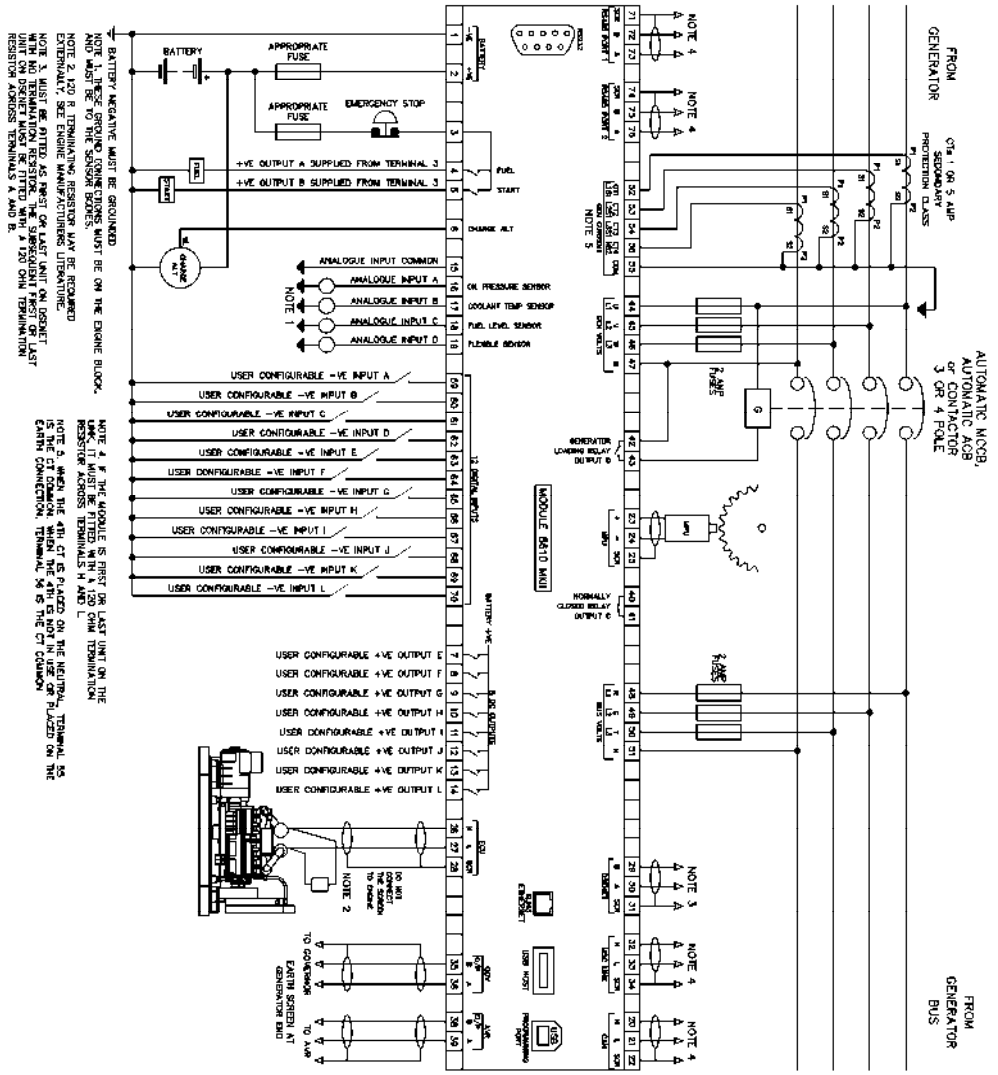
TYPICAL WIRING DIAGRAM

NOTE: A larger version of the Typical Wiring Diagram is available in the product's operator manual, refer to DSE Publication: *057-254 DSE8610 MKII Operator Manual* available from www.deepseaelectronics.com for more information.



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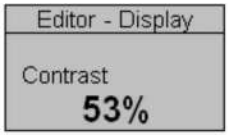
DSE8610 MKII Installation Instructions

ACCESSING THE MAIN CONFIGURATION EDITOR

- Ensure the engine is at rest and the module is in STOP mode by pressing the (Stop/Reset) button.
- Press the (Stop/Reset) and (Tick) buttons simultaneously.
- If a module security PIN has been set, the PIN number request is then shown:
- The first **'#'** changes to **'0'.** Press the (Up) or (Down) button to adjust it to the correct value.
- Press the (Right) button when the first digit is correctly entered. The digit previously entered now shows **'#'** for security.
- Repeat this process for the other digits of the PIN number. Press the (Left) button to move back to adjust one of the previous digits.
- When the (Tick) button is pressed after editing the final PIN digit, the PIN is checked for validity. If the number is not correct, the PIN must be re-entered.
- If the PIN has been successfully entered (or the module PIN has not been enabled), the editor is displayed:



EDITING A PARAMETER

- Enter the editor as described above.
- Press the (Right) or (Left) buttons to cycle to the section to view/change.
- Press the (Up) or (Down) buttons to select the parameter to view/change within the currently selected section.
- To edit the parameter, press the (Tick) button to enter edit mode. The parameter begins to flash to indicate editing.
- Press the (Up) or (Down) buttons to change the parameter to the required value.
- Press the (Tick) button to save the value. The parameter ceases flashing to indicate that it has been saved.
- To exit the editor and save the changes, press and hold the (Tick) button.
- To exit the editor and not save the changes, press and hold the (Stop/Reset) button.

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

NOTE: The PIN number is automatically reset when the editor is exited (manually or automatically) to ensure security.

NOTE: Comprehensive module configuration is possible using the DSE Configuration Suite PC Software, refer to DSE publication 0*57-238 DSE8610 MKII Configuration Suite PC Software Manual* available from www.deepseaelectronics.com.

NOTE: Depending upon module configuration, some parameters in the Main and Running Editors may not be available. For more information refer to DSE publication *057-238 DSE8610 MKII Configuraiton Suite PC Software Manual* available from www.deepseaelectronics.com

MAIN CONFIGURATION EDITOR PARAMETERS

Section	Parameter As Shown On Display	Values
Display	Contrast	0%
	Language	English, Other.
	Current Date and Time	DD:MM:YY, hh:mm:ss
Alt Config	Default Config	Default Config / Alternative Config
Engine	Oil Pressure Low Shutdown	0.00 bar
	Oil Pressure Low Pre Alarm	0.00 bar
	Coolant Temperature Low Warning	0 °C
	Coolant Temp High Pre Alarm	0 °C
	Coolant Temp High Shutdown	0 °C
	Start Delay Off Load	0 h 0 m 0 s
	Start Delay On Load	0 h 0 m 0 s
	Start Delay Telemetry	0 h 0 m 0 s
	Pre Heat Temp	0 °C
	Pre Heat Timer	0 h 0 m 0 s
	Post Heat Temp	0 °C
	Post Heat Timer	0 h 0 m 0 s
	Cranking	0 m 0 s
	Cranking Rest	0 m 0 s
	Safety On Delay	0 m 0 s
	Warming at Idle (Idle Running)	0 m 0 s
	Idle Ramp Up (Idle Running)	0 m 0 s
	Smoke Limiting	0 m 0 s
	Smoke Limiting Off	0 m 0 s
	Warming	0 h 0 m 0 s
	Cooling	0 h 0 m 0 s
	Under Speed Shutdown	Active / Inactive
	Under Speed Shutdown	0 RPM
	Under Speed Warning	Active / Inactive
	Under Speed Warning	0 RPM
	Over Speed Warning	Active / Inactive
	Over Speed Warning	0 RPM
	Over Speed Shutdown	0 RPM
	Overspeed Overshoot	0 m 0 s
	Overspeed Overshoot	0 %
	Fail To Stop Delay	0 m 0 s
	Battery Under Voltage Warning	Active / Inactive
	Battery Under Voltage Warning Delay	0 h 0 m 0 s
	Battery Under Voltage Warning	0.0 V
	Battery Over Voltage Warning	Active / Inactive
	Battery Over Voltage Warning Delay	0 h 0 m 0 s
	Battery Over Voltage Warning	0.0 V
	Charge Alternator Failure Warning	Active / Inactive
	Charge Alternator Failure Warning	0.0 V
	Charge Alternator Warning Delay	0 h 0 m 0 s
	Charge Alternator Failure Shutdown	Active / Inactive
	Charge Alternator Failure Shutdown	0.0 V
	Charge Alternator Shutdown Delay	0 h 0 m 0 s
	Droop	Active / Inactive
	Droop	0 %
	Fuel Usage Running Rate	0 %
	Fuel Usage Stopped Rate	0 %
	DPF Auto Regen Inhibit	Active / Inactive
	Specific Gravity	0.80 to 1.00
	CAN Termination	Active / Inactive
Generator	Under Voltage Shutdown	0 V
	Under Voltage Pre-Alarm	0 V
	Loading Voltage	0 V
	Nominal Voltage	0 V
	Over Voltage Pre-Alarm	0 V
	Over Voltage Shutdown	0 V
	Under Frequency Shutdown	0.0 Hz
	Under Frequency Pre-Alarm	0.0 Hz
	Loading Frequency	0.0 Hz
	Nominal Frequency	0.0 Hz
	Over Frequency Pre-Alarm	0.0 Hz
	Over Frequency Shutdown	0.0 Hz

MAIN CONFIGURATION EDITOR PARAMETERS (CONTINUED)

Section	Parameter As Shown On Display	Values
Generator (Continued)	Full Load Rating	0 A
	kW Overload Trip	0 %
	Delayed Over Current	Active / Inactive
	Gen Over Current Trip	0 %
	AC System	3 Phase, 4 Wire
	CT Primary	0 A Power Cycle After Exit
	CT Secondary	0 A Power Cycle After Exit
	Short Circuit Trip	0 %
	Earth CT Primary	0 A
	Earth Fault Trip	Active / Inactive
	Earth Fault Trip	0 %
	Transient Delay	0.0 s
	Gen Reverse Power Delay	0.0 s
	Full kW Rating	0 kW
	Full kVAr Rating	0 kvar
	Ramp Up Rate	0 %
	Ramp Down Rate	0 %
	Load Level For More Sets	0 %
	Load Level For Less Sets	0 %
	Load Demand Priority	1
	Gen Reverse Power Trip	0 kW
	Insufficient Capacity Delay	0 m 0 s
	Insufficient Capacity Action	None / Indication / Warning / Shutdown / Electrical Trip
	Reactive Load CTL Mode	None / var Share / var Fixed Export
	Load Parallel Power	0 kW In Mains Parallel Mode
	Load Power Factor	0 % In Mains Parallel Mode
	Enable MSC Compatibility	Active / Inactive
Comms	RS232 Port Baud Rate	115200
	RS232 Port Slave ID	10
	RS485 Port Baud Rate	115200
	RS485 Port Slave ID	10
Timers	LCD Page Timer	0 h 0 m 0 s
	Scroll Delay	0 h 0 m 0 s
	Engine Pre Heat Timer	0 h 0 m 0 s
	Engine Post Heat Timer	0 h 0 m 0 s
	Engine Cranking	0 m 0 s
	Engine Cranking Rest	0 m 0 s
	Engine Safety On Delay	0 m 0 s
	Engine Warming Up at Idle	0 m 0 s
	Engine Idle Ramp Up	0 m 0 s
	Engine Smoke Limiting	0 m 0 s
	Engine Smoke Limiting Off	0 m 0 s
	Engine Warming	0 h 0 m 0 s
	Engine Cooling	0 h 0 m 0 s
	Engine Overspeed Overshoot	0 m 0 s
	Engine Fail To Stop Delay	0 m 0 s
	Battery Under Voltage Warning Delay	0 h 0 m 0 s
	Battery Over Voltage Warning Delay	0 h 0 m 0 s
	Return Delay	0 h 0 m 0 s
	Generator Transient Delay	0 s
Schedule	Schedule	Active / Inactive
	Schedule Bank 1 Period	Weekly / Monthly.
	On Load / Off Load / Auto Start Inhibit, Week, Start Time, Run Time and Day. Selection (1 to 8)	Press ✓ to begin editing then up or down when selecting the different parameters.
	Schedule Bank 2 Period	Weekly / Monthly.
	On Load / Off Load / Auto Start Inhibit, Week, Start Time, Run Time and Day. Selection (1 to 8)	Press ✓ to begin editing then up or down when selecting the different parameters.

DIMENSIONS AND MOUNTING

Parameter	Specification
Dimensions	245 mm X 184 mm X 51 mm (9.6" X 7.2" X 2.0")
Panel Cut-out	220 mm X 160 mm (8.7" X 6.3")
Weight	0.98 kg (2.16 lb)
Operating Temp with Standard Display	-30 °C to +70 °C (-22 °F to +158 °F)
Operating Temp with Heated Display	-40 °C to +70 °C (-40 °F to +158 °F)
Storage Temperature	-40 °C to +80 °C (-40 °F to +176 °F)

ACCESSING THE 'RUNNING' CONFIGURATION EDITOR

- The 'Running' Configuration Editor is enterable without stopping the engine. All protections remain active whilst using the 'Running' Configuration Editor.
- Press and hold the (Tick) button to enter and exit the Running Editor.

RUNNING CONFIGURATION EDITOR PARAMETERS

Section	Parameter As Shown On Display	Values
Display	Contrast	0 %
	Language	English, Other
	Load Demand Priority	1
	Commissioning Screens	Active / Inactive
	Override Starting Alarms	Active / Inactive
	Voltage Adjust (manual mode only, breaker open)	0 %
	Frequency Adjust (manual mode only, breaker open)	0 %
	Mains Decoupling Test Mode	Active / Inactive
	Voltage and Frequency Injection Testing	Active / Inactive (Remains active for 3 minutes)
Engine	Governor Gain	0.0
	Frequency Adjust Offset	0.0 Hz
	DPF Auto Regen Inhibit	Active / Inactive
	DPF Manual Regen	Active / Inactive
Power Levels	Power Control Mode	Constant Power / Frequency-Power / Voltage-Power
	kVAr Control Mode	Constant Power Factor / Voltage-Reactive Power / Power-Power Factor / Constant Reactive Power
	Load Parallel Power	0 %
	Load Parallel kVAr	0 %
	Load Parallel PF	0.00 pf
	Frequency Droop Offset	0.00 % (0.00 Hz)
	Freq. Droop Ramp Rate	0.0 %
	Voltage Droop Offset	0.00 % (0.0 V)
	Voltage Droop Ramp Rate	0.0 %

REQUIREMENTS FOR UL CERTIFICATION

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

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.
CTs	• Protection Class CTs must be used on the phases for the Short Circuit Protection
Communication Circuits	• Must be connected to communication circuits of UL Listed equipment
Fuel Output Relay	• The slave relay on the Fuel output must meet the UL 6200 requirements.
Digital Outputs A & B	• 30 V, 8 A resistive • 24 V, 15 A resistive • 2 A VA if used to control fuel safety shut off valve in a UL approved system.
DC Supply Outputs E to L	• 35 V, 2 A resistive • 1 A VA if used to control fuel safety shut off valve in a UL approved system.
Mounting	• Suitable for flat surface mounting in Type 1 Enclosure Type rating with surrounding air temperature -22 °F to +122 °F (-30 °C to +50 °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.
Max. Operating Temperature	• 122 °F (50 °C)
VTs	• When using voltage transformers (VTs) they must be fitted to both generator and bus sensing, have the same ratio from the primary to secondary windings, and a 0° phase offset between the primary and secondary windings.