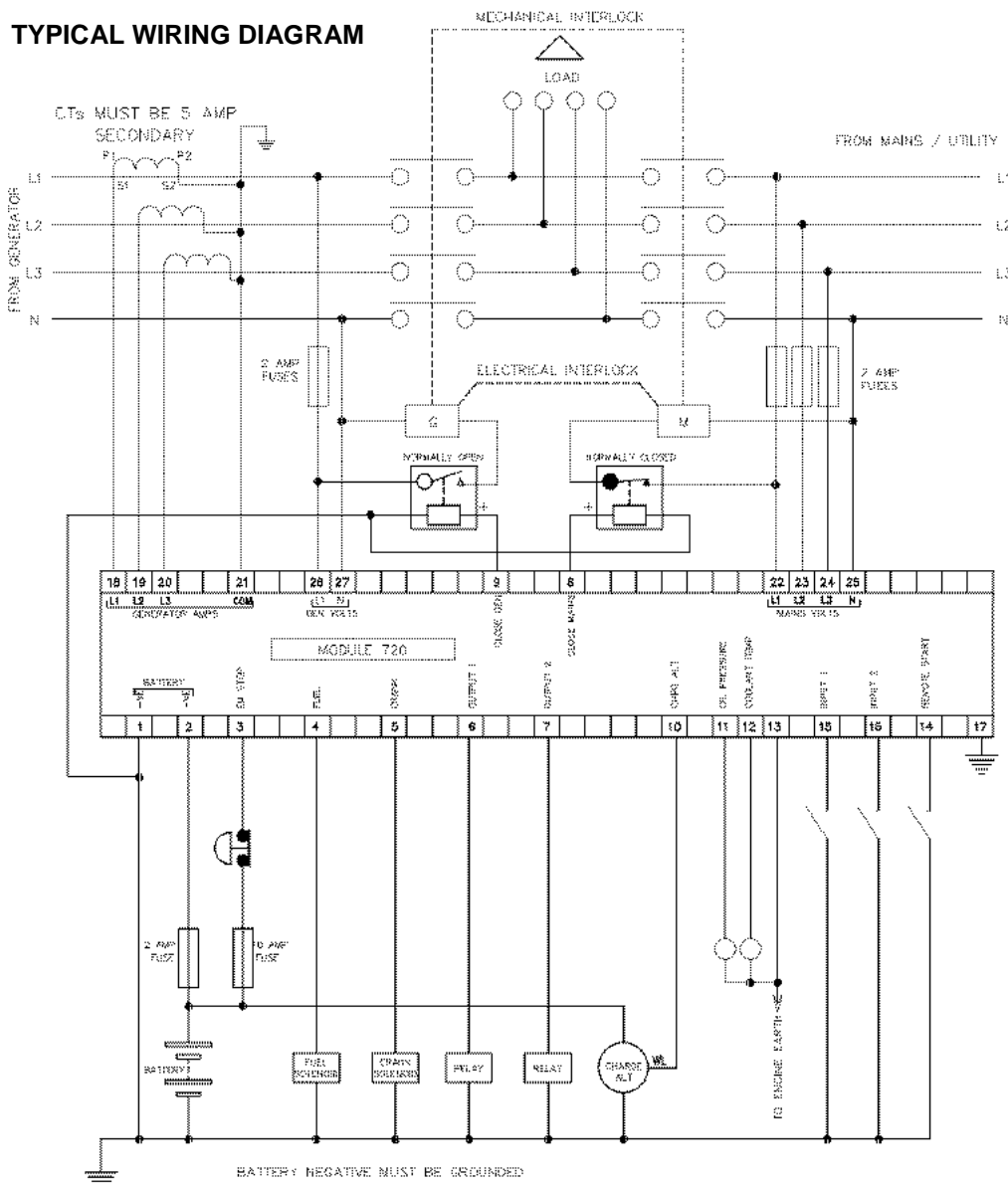


# TYPICAL WIRING DIAGRAM



BATTERY NEGATIVE MUST BE GROUNDED  
 SCREW TERMINALS TIGHTENING TORQUE = 0.2Nm (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")



# Model 720 Configuration and installation instructions

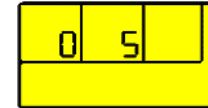
## ACCESSING THE CONFIG EDITOR

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.



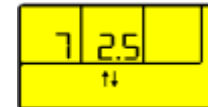
- The first configuration setting is displayed:



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

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

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

Fixed Input settings	
20 - Low Oil Pressure	5-150PSI ( <b>15 PSI</b> )
21 - High Engine Temperature	90-150°C ( <b>95°C</b> )
22 - Remote Start / Simulated Mains input	<b>0 - Remote start close to activate</b> 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@deepseapl.com  
 Web: www.deepseapl.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@deepseapl.com  
 Web: www.deepseapl.com

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

<b>Auxiliary Input settings</b>	
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 <b>8 - Lamp test, close to activate</b> 9 - Lamp test, open to activate
24 - Auxiliary input 1 delay	0-10s ( <i>0s</i> )
25 - Auxiliary Input 2	<b>0 - Delayed, warning, close to activate</b> 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 ( <i>0s</i> )
<b>Outputs</b>	
27 - Auxiliary Output 1	0 - Unused <b>1 - Preheat Mode 0</b> 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 <b>14 - Common Alarm</b> 15 - Fail to start

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

<b>LCD Indicators</b>	
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 <b>8 - Auxiliary input 1 active</b> 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 <b>9 - Auxiliary input 2 active</b> 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.

<b>Misc</b>	
31 - Full Load Current Rating	5-6000A ( <b>500A</b> )
32 - Current Transformer Primary	5-6000A ( <b>500A</b> )
33 - Alternator Poles	2,4,6,8 ( <b>4</b> )
34 - AC Topology (see note 1)	0 - <b>3 phase, 4 wire</b> 1 - Single phase, 2 wire
35 - Oil Pressure Display Units	0 - <b>Bar / PSI</b> 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 - <b>VDO 10 bar</b> 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 - <b>VDO 120°C</b> 4 - Datcon high 5 - Datcon low 6 - Murphy 7 - Cummins 8 - User configured

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