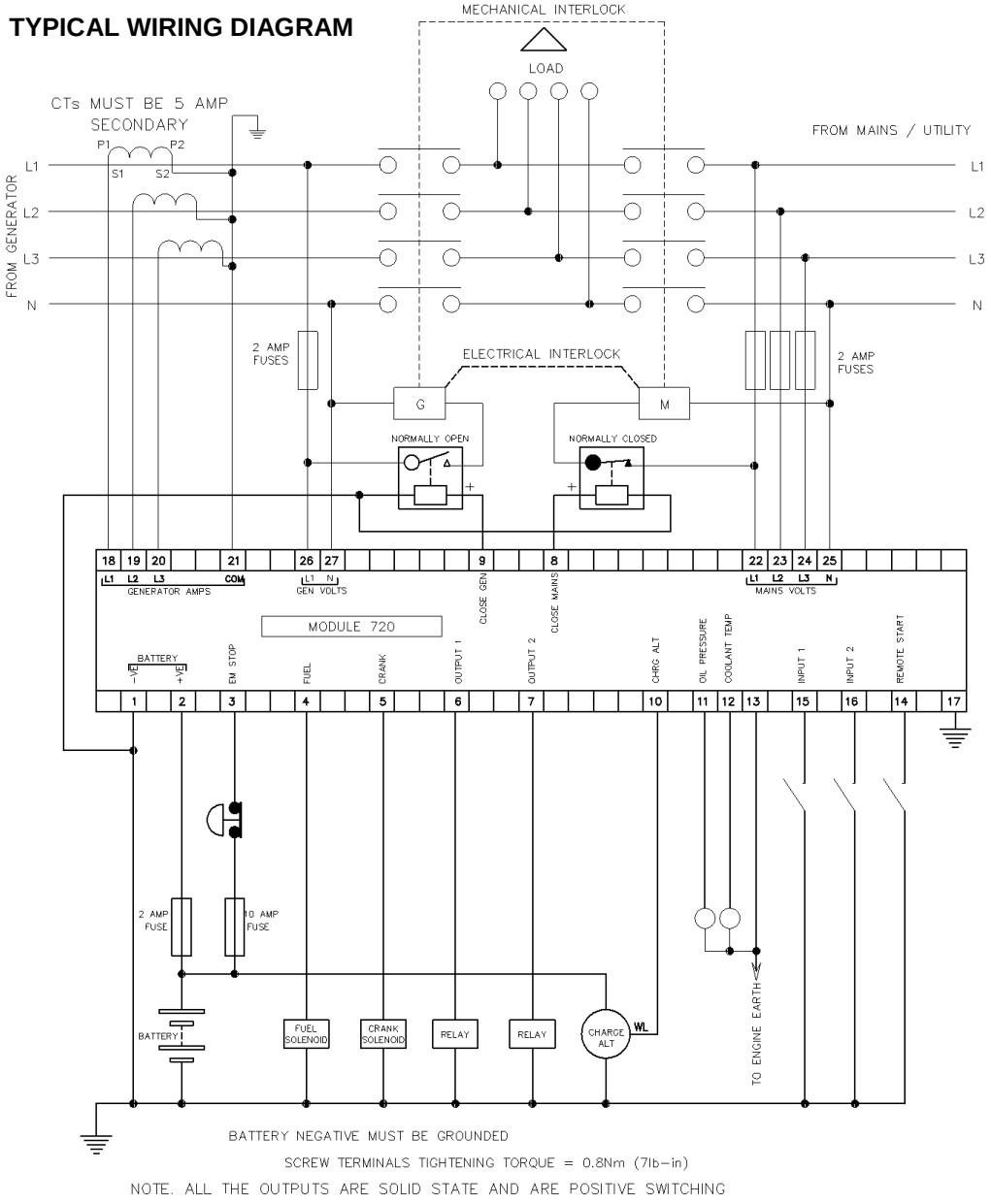
TYPICAL WIRING DIAGRAM



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

053-005
ISSUE 2

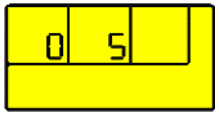
Model 720 Configuration and installation instructions

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.

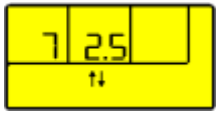
- The first configuration setting is displayed:



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	0-30s ***(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 / Simulated Mains input	***0 - Remote start close to activate***
	1 - Remote start open to activate
	2 - Simulated mains close to activate
	3 - Simulated mains 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

Deep Sea Electronics Plc.
Tel:+44 (0)1723 890099
Fax: +44 (0)1723 893303
LO CALL (from UK BT landlines) :
Telephone 0845 260 8933
Email: support@deepseaplc.com
Web: www.deepseaplc.com

Deep Sea Electronics inc.
Phone: +1 (815) 316-8706
Fax: +1 (815) 316- 8708
TOLL FREE (USA only) : Tel: 1 866 636 9703
Email: dsesales@deepseausa.com
Web: www.deepseausa.com

Deep Sea Electronics Plc. (Far East)
Tel:+66 2 670 6228
Fax: +66 2 678 3028
Email: support@deepseaplc.com
Web: www.deepseaplc.com

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

Auxiliary Input settings	
23 - Auxiliary 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 - Auxiliary input 1 delay	0-10s ***(0s)***
25 - Auxiliary 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 - Auxiliary input 2 delay	0-10s ***(0s)***
Outputs	
27 - Auxiliary 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 - Auxiliary 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

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

LCD Indicators	
29 - LCD 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
30 - LCD 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

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.

Misc	
31 - Full Load Current Rating	5-6000A ***(500A)***
32 - Current Transformer Primary	5-6000A ***(500A)***
33 - Alternator Poles	2,4,6,8 ***(4)***
34 - AC Topology (see note 1)	0 - ***3 phase, 4 wire***
	1 - Single phase, 2 wire
35 - Oil Pressure Display Units	0 - ***Bar / PSI***
	1 - Kpa
36 - 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
37 - Coolant temperature sender type	1 - Digital closed for high temperature
	2 - Digital open for high temperature
	3 - ***VDO 120°C***
	4 - Datcon high
	5 - Datcon low
	6 - Murphy
	7 - Cummins
	8 - User configured

Mains	
38 - Immediate Mains Dropout	0 - ***No***
	1 - Yes
39 - Mains Undervolt Trip	50-333V ***(184V)***
40 - Mains Undervolt Return	50-333V ***(207V)***
41 - Mains Overvolt Return	50-333V ***(253V)***
42 - Mains Overvolt Trip	50-333V ***(276V)***
43 - Mains Transient Delay Timer	0-30s ***(0s)***