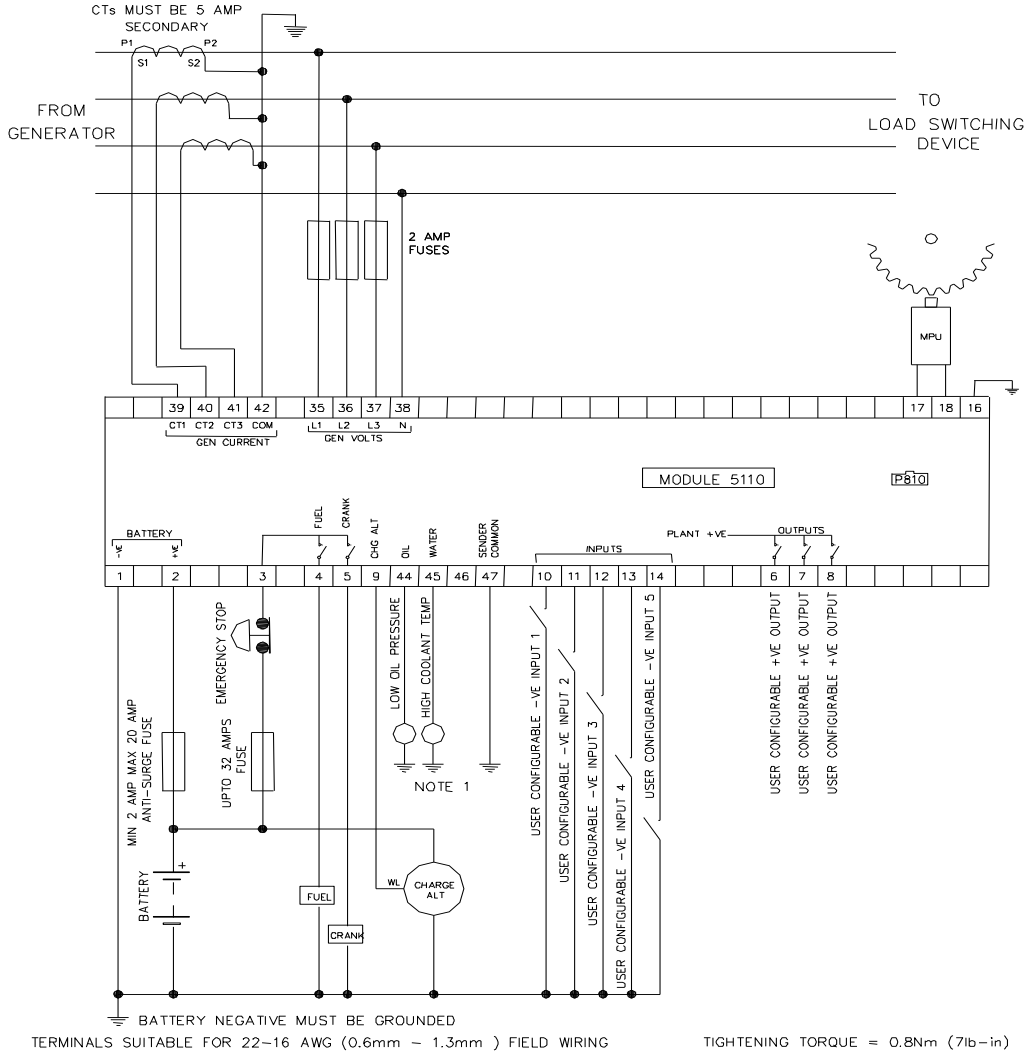
TYPICAL WIRING DIAGRAM



TERMINALS SUITABLE FOR 22–16 AWG (0.6mm – 1.3mm) FIELD WIRING

TIGHTENING TORQUE = 0.8Nm (7lb–in)

NOTE 1
THESE GROUND CONNECTIONS MUST BE ON THE ENGINE BLOCK, AND MUST BE TO THE SENDER BODIES.

THE GROUND WIRE TO TERMINAL 47 MUST NOT BE USED TO PROVIDE A GROUND CONNECTION TO ANY OTHER DEVICE

DIMENSIONS	PANEL CUTOUT
240mm x 172mm x 57mm (9.5" x 6.8" x 2.25")	220mm x 160mm (8.7" x 6.3")

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DEEP SEA ELECTRONICS

Model 5110 Configuration and installation instructions

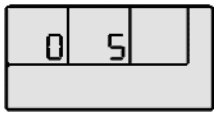
053-038
ISSUE 3

ACCESSING THE CONFIGURATION EDITOR

Press the Stop/Reset and Info buttons simultaneously.

- The LED beside the AUTO button will flash continuously to indicate that configuration mode has been entered.

- The first configuration setting is displayed:

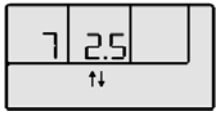


From the configuration table, this example is displaying ***Start Delay*** (parameter 0). It is currently set to ***5 seconds***.

(Factory default settings are shown in the configuration table in ***bold italic*** text)

EDITING A PARAMETER

- Enter the editor as described above.
- Press **+** / **-** to scroll through the parameters to the one you want to change.
- Press ✓ to enter edit mode. The ↑↓ symbol will flash on the display to indicate that edit mode has been entered.



- Press **+** / **-** to change the value to the desired parameter.
- Press ✓ to save the value and exit edit mode for this parameter.
- The ↑↓ symbol will be removed from the display to indicate that edit mode has been exited.
- To select another value to edit, press the **+** / **-** buttons. Continuing to press the **+** and **–** buttons will cycle through the adjustable parameters as shown in the following lists.

⚠NOTE: To exit the front panel configuration editor at any time, press the Stop/Reset button. Ensure you have saved any changes you have made by pressing the ✓ button first

Parameter	Range
0 - Start delay	0-60m ***(5s)***
1 - Preheat	0-60s ***(0s)***
2 - Crank attempt	3-60s ***(10s)***
3 - Crank rest	3-60s ***(10s)***
4 - Safety delay	8-60s ***(8s)***
5 - Warming up	0-60s ***(0s)***
6 - Return delay	0-60m ***(30s)***
7 - Cooling run	0-60m ***(60s)***
8 - E.T.S. hold	0-60s ***(0s)***
9 - Sensor fail	1-5s ***(2s)***
10 - Fail to Stop	10-60s ***(60s)***
11 - Low Oil Press.	5-150PSI ***(15PSI)***
12 - High Temp	90-150°C ***(95°C)***
13 - Under Speed	0-3600RPM ***(1250RPM)***
14 - Over Speed	300-5000RPM ***(1750RPM)***
15 – Under freq'	0-60Hz ***(40Hz)***
16 - Over freq'	50-72Hz ***(57Hz)***
17 - Charge Alt Failure	0-25V ***(8V DC)***
18 - Flywheel teeth	46-300 ***(0)***
19 - CT Primary	10-6000A ***(500A)***

⚠NOTE:- Setting a timer to zero (0) will disable it (where applicable)

⚠NOTE:- Setting Flywheel teeth to zero (0) will disable magnetic pickup speed sensing. In this instance, engine speed is derived from the alternator output frequency.

LIST ITEM SETTINGS

Factory default settings are in ***bold italicised*** text.

Parameter	Selections
20 - Alternator poles	0,2,***4***,6,8
21 - Oil pressure input	0 - Not used
	1 - Digital, close for low pressure
	2 - Digital, open for low pressure
	3 - VDO 0-5bar
	4 - VDO 0-10bar
	5 - Datcon 5bar
	6 - Datcon 10bar
	7 - Datcon 7bar
	8 - Murphy 7bar
	9 - User configured
22 - Coolant temp input	0 - Not used
	1 - Digital, close for high temperature
	2 - Digital, open for high temperature
	3 - VDO 40℃ to 120℃
	4 - Datcon High
	5 - Datcon Low
	6 - Murphy
	7 - Cummins
	8 - PT100
	9 - User configured

Parameter	Selections
23 - Fast loading enabled	***0 - No***
	1 - Yes
24 - AC system	***0 - 3 phases 4 wires***
	1 - 1 phase 2 wire
	2 - 3 phases 3 wires
	3 - 2 phases 3 wires
25 - Oil pressure display units	***0 - Bar/PSI***
	1 - kPa

Parameter	Selection
26 - Output 1	0 - Unused
	1 - Preheat mode 0
	2 - Air flap
	3 - Close Generator
	4 - Energise to stop
	5 - Engine running
	6 - Shutdown alarm
	7 - System in auto
	8 - Auxiliary input 1 active
	9 - Auxiliary input 2 active
	10 - Auxiliary input 3 active
	11 - Auxiliary input 4 active
	12 - Auxiliary input 5 active
	13 - Preheat mode 1
	14 - Preheat mode 2
	15 - Preheat mode 3
	16 - Warning alarm
	17 - Common alarm
27 - Output 2	0 - Unused
	1 - Preheat mode 0
	2 - Air flap
	3 - Close Generator
	4 - Energise to stop
	5 - Engine running
	6 - Shutdown alarm
	7 - System in auto
	8 - Auxiliary input 1 active
	9 - Auxiliary input 2 active
	10 - Auxiliary input 3 active
	11 - Auxiliary input 4 active
	12 - Auxiliary input 5 active
	13 - Preheat mode 1
	14 - Preheat mode 2
	15 - Preheat mode 3
	16 - Warning alarm
	17 - Common alarm

Parameter	Selection
28 - Output 3	0 - Unused
	1 - Preheat mode 0
	2 - Air flap
	3 - Close Generator
	4 - Energise to stop
	5 - Engine running
	6 - Shutdown alarm
	7 - System in auto
	8 - Auxiliary input 1 active
	9 - Auxiliary input 2 active
	10 - Auxiliary input 3 active
	11 - Auxiliary input 4 active
	12 - Auxiliary input 5 active
	13 - Preheat mode 1
	14 - Preheat mode 2
	15 - Preheat mode 3
	16 - Warning alarm
	17 - Common alarm
29 - LCD 1	0 - Unused
	1 - Preheat mode 0
	2 - Air flap
	3 - Close Generator
	4 - Energise to stop
	5 - Engine running
	6 - Shutdown alarm
	7 - System in auto
	8 - Auxiliary input 1 active
	9 - Auxiliary input 2 active
	10 - Auxiliary input 3 active
	11 - Auxiliary input 4 active
	12 - Auxiliary input 5 active
	13 - Preheat mode 1
	14 - Preheat mode 2
	15 - Preheat mode 3
	16 - Warning alarm
	17 - Common alarm
30 - LCD 2	0 - Unused
	1 - Preheat mode 0
	2 - Air flap
	3 - Close Generator
	4 - Energise to stop
	5 - Engine running
	6 - Shutdown alarm
	7 - System in auto
	8 - Auxiliary input 1 active
	9 - Auxiliary input 2 active
	10 - Auxiliary input 3 active
	11 - Auxiliary input 4 active
	12 - Auxiliary input 5 active
	13 - Preheat mode 1
	14 - Preheat mode 2
	15 - Preheat mode 3
	16 - Warning alarm
	17 - Common alarm

Parameter	Selection
31 - LCD 3	0 - Unused
	1 - Preheat mode 0
	2 - Air flap
	3 - Close Generator
	4 - Energise to stop
	5 - Engine running
	6 - Shutdown alarm
	7 - System in auto
	8 - Auxiliary input 1 active
	9 - Auxiliary input 2 active
	10 - Auxiliary input 3 active
	11 - Auxiliary input 4 active
	12 - Auxiliary input 5 active
	13 - Preheat mode 1
	14 - Preheat mode 2
	15 - Preheat mode 3
	16 - Warning alarm
	17 - Common alarm
32 - LCD 4	0 - Unused
	1 - Preheat mode 0
	2 - Air flap
	3 - Close Generator
	4 - Energise to stop
	5 - Engine running
	6 - Shutdown alarm
	7 - System in auto
	8 - Auxiliary input 1 active
	9 - Auxiliary input 2 active
	10 - Auxiliary input 3 active
	11 - Auxiliary input 4 active
	12 - Auxiliary input 5 active
	13 - Preheat mode 1
	14 - Preheat mode 2
	15 - Preheat mode 3
	16 - Warning alarm
	17 - Common alarm

NOTE:- The 'preheat modes' selectable for configurable outputs and LCD indicators perform the following actions :

- Preheat mode 0 - Preheat during preheat timer, ceasing at end of preheat timer.
- Preheat mode 1 - Preheat during preheat timer and continue until engine stops cranking.
- Preheat mode 2 - Preheat during preheat timer and continue until the safety delay timer has expired.
- Preheat mode 3 - Preheat during preheat timer and continue until the warming timer has expired.

In addition, in all preheat modes, preheat takes place during the crank rest timer between crank cycles.

Parameter	Selection
33 - Input 1	0 - Delayed, Warning, close to activate
	1 - Delayed, Warning, open to activate
	2 - Immediate, Warning, close to activate
	3 - Immediate, Warning, open to activate
	4 - Delayed, Shutdown, close to activate
	5 - Delayed, Shutdown, open to activate
	6 -Immediate, Shutdown, close to activate
	7 - Immediate, Shutdown, open to activate
	8 - Remote Start, close to activate
	9 - Remote Start, open to activate
34 - Input 2	***0 - Delayed, Warning, close to activate***
	1 - Delayed, Warning, open to activate
	2 - Immediate, Warning, close to activate
	3 - Immediate, Warning, open to activate
	4 - Delayed, Shutdown, close to activate
	5 - Delayed, Shutdown, open to activate
	6 - Immediate, Shutdown, close to activate
	7 - Immediate, Shutdown, open to activate
	8 - Electrical trip, close to activate
	9 - Electrical trip, open to activate
35 - Input 3	0 - Delayed, Warning, close to activate
	1 - Delayed, Warning, open to activate
	2 - Immediate, Warning, close to activate
	3 - Immediate, Warning, open to activate
	4 - Delayed, Shutdown, close to activate
	5 - Delayed, Shutdown, open to activate
	6 - Immediate, Shutdown, close to activat***e***
	7 - Immediate, Shutdown, open to activate
	8 - Lamp test, close to activate
	9 - Lamp test, open to activate
36 - Input 4	0 - Delayed, Warning, close to activate
	1 - Delayed, Warning, open to activate
	2 - Immediate, Warning, close to activate
	3 - Immediate, Warning, open to activate
	4 - Delayed, Shutdown, close to activate
	5 - Delayed, Shutdown, open to activate
	6 - Immediate, Shutdown, close to activat***e***
	7 - Immediate, Shutdown, open to activate
37 - Input 5	0 - Delayed, Warning, close to activate
	1 - Delayed, Warning, open to activate
	2 - Immediate, Warning, close to activate
	3 - Immediate, Warning, open to activate
	4 - Delayed, Shutdown, close to activate
	5 - Delayed, Shutdown, open to activate
	6 - Immediate, Shutdown, close to activate
	7 - Immediate, Shutdown, open to activate
	8 - Oil pressure, Shutdown, close to activate
	9 - Oil pressure, Shutdown, open to activate