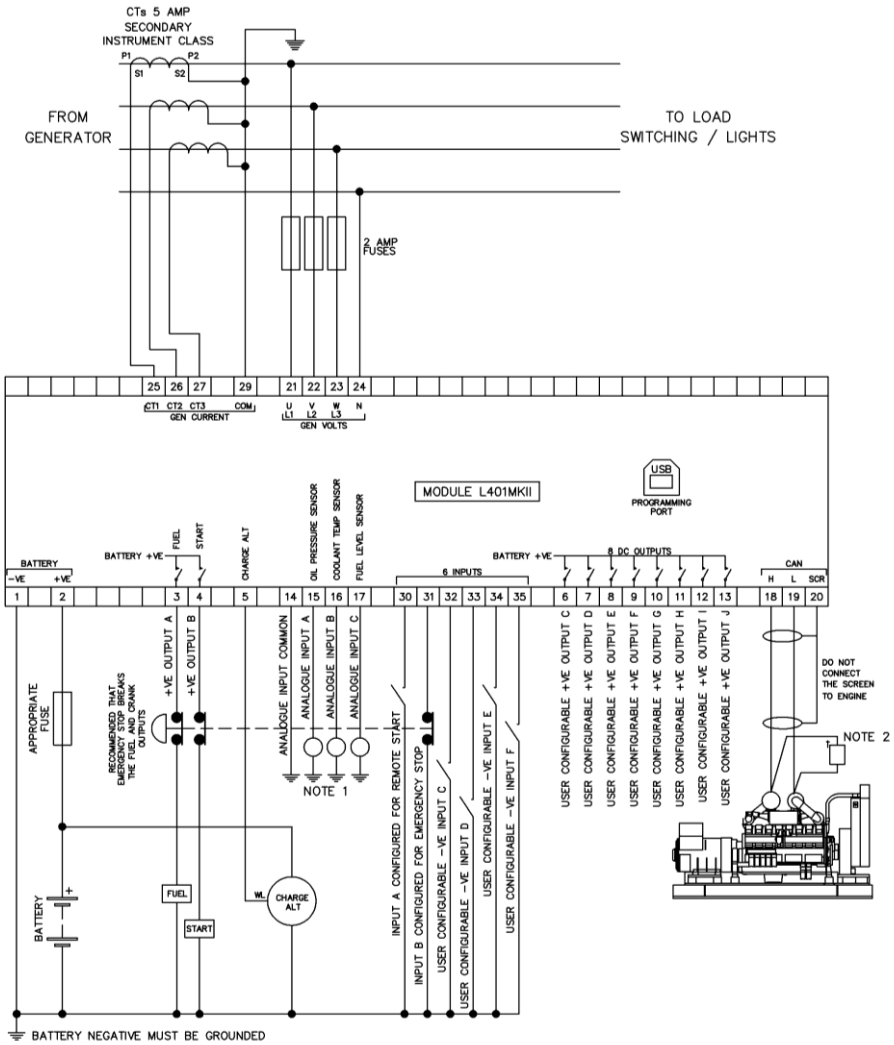
TYPICAL WIRING DIAGRAM

NOTE: A larger version of the Typical Wiring Diagram is available in the product's operator manual, refer to DSE Publication: *057-221 DSEL401 MKII Operator Manual* available from www.deepseaelectronics.com for more information.



Deep Sea Electronics Ltd.
Tel:+44 (0)1723 890099
Email: support@deepseaelectronics.com
Web: www.deepseaelectronics.com

Deep Sea Electronics Inc.
Tel: +1 (815) 316 8706
Email: support@deepseaelectronics.com
Web: www.deepseaelectronics.com

DEEP SEA ELECTRONICS

053-172
ISSUE 7

DSEL401 MKII Installation Instructions

NOTE: While mains is present, the controller enters an armed state on the first start press and will not start the engine on a second start press. If mains fails while armed, the controller does not auto-start. A second start press is required to start the engine. Use the *Stop/Reset Mode* button to cancel the armed state.

ACCESSING THE MAIN CONFIGURATION EDITOR

- Press ***Stop/Reset Mode*** (-) and ***Auto Mode*** (✔) buttons together to enter the editor mode.
- Press ***Up*** and ***Down*** navagation buttons to select the ***Configuration Editor*** or ***Operator Editor***. The selected edtior begins to flash.
- Press the ***Auto Mode*** (✔) button to enter the selected editor.
- If a module security PIN has been set for the ***Configuration Editor***, the PIN request is shown.
- Press the ***Up*** and ***Down*** buttons to adjust first digit to the correct value.
- Press the ***Manual/Start Mode*** (+) button when the first digit is correctly entered. The digit just entered now shows '#' for security.
- Repeat this process for the other digits of the PIN number. Press ***Stop/Reset Mode*** (-) to move back to adjust one of the previous digits.
- When ***Auto Mode*** (✔) button is pressed after editing the final PIN digit, the PIN is checked for validity. If the number is not correct, editor is exited.

EDITING A PARAMETER

- Once in the selected editor, press the ***Up*** and ***Down*** navigation buttons to cycle through it in increments of 100.
- Press the ***Stop/Reset Mode*** (-) or ***Manual/Start Mode*** (+) buttons to cycle through the editor in increments of 1.
- When viewing the parameter to be edited, press the ***Auto Mode*** (✔) button. The value begins to flash.
- Press the ***Stop/Reset Mode*** (-) or ***Manual/Start Mode*** (+) buttons to adjust the value to the required setting.
- Press the ***Auto Mode*** (✔) button to save the current value, the value stops flashing.

EXITING THE EDITOR

- Press and hold the ***Auto Mode*** (✔) button to save and exit the editor, press and hold the ***Stop/Reset Mode*** (-) to exit without saving. The ***Configuration Editor*** or ***Operator Editor*** is removed from the display.

MAIN CONFIGURATION EDITOR PARAMETERS

NOTE: Depending upon module configuration, some parameters in the *Main Configuration Editor* may not be available. For details of additional main configuration parameters, refer to DSE publication *057-221 DSEL401 MKII Operator Manual*.

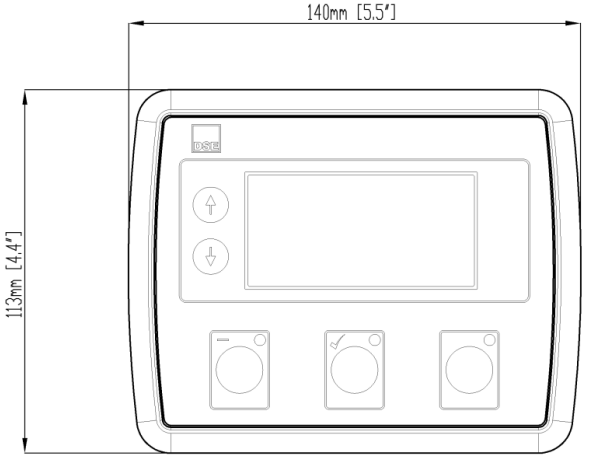
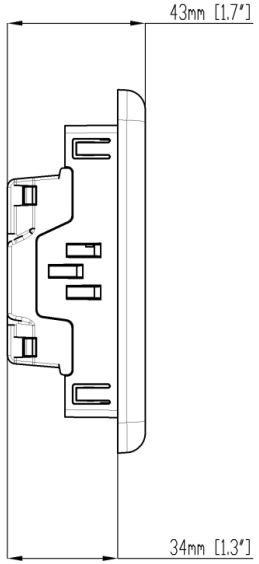
Configuration Parameters – Module (Page 1)		
101	Contrast	0 (%)
102	Fast Loading Enabled	On (1), Off (0)
103	All Warnings Latched	On (1), Off (0)
104	Lamp Test At Start-up	On (1), Off (0)
105	Power Save Mode Enable	On (1), Off (0)
106	Deep Sleep Mode Enable	On (1), Off (0)
107	Protected Start Enable	On (1), Off (0)
108	Event Log Display Format	On (1), Off (0)
109	Power Up Mode	0 (Power Up Mode)
110	DTC String Enable	On (1), Off (0)
111	Pin Protected Maintenance Reset	On (1), Off (0)
112	Stop Button Cooldown	On (1), Off (0)
113	Use Module Oil Pressure	On (1), Off (0)
114	Use Module Coolant Temp	On (1), Off (0)
115	Use Module Engine Hours	On (1), Off (0)
116	Use Module RPM	On (1), Off (0)
117	Use Module Charge Alt	On (1), Off (0)
118	Disable CAN Speed Control	On (1), Off (0)
119	Auto Light Control In Manual	On (1), Off (0)
120	Manual Light Sequence Control Display	On (1), Off (0)
121	Manual Individual Light Control Display	On (1), Off (0)
122	Manual All Light Control Display	On (1), Off (0)
123	Voltage Display	On (1), Off (0)
124	Frequency Display	On (1), Off (0)
125	Current Display	On (1), Off (0)
126	kW Display	On (1), Off (0)
127	kvar Display	On (1), Off (0)
128	kV A Display	On (1), Off (0)
129	PF Display	On (1), Off (0)
130	kW h Display	On (1), Off (0)
131	kvar h Display	On (1), Off (0)
132	kV A h Display	On (1), Off (0)
133	Mains Supply Voltage Display	On (1), Off (0)
134	Mains Supply Hz Display	On (1), Off (0)

ELECTRICAL SPECIFICATIONS

Parameter	Specification
Minimum Supply Voltage	8 V continuous
Cranking Dropouts	Able to survive 0 V for 100 ms providing the supply was at least 10 V before the dropout and recovers to 5 V afterwards.
Maximum Supply Voltage	35 V continuous (60 V protection)
Reverse Polarity Protection	-35 V continuous
Maximum Operating Current	115 mA at12 V 120 mA at 24 V
Maximum Standby Current	51 mA at 12 V 47 mA at 24 V
Maximum Current When In Sleep Mode	35 mA at 12 V 32 mA at 24 V
Maximum Current When In Deep Sleep Mode	Less than 10 µA at 12 V Less than 10 µA at 24 V

REQUIREMENTS FOR UL CERTIFICATION

Specification	Description
Screw Terminal Tightening Torque	4.5 lb-in (0.5 Nm)
Conductors	• Terminals suitable for connection of conductor size 13 AWG to 20 AWG (0.5 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.
Current Inputs	Must be connected through UL Listed or Recognized isolating current transformers with the secondary rating of 5 A max.
Communication Circuits	Must be connected to communication circuits of UL Listed equipment
Output Pilot Duty	0.5 A
Mounting	• Suitable for use in type 1 Enclosure Type rating with surrounding air temperature -22 ºF to +158 ºF (-30 ºC to +70 ºC) • 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 ºF to +158 ºF (-30 ºC to +70 ºC)
Storage Temperature	-40 ºF to +176 ºF (-40 ºC to +80 ºC)

DIMENSIONS AND MOUNTING

Parameter	Specification
Dimensions	140.0 mm x 113 mm x 43 mm (5.5 " x 4.4 " x 1.7 ")
Panel Cutout	118 mm x 92 mm (4.6 " x 3.6 ")
Weight	0.16 kg (0.35 lb)
Operating Temperature	-30 ºC to +70 ºC (-22 ºF to +158 ºF)
Storage Temperature	-40 ºC to +80 ºC (-40 ºF to +176 ºF)