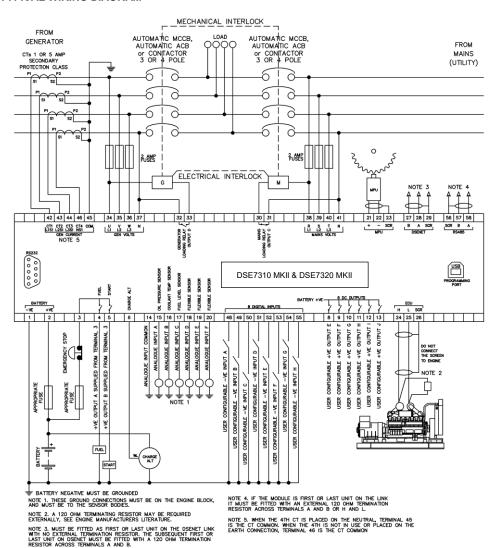
#### **TYPICAL WIRING DIAGRAM**



NOTE: Terminals 38, 39, 40 & 41 are not fitted to the DSE7310 MKII.

NOTE: A larger version of the Typical Wiring Diagram is available in the product's operator manual, refer to DSE Publication: 057-253 DSE7310 MKII & DSE7320 MKII Operator Manual available from <a href="https://www.deepseaelectronics.com">www.deepseaelectronics.com</a> for more information.

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# DEEP SEA ELECTRONICS

053-181 ISSUE 7

# DSE7310 MKII & DSE7320 MKII Installation Instructions

#### **ACCESSING THE MAIN CONFIGURATION EDITOR**

**DSE** 

•	Ensure the engine is at rest and the module is in STOP mode by pressing the	Editor
	(Stop/Reset) button.	
	000	Enter Pin
•	Press the (Stop/Reset) and (Tick) buttons simultaneously.	####
•	If a module security PIN has been set, the PIN number request is then shown:	11 11 11 11
	000 000	
•	The first '#' changes to '0'. Press the Up) or Obwn) button to adjust it to the corre	ect value.
•	Press the (Right) button when the first digit is correctly entered. The digit previously entered	now shows '#' for security.
		,
	Reneat this process for the other digits of the PIN number. Press the	ank to adjust one of the westings
•	Repeat this process for the other digits of the PIN number. Press the ULEft) button to move b digits.	ack to adjust one of the previous
	0	
_	<ul> <li>♦ O I I I I I I I I I I I I I I I I I I</li></ul>	dity. If the number is not correct
•	the PIN must be re-entered.	uity. If the number is not concet,
•	If the PIN has been successfully entered (or the module PIN has not been enabled), the editor is displayed:	Editor - Display
	alopidyod.	
ED	DITING A PARAMETER	Contrast
	TINO A FARAMETER	53%
•	Enter the editor as described above.	0070
•	Press the (Right) or (Left) buttons to cycle to the section to view/change.	
	Press the U(Up) or U(Down) buttons to select the parameter to view/change within the	currently selected section
	(op) or (op) o	o duriertay delected decitori.
	000	
•	To edit the parameter, press the (Tick) button to enter edit mode. The parameter begins to fi	ash to indicate editing.
	000 000	
•	Press the (Up) or (Down) buttons to change the parameter to the required value.	
	3 1	
	000	
•	Press the (Tick) button to save the value. The parameter ceases flashing to indicate that it has	as been saved.
•	Press the (Tick) button to save the value. The parameter ceases flashing to indicate that it has	ns been saved.
	Press the (Tick) button to save the value. The parameter ceases flashing to indicate that it has	is been saved.
•	Press the (Tick) button to save the value. The parameter ceases flashing to indicate that it has	is been saved.

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 057-243 DSE7310 MKII & DSE7320 MKII Configuration Suite PC Software Manual available from www.deepseaelectronics.com.

#### MAIN CONFIGURATION EDITOR PARAMETERS

ANOTE: Depending upon module configuration, some values in the Main & Running Configuration Editors may not be available. For more information refer to DSE publication 057-243 DSE7310 MKII & DSE7320 MKII Configuration Suite PC Software Manual available from <a href="https://www.deepseaelectronics.com">www.deepseaelectronics.com</a>

Contrast	on / Alt 5 on / Alt 5 kPa
Language Current Date and Time  Dual Mutual Mode Dual Mutual Priority Dual Mutual Priority Dual Mutual Duty Time  Config To Edit  Config To Edit  Config 1,2,3,4 or Default Configuration  Engine  Oil Pressure Low Shutdown Oil Pressure Low Pre Alarm Coolant Temperature High Shutdown Coolant Temperature High Shutdown D° C 0°F Fuel Usage Running Rate Fuel Usage Stopped Rate Specific Gravity Pre Heat Timer Post Heat Timer Post Heat Timer On 0 o C 0°F Pre Heat Timer On 0 o C 0°F Post Heat Timer On 0 o C 0°F Post Heat Timer On 0 o C 0°F Post Heat Timer On 0 o C 0°F On 0 o C 0°	on / Alt 5 on / Alt 5 kPa
Current Date and Time	on / Alt 5 on / Alt 5 kPa
Dual Mutual Mode	on / Alt 5 on / Alt 5 kPa
Dual Mutual Wide	on / Alt 5 on / Alt 5 kPa
Dual Mutual Priority	on / Alt 5 kPa
Dual Mutual Duty Time	on / Alt 5 kPa
Config To Edit	on / Alt 5 kPa
Config 1,2,3,4 or	on / Alt 5 kPa
Default Configuration	on / Alt · 5 kPa
Default Conliguration	r 5 kPa
Engine       Oil Pressure Low Shutdown       0.00 bar 0 psi 0         Oil Pressure Low Pre Alarm       0.00 bar 0 psi 0         Coolant Temperature Low Warning       0 °C 0 °F         Coolant Temperature High Pre Alarm       0 °C 0 °F         Coolant Temperature High Electrical Trip       0 °C 0 °F         Coolant Temperature High Shutdown       0 °C 0 °F         Fuel Usage Running Rate       0 %         Fuel Usage Stopped Rate       0 %         Specific Gravity       0.00         Pre Heat Temp       0 °C 0 °F         Pre Heat Timer       0 h 0 m 0 s         Post Heat Timer       0 h 0 m 0 s         Droop Control       Active / Inactive	kPa
Oil Pressure Low Pre Alarm  Coolant Temperature Low Warning  Coolant Temperature High Pre Alarm  Coolant Temperature High Pre Alarm  Coolant Temperature High Electrical Trip  Coolant Temperature High Shutdown  0°C 0°F  Coolant Temperature High Shutdown  0°C 0°F  Fuel Usage Running Rate  Fuel Usage Stopped Rate  O%  Specific Gravity  0.00  Pre Heat Temp  0°C 0°F  Pre Heat Timer  0 h 0 m 0 s  Post Heat Timer  0 h 0 m 0 s  Droop Control  Active / Inactive	
Coolant Temperature Low Warning 0 °C 0 °F Coolant Temperature High Pre Alarm 0 °C 0 °F Coolant Temperature High Electrical Trip 0 °C 0 °F Coolant Temperature High Shutdown 0 °C 0 °F Fuel Usage Running Rate 0 % Fuel Usage Stopped Rate 0 % Specific Gravity 0.00 Pre Heat Temp 0 °C 0 °F Pre Heat Timer 0 h 0 m 0 s Post Heat Timer 0 °C 0 °F Post Heat Timer 0 h 0 m 0 s Droop Control Active / Inactive	kPa
Coolant Temperature High Pre Alarm 0 °C 0 °F Coolant Temperature High Electrical Trip 0 °C 0 °F Coolant Temperature High Electrical Trip 0 °C 0 °F Fuel Usage Running Rate 0 % Fuel Usage Stopped Rate 0 % Specific Gravity 0.00 Pre Heat Temp 0 °C 0 °F Pre Heat Timer 0 h 0 m 0 s Post Heat Timer 0 h 0 m 0 s Droop Control Active / Inactive	
Coolant Temperature High Electrical Trip 0 °C 0 °F Coolant Temperature High Shutdown 0 °C 0 °F Fuel Usage Running Rate 0 % Fuel Usage Stopped Rate 0 % Specific Gravity 0.00 Pre Heat Temp 0 °C 0 °F Pre Heat Timer 0 h 0 m 0 s Post Heat Temp 0 °C 0 °F Post Heat Timer 0 h 0 m 0 s Droop Control Active / Inactive	
Coolant Temperature High Electrical Trip 0 °C 0 °F Coolant Temperature High Shutdown 0 °C 0 °F Fuel Usage Running Rate 0 % Fuel Usage Stopped Rate 0 % Specific Gravity 0.00 Pre Heat Temp 0 °C 0 °F Pre Heat Timer 0 h 0 m 0 s Post Heat Temp 0 °C 0 °F Post Heat Timer 0 h 0 m 0 s Droop Control Active / Inactive	
Coolant Temperature High Shutdown         0 °C 0 °F           Fuel Usage Running Rate         0 %           Fuel Usage Stopped Rate         0 %           Specific Gravity         0.00           Pre Heat Temp         0 °C 0 °F           Pre Heat Timer         0 h 0 m 0 s           Post Heat Timer         0 h 0 m 0 s           Post Heat Timer         0 h 0 m 0 s           Droop Control         Active / Inactive	
Fuel Usage Running Rate         0 %           Fuel Usage Stopped Rate         0 %           Specific Gravity         0.00           Pre Heat Temp         0 °C 0 °F           Pre Heat Timer         0 h 0 m 0 s           Post Heat Temp         0 °C 0 °F           Post Heat Timer         0 h 0 m 0 s           Droop Control         Active / Inactive	
Fuel Usage Stopped Rate         0 %           Specific Gravity         0.00           Pre Heat Temp         0 °C 0 °F           Pre Heat Timer         0 h 0 m 0 s           Post Heat Temp         0 °C 0 °F           Post Heat Timer         0 h 0 m 0 s           Droop Control         Active / Inactive	
Specific Gravity         0.00           Pre Heat Temp         0 °C 0 °F           Pre Heat Timer         0 h 0 m 0 s           Post Heat Temp         0 °C 0 °F           Post Heat Timer         0 h 0 m 0 s           Droop Control         Active / Inactive	
Pre Heat Temp         0 °C 0 °F           Pre Heat Timer         0 h 0 m 0 s           Post Heat Timer         0 °C 0 °F           Post Heat Timer         0 h 0 m 0 s           Droop Control         Active / Inactive	
Pre Heat Timer         0 h 0 m 0 s           Post Heat Temp         0 °C 0 °F           Post Heat Timer         0 h 0 m 0 s           Droop Control         Active / Inactive	
Post Heat Temp         0 °C 0 °F           Post Heat Timer         0 h 0 m 0 s           Droop Control         Active / Inactive	
Post Heat Timer         0 h 0 m 0 s           Droop Control         Active / Inactive	
Droop Control Active / Inactive	
Droop Control	
2.000 00	
Crank Disconnect Oil Pressure Delay 0.0 s	
Crank Disconnect 0 V	
Under Speed Shutdown Active / Inactive	
Under Speed Shutdown 0 RPM	
Under Speed Warning Active / Inactive	
Under Speed Warning 0 RPM	
Under Speed Delay 0.0 s	
Over Speed Warning Active / Inactive	
Over Speed Warning 0 RPM	
Over Speed Shutdown 0 RPM	
Over Speed Delay 0.0 s	
Overspeed Overshoot 0 %	
Overspeed Overshoot Delay 0 m 0.0 s	
Battery Under Voltage Warning Active / Inactive	
Battery Under Voltage Warning 0.0 V	
Battery Under Voltage Warning Delay 0 h 0 m 0 s	
Battery Over Voltage Warning Active / Inactive	
Battery Over Voltage Warning 0.0 V	
Battery Over Voltage Warning Delay 0 h 0 m 0 s	
Charge Alternator Failure Warning Active / Inactive	
Charge Alternator Failure Warning 0.0 V	
Charge Alternator Failure Shutdown Active / Inactive	
Charge Alternator Failure Shutdown 0.0 V	
Charge Alternator Shutdown Delay 0 h 0 m 0 s	
Inlet Temperature Shutdown 0 °C 0 °F	
Inlet Temperature Pre-Alarm 0 °C 0 °F	
Generator AC System 3 Phase, 4 Wire	
Under Voltage Shutdown 0 V	
Under Voltage Pre Alarm 0 V	
Under Voltage Delay 0.0 s	
Nominal Voltage 0 V	
Over Voltage Pre Alarm 0 V	
Over Voltage Fre Alaim 0 V	
Under Frequency Shutdown 0.0 Hz	
Under Frequency Pre Alarm 0.0 Hz	
Under Frequency Delay 0.0 s	

# MAIN CONFIGURATION EDITOR PARAMETERS (CONTINUED)

Section	Parameter As Shown On Display	Value
Generator	Nominal Frequency	0.0 Hz
(Continued)	Over Frequency Pre Alarm	0.0 Hz
[`	Over Frequency Shutdown	0.0 Hz
	Over Frequency Delay	0.0 s
	Frequency Overshoot	0 %
	Frequency Overshoot Delay	0.0 s
	CT Primary	0 A
	CT Secondary	0 A
	Earth CT Primary	0 A
	Full Load Rating	0 A
	Delayed Over Current	Active / Inactive
	Delayed Over Current	0 %
	Earth Fault Trip	Active / Inactive
	Earth Fault Trip	0 %
	kW Overload Trip	0 %
Mains	AC System	3 Phase, 4 Wire
DSE7320 MKII	Under Voltage Trip	0 V
Only	Over Voltage Trip	0 V
	Under Frequency Trip	0.0 Hz
	Over Frequency Trip	0.0 Hz
Timers	Start Delay Off Load	0 h 0 m 0 s
	Start Delay On Load	0 h 0 m 0 s
	Start Delay Mains Fail	0 h 0 m 0 s
	Start Delay Telemetry	0 h 0 m 0 s
	Mains Transient Delay	0 m 0 s
	Engine Cranking	0 m 0 s
	Engine Cranking Rest	0 m 0 s
	Engine Smoke Limiting	0 m 0 s
	Engine Smoke Limiting Off	0 m 0 s
	Engine Safety On Delay	0 m 0 s
	Engine Warming	0 h 0 m 0 s
	ECU Override	0 m 0 s
	Mains Transfer Time	0 m 0.0 s
	Return Delay	0 h 0 m 0 s
	Engine Cooling	0 h 0 m 0 s
	Engine Fail To Stop Delay	0 m 0 s
	LCD Page Delay	0 h 0 m 0 s
	LCD Scroll Delay	0 h 0 m 0 s
	Sleep Timer	0 h 0 m 0 s
	Backlight Timer	0 h 0 m 0 s
Schedule	Schedule	Active / Inactive
	Schedule Bank 1 Period	Weekly / Monthly,
	0 1 1/0"1 1/4 1 0 11111	Press Tick O to begin editing
	On Load / Off Load / Auto Start Inhibit,	then up or down when selecting
	Week, Start Time, Run Time and Day	the different parameters in the
	Selection (1 to 8)	scheduler.
	Schedule Bank 2 Period	Weekly / Monthly,
	CONTRACTOR DATE OF CONTRACTOR DA	$\overline{}$
	On Load / Off Load / Auto Start Inhibit,	Press Tick to begin editing
	Week, Start Time, Run Time and Day	then up or down when selecting
	Selection (1 to 8)	the different parameters in the
		scheduler.

#### **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 Temperature With Standard Display	-30 °C to +70 °C (-22 °F to +158 °F)
Operating Temperature 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' editor can be entered while the engine is running. All protections remain active if the engine is running while the running editor is entered.

000

# **RUNNING CONFIGURATION EDITOR PARAMETERS**

Section	Parameter As Shown On Display	Values
Display	Contrast	0 %
	Language	English
	Dual Mutual Status	Set Priority (1 to 8)
Engine	Manual Frequency Trim	0.0 Hz
	Speed Bias	0.0
	Governor Gain	0
	Frequency Adjust	0.0 %
	DPF Auto Regen Inhibit	Active / Inactive
	DPF Manual Regeneration Request	Active / Inactive
	ECU Service Mode	Active / Inactive
AVR	Droop (% of Set Point)	0.0
	Proportional Set Point	0.0
	Integral Set Point	0.0
	Derivative Set Point	0.0
	Off Load Duty Cycle	0.0
	Maximum Duty Cycle	0.0
	Soft Start Ramp Start Point	0.0
	Soft Start Ramp Rate (%/Hz)	0.0
	Alternative Configuration	0
	Stability Selection	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.
Communication Circuits	Must be connected to communication circuits of UL Listed equipment
DC Output Pilot Duty	• 0.5 A
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.
Operating Temperature	• -22 °F to +122 °F (-30 °C to +50 °C)