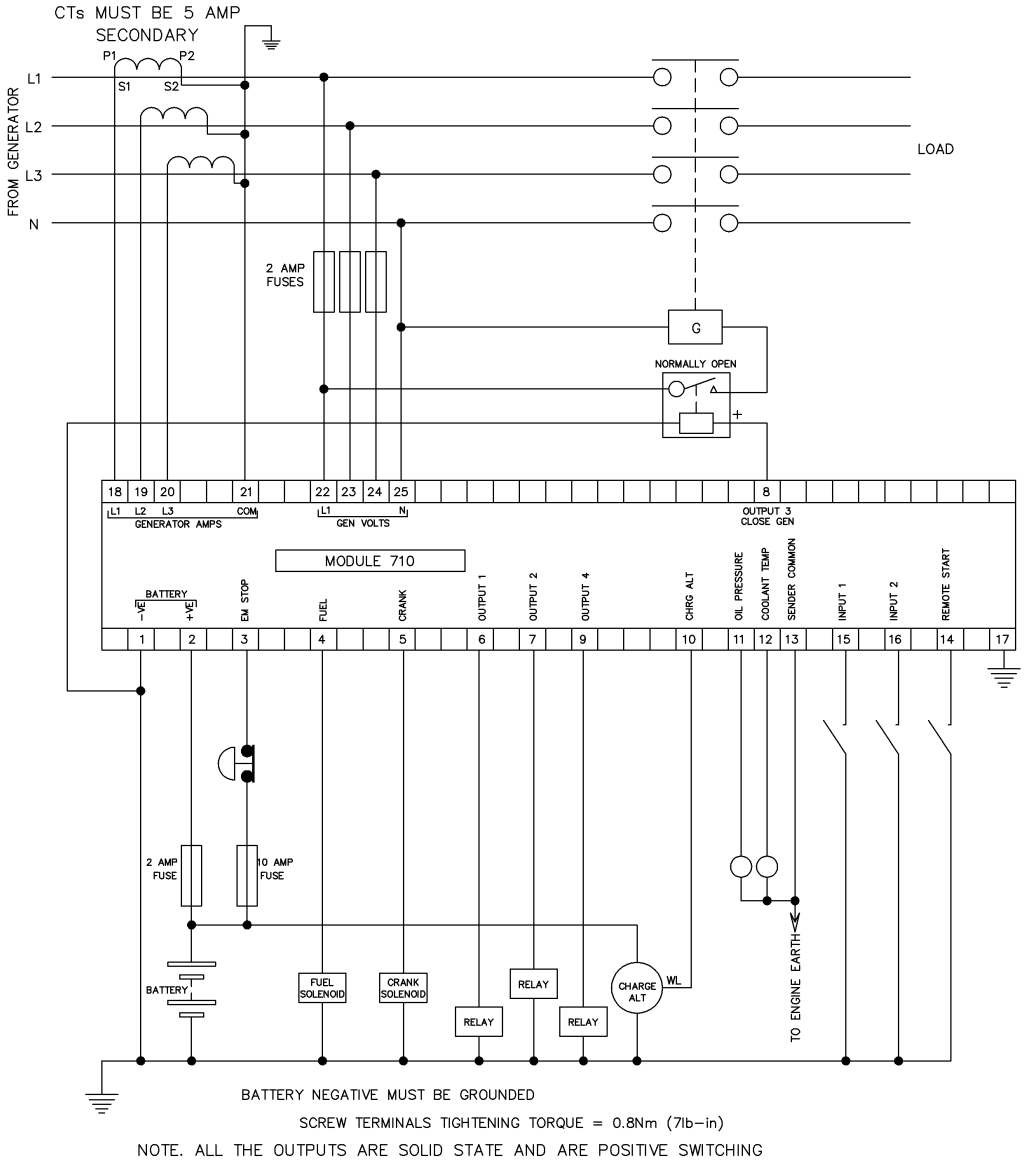
TYPICAL WIRING DIAGRAM



BATTERY NEGATIVE MUST BE GROUNDED

SCREW TERMINALS TIGHTENING TORQUE = 0.8Nm (7lb–in)

NOTE. ALL THE OUTPUTS ARE SOLID STATE AND ARE POSITIVE SWITCHING

DIMENSIONS 209mm x 146mm (8.23" x 5.75")

MOUNTING Mounting holes suitable for 4 x 4mm screws
Mounting Hole spacing 196.0mm x 103.5mm (7.717" x 4.075")

PANEL CUT-OUT 182mm x 137mm (7.17" x 5.39")
Maximum panel thickness – 8mm (0.3")

DEEP SEA ELECTRONICS

053-013
ISSUE 1

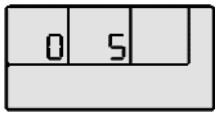
Model 710 Configuration and installation instructions

ACCESSING THE CONFIG 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.

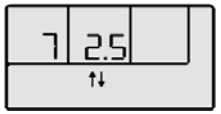
- The first configuration setting is displayed:



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

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.

SETTINGS

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

Timers	
0 - Start Delay	0-60m ***(5s)***
1 - Preheat	0-60s ***(0s)***
2 - Cranking Time	3-60s ***(10s)***
3 - Crank Rest Time	3-60s ***(10s)***
4 - Safety On Delay	8-60s ***(8s)***
5 - Warm Up Time	0-10m ***(0s)***
6 - Gen transient delay	0-10s ***(0s)***
7 – Return Delay	0-60m ***(30s)***
8 - Cooling Time	0-30m ***(1m)***
9 - ETS Hold Time	0-60s ***(0s)***
10 - Fail To Stop Delay Time	10-60s ***(60s)***
11 - Low DC Voltage Alarm Delay	0-60m ***(5m)***

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

Generator	
12 - Under Frequency	0-60Hz ***(40Hz)***
13 - Loading Frequency	20-60Hz ***(47Hz)***
14 - Over Frequency	50-72Hz ***(57Hz)***
15 - Loading Voltage	50-333V ***(212V)***
16 - Over Current Alarm	50-120% ***(110%)***
17 - Over Current Alarm Type	0 - Warning
	1 - Shutdown
	2 - Electrical Trip
Engine	
18 - Low DC Voltage Alarm	0-25V ***(8V)***
19 - Charge Fail Voltage Alarm	0-25V ***(8V)***

Fixed Input settings	
20 - Low Oil Pressure	5-150PSI ***(15 PSI)***
21 - High Engine Temperature	90-150°C ***(95°C)***
22 - Remote Start input	***0 - Remote start close to activate***
	1 - Remote start, open to activate

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

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

Auxiliary Input settings	
23 - Input 1	0 - Delayed, warning, close to activate
	1 - Delayed, warning, open to active
	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 - Lamp test, close to activate
	9 - Lamp test, open to activate
24 - I/P 1 delay	0-10s ***(0s)***
25 - Input 2	***0 - Delayed, warning, close to activate***
	1 - Delayed, warning, open to active
	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
26 - I/P 2 delay	0-10s ***(0s)***
Outputs	
27 - 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 - Preheat mode 1
	11 - Preheat mode 2
	12 - Preheat mode 3
	13 - Warning Alarm
	14 - Common Alarm
	15 - Fail to start
28 - 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 - Preheat mode 1
	11 - Preheat mode 2
	12 - Preheat mode 3
	13 - Warning Alarm
	14 - Common Alarm
	15 - Fail to start

Outputs cont'd	
29 - 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 - Preheat mode 1
	11 - Preheat mode 2
	12 - Preheat mode 3
	13 - Warning Alarm
	14 - Common Alarm
	15 - Fail to start
30 - Output 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 - Preheat mode 1
	11 - Preheat mode 2
	12 - Preheat mode 3
	13 - Warning Alarm
	14 - Common Alarm
	15 - Fail to start

LCD Indicators	
31 - Indicator 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 - Preheat mode 1
	11 - Preheat mode 2
	12 - Preheat mode 3
	13 - Warning Alarm
	14 - Common Alarm
	15 - Fail to start

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

LCD Indicators cont'd	
32 - Indicator 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 - Preheat mode 1
	11 - Preheat mode 2
	12 - Preheat mode 3
	13 - Warning Alarm
	14 - Common Alarm
	15 - Fail to start
33 - Indicator 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 - Preheat mode 1
	11 - Preheat mode 2
	12 - Preheat mode 3
	13 - Warning Alarm
	14 - Common Alarm
	15 - Fail to start
34 - Indicator 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 - Preheat mode 1
	11 - Preheat mode 2
	12 - Preheat mode 3
	13 - Warning Alarm
	14 - Common Alarm
	15 - Fail to start

Misc	
35 - Full Load Current Rating	5-6000A ***(500A)***
36 - Current Transformer Primary	10-6000A ***(500A)***
37 - Alternator Poles	2,4,6,8 ***(4)***
38 - AC Topology	0 - ***3 phase, 4 wire***
	1 - Single phase, 2 wire
39 - Oil Pressure Display Units	0 - ***Bar / PSI***
	1 - Kpa
40 - Oil pressure sender type	0 - Not used
	1 - Digital closed for low oil pressure
	2 - Digital open for low oil pressure
	3 - VDO 5 bar
	4 - ***VDO 10 bar***
	5 - Datcon 5 bar
	6 - Datcon 10 bar
	7 - Datcon 7 bar
	8 - Murphy 7 bar
	9 - User configured
41 - Coolant temperature sender type	1 - Digital closed for high temperature
	2 - Digital open for high temperature
	3 - ***VDO 120℃***
	4 - Datcon high
	5 - Datcon low
	6 - Murphy
	7 - Cummins
	8 - PT100
	9 - User configured

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.