CONFIGURATION PARAMETERS – MODULE (PAGE 1)						
101	Contrast	000 (%)	106	RESERVED		
102	Fast Loading Enabled	On (1), Off (0)	107	RESERVED		
103	RESERVED		108	Event Log Display Format	On (1), Off (0)	
104	Lamp Test at Startup	On (1), Off (0)	109	Start in auto	On (1), Off (0)	
105	Power Save Mode Enable	On (1), Off (0)	110	Diagnostic Trouble Code String (English Only) Enable	On (1), Off (0)	CAN

CONFIGURATION PARAMETERS – APPLICATION (PAGE 2) (CAN VERSION MODULE ONLY)					
201	Alternate Engine Speed	On (1), Off (0)	203	CAN ECU Data Fail Action	0 (Action)
202	CAN ECU Data Fail Enable	On (1), Off (0)	204	CAN ECU Data Fail Delay	0:00

CONFIGURATION PARAMETERS – INPUTS (PAGE 3)		
301	Low Oil Pressure Enable	On (1), Off (0)
302	Low Oil Pressure Trip	0.00 bar
303	High Engine Temperature Trip	00 Deg C
304	Digital Input A Source	0 (Input Source)
305	Digital Input A Polarity	0 (Polarity)
306	Digital Input A Action (If Source = User Config)	0 (Action)
307	Digital Input A Arming (If Source = User Config)	0 (Arming)
308	Digital Input A Activation Delay (If Source = User Config)	0:00
309	Digital Input B Source	0 (Input Source)
310	Digital Input B Polarity	0 (Polarity)
311	Digital Input B Action (If Source = User Config)	0 (Action)
312	Digital Input B Arming (If Source = User Config)	0 (Arming)
313	Digital Input B Activation Delay (If Source = User Config)	0:00
314	Digital Input C Source	0 (Input Source)
315	Digital Input C Polarity	0 (Polarity)
316	Digital Input C Action (If Source = User Config)	0 (Action)
317	Digital Input C Arming (If Source = User Config)	0 (Arming)
318	Digital Input C Activation Delay (If Source = User Config)	0:00
319	Digital Input D Source	0 (Input Source)
320	Digital Input D Polarity	0 (Polarity)
321	Digital Input D Action (If Source = User Config)	0 (Action)
322	Digital Input D Arming (If Source = User Config)	0 (Arming)
323	Digital Input D Activation Delay (If Source = User Config)	0:00
324	Analogue Input A Sensor Type	0 (Sensor Type)
325	Analogue Input A Sensor Selection (Pressure Senor List)	0 (Pressure Sensor)
326	Analogue Input A (Set as Digtal) Source (Oil Pressure Sender)	0 (Input Source)
327	Analogue Input A (Set as Digital) Polarity	0 (Polarity)
328	Analogue Input A (Set as Digital) Action (If Source = User Config)	0 (Action)
329	Analogue Input A (Set as Digital) Arming (If Source = User Config)	0 (Arming)
330	Analogue Input A (Set as Digital) Activation Delay (If Source = User Config)	0:00
331	Analogue Input B Sensor Type	0 (Sensor Type)
332	Analogue Input B Sensor Selection (Temperature Senor List)	0 (Temp Sensor)
333	Analogue Input B (Set as Digital) Source (Temperature Sender)	0 (Input Source)
334	Analogue Input B Polarity (Set as Digital)	0 (Polarity)
335	Analogue Input B (Set as Digital) Action (If Source = User Config)	0 (Action)
336	Analogue Input B (Set as Digital) Arming (If Source = User Config)	0 (Arming)
337	Analogue Input B (Set as Digital) Activation Delay (If Source = User Config)	0:00
338	Analogue Input C Sensor Type	0 (Sensor Type)
339	Analogue Input C Sensor Selection (Pressure / Temp / Percentage)	0 (Sensor)
340	Analogue Input C (Set as Digital) Source (Flexible Sender)	0 (Input Source)
341	Analogue Input C (Set as Digital) Polarity	0 (Polarity)
342	Analogue Input C (Set as Digital) Action (If Source = User Config)	0 (Action)
343	Analogue Input C (Set as Digital) Arming (If Source = User Config)	0 (Arming)
344	Analogue Input C (Set as Digital) Activation Delay (If Source = User Config)	0:00
345	Oil Pressure Sender Open Circuit Alarm	On (1), Off (0)
346	Temperature Sender Open Circuit Alarm	On (1), Off (0)

CONFIGURATION PARAMETERS – OUTPUTS (PAGE 4)			
401	Digital Output A Source	0 (Output Source)	CAN
402	Digital Output A Polarity	0 (Output Source Polarity)	CAN
403	Digital Output B Source	0 (Output Source)	CAN
404	Digital Output B Polarity	0 (Output Source Polarity)	CAN
405	Digital Output C Source	0 (Output Source)	
406	Digital Output C Polarity	0 (Output Source Polarity)	
407	Digital Output D Source	0 (Output Source)	
408	Digital Output D Polarity	0 (Output Source Polarity)	
409	Digital Output E Source	0 (Output Source)	
410	Digital Output E Polarity	0 (Output Source Polarity)	
411	Digital Output F Source	0 (Output Source)	
412	Digital Output F Polarity	0 (Output Source Polarity)	

CONFIGURATION PARAMETERS – TIMERS (PAGE 5)					
501	Mains Transient Delay	508	Safety On Delay	515	Power Save Mode Delay
502	Start Delay	509	Warm Up Time	516	Transfer Time
503	Preheat Timer	510	Return Delay	517	Breaker Trip Pulse
504	Crank Time	511	Cooling Time	518	Breaker Close Pulse
505	Crank Rest Time	512	ETS Solenoid Hold	519	Cooling Idle Time
506	Smoke Limiting	513	Failed To Stop Delay		
507	Smoke Limiting Off	514	Generator Transient Delay		

CAN = 60xx – 02 (CAN) option only

= 60xx –01 (Magnetic pickup) option only

Output source list overleaf...

CONFIGURATION PARAMETERS – GENERATOR (PAGE 6)					
601	Alternator Fitted	On (1), Off (0)	612	Nominal Frequency	0.0 Hz
602	Alternator Poles	0	613	Over Frequency Enable	On (1), Off (0)
603	RESERVED		614	Over Frequency Trip	0.0 Hz
604	RESERVED		615	AC System	AC System (See Table)
605	Under Voltage Enabled	On (1), Off (0)	616	CT Primary	0 (Amps)
606	Under Voltage Level	0 V	617	Full Load Rating	0 (Amps)
607	Loading Voltage	0 V	618	Immediate Overcurrent	On (1), Off (0)
608	Over Voltage Level	0 V	619	Overcurrent Delayed Alarm Enable	On (1), Off (0)
609	Under Frequency Enable	On (1), Off (0)	620	Overcurrent Delayed Alarm Action	0 (Action)
610	Under Frequency Level	0.0 Hz	621	Overcurrent Delay	0.00.00
611	Loading Frequency	0.0 Hz	622	Overcurrent Trip	0 (%)

CONFIGURATION PARAMETERS – MAINS (PAGE 7)					
701	AC System	AC System (See Table)	709	Over Voltage Level	0 V
702	Mains Failure Detection	On (1), Off (0)	710	Under Frequency Enable	On (1), Off (0)
703	Immediate Mains Dropout	On (1), Off (0)	711	Under Frequency Level	0.0 Hz
704	Under Voltage Enable	On (1), Off (0)	712	Under Frequency Return	0.0 Hz
705	Under Voltage Level	0 V	713	Over Frequency Enable	On (1), Off (0)
706	Under Voltage Return	0 V	714	Over Frequency Return	0 Hz
707	Over Voltage Enable	On (1), Off (0)	715	Over Frequency Level	0.0 Hz
708	Over Voltage Return	0 V			

CONFIGURATION PARAMETERS – ENGINE (PAGE 8)						
801	Magnetic Pickup Fitted	On (1), Off (0)		818	Low Battery Volts Trip	00.0 V
802	Flywheel Teeth	000		819	Low Battery Volts Rtn	00.0 V
803	Start Attempts	0		820	Low Battery Volts Delay	0:00:00
804	RESERVED			821	High Battery Volts Enable	On (1), Off (0)
805	RESERVED			822	High Battery Volts Rtn	00.0 V
806	Gas Choke Timer	0:00		823	High Battery Volts Warning	00.0 V
807	Gas On Delay	0:00		824	High Battery Volts Warning Delay	00.0 V
808	Gas Ignition Off Delay	0:00		825	Charge Alt Shutdown Enable	On (1), Off (0)
809	Crank Disconnect On Oil Pressure Enable	On (1), Off (0)		826	Charge Alt Shutdown Trip	00.0 V
810	Check Oil Pressure Prior To Starting	On (1), Off (0)		827	Charge Alt Shutdown Trip Delay	0:00:00
811	Crank Disconnect On Oil Threshold	0.00 bar		828	Charge Alt Warning Trip Enable	On (1), Off (0)
812	Crank Disconnect On Frequency	0.0 Hz		829	Charge Alt Warning Trip	00.0 V
813	Crank Disconnect On Engine Speed	000 RPM		830	Charge Alt Warning Trip Delay	0:00:00
814	Under Speed Enable	On (1), Off (0)		831	Low Battery Start Arming	On (1), Off (0)
815	Under Speed Trip	0000 RPM		832	Low Battery Start Threshold	00.0 V
816	Over Speed Trip	0000 RPM		833	Low Battery Start Delay	0:00:00
817	Low Battery Volts Enable	On (1), Off (0)		834	Low Battery Start Run Time	0:00:00

CONFIGURATION PARAMETERS – ALTERNATIVE CONFIGURATION (PAGE 9)			
901	Default Configuration	Main (1), Alternative (0)	
902	Alt Config - Enable Configuration	On (1), Off (0)	
903	Alt Config - Alternative Engine Speed	On (1), Off (0)	CAN
904	Alt Config - Under Voltage Shutdown Enable	On (1), Off (0)	
905	Alt Config - Under Voltage Trip	On (1), Off (0)	
906	Alt Config - Loading Voltage	0 V	
907	Alt Config - Over Voltage Trip Level	0 V	
908	Alt Config - Under Frequency Enabled	On (1), Off (0)	
909	Alt Config - Under Frequency Trip Level	0.0 Hz	
910	Alt Config - Loading Frequency	0.0 Hz	
911	Alt Config - Nominal Frequency	0.0 Hz	
912	Alt Config - Over Frequency Enabled	On (1), Off (0)	
913	Alt Config - Over Frequency Trip Level	0.0 Hz	
914	Alt Config - CT Primary	0 (Amps)	
915	Alt Config - Full Load Rating	0 (Amps)	
916	Alt Config - Immediate Overcurrent	On (1) Off (0)	
917	Alt Config - Overcurrent Delayed Alarm	On (1) Off (0)	
918	Alt Config - Overcurrent Elayed Alarm Action	0 (Action)	
919	Alt Config - Overcurrent Delay	0.00.00	
920	Alt Config - Overcurrent Trip	0 (%)	
921	Alt Config - Generator AC System	0 (AC System)	
922	Alt Config - Mains Failure Detection	On (1), Off (0)	
923	Alt Config - Immediate Mains Dropout	On (1), Off (0)	
924	Alt Config - Mains Under Volt Enable	On (1), Off (0)	
925	Alt Config - Mains Under Volt Trip	0 V	
926	Alt Config - Mains Under Volt Return	0 V	
927	Alt Config - Mains Over Volt Enable	On (1), Off (0)	
928	Alt Config - Mains Over Volt Return	0 V	
929	Alt Config - Mains Over Volt Trip	0 V	

Continued in next column

CONFIGURATION PARAMETERS – ALTERNATIVE CONFIGURATION (PAGE 9) CONTINUED			
930	Alt Config - Mains Under Frequency Enable	On (1), Off (0)	
931	Alt Config - Mains Under Frequency Trip	0.0 Hz	
932	Alt Config - Mains Under Frequency Return	0.0 Hz	
933	Alt Config - Mains Over Frequency Enable	On (1), Off (0)	
934	Alt Config - Mains Over Frequency Return	0.0 Hz	
935	Alt Config - Mains Over Frequency Trip	0.0 Hz	
936	Alt Config – Alternative Under Speed Shutdown Enable	On (1), Off (0)	
937	Alt Config – Alternative Under Speed Shutdown Trip	0000 RPM	
938	Alt Config – Alternative Over Speed Shutdown Trip	0000 RPM	

CONFIGURATION PARAMETERS – FLEXIBLE SENSOR (PAGE 10)		
1001	Flex Sensor Alarm Arming	0 (Arming)
1002	Flex Sensor - Low Alarm Enable	0 (Action)
1003	Flex Sensor - Low Alarm Trip (Units Depend Upon Sensor Type)	0 % / 0.00 bar / 0 °C
1004	Flex Sensor - High Alarm Enable	0 (Action)
1005	Flex Sensor - High Alarm Trip (Units Depend Upon Sensor Type)	0 % / 0.00 bar / 0 °C
1006	Flex Sensor - Low Warning Enable	On (1), Off (0)
1007	Flex Sensor - Low Warning Trip (Units Depend Upon Sensor Type)	0 % / 0.00 bar / 0 °C
1008	Flex Sensor – High Warning Enable	On (1), Off (0)
1009	Flex Sensor – High Warning Trip (Units Depend Upon Sensor Type)	0 % / 0.00 bar / 0 °C
1010	Flex Sensor – Level Value Units (When Sensor Type is %)	0 (Level Value Units)
1011	Flex Sensor – Level Scaling Value (When Sensor Type is %)	0

CONFIGURATION PARAMETERS – SCHEDULER (PAGE 11)					
1101	Enable Scheduler	On (1), Off (0)	1104	Day	0 (Day, 1=Monday)
1102	On or Off Load	On (1), Off (0)	1105	Duration	0:00:00
1103	Start Time	0:00:00			

CONFIGURATION PARAMETERS – TIME AND DAY (PAGE 12)					
1201	Time of Day	0:00	1202	Day of Week	0 (Day, 1=Monday)

INPUT SOURCE LIST					
0	User Configured	8	Emergency Stop	16	Oil Pressure Switch
1	Alarm Mute	9	External Panel Lock	17	Remote Start Off Load
2	Alarm Reset	10	Reserved	18	Remote Start On Load
3	Alternative Configuration	11	Generator Load Inhibit	19	Simulate Mains Available
4	Auto Restor Inhibit	12	Lamp Test	20	Smoke Limiting
5	Auto Start Inhibit	13	Low Fuel Level Switch	21	Close Gen / Open Mains
6	Auxilary Mains Fail	14	RESERVED	22	Open Gen / Close Mains
7	Coolant Temperature Switch	15	Mains Load Inhibt		

INPUT ACTION LIST	
Index	Action
0	Electrical Trip
1	Shutdown
2	Warning

INPUT ARMING LIST	
Index	Arming
0	Always
1	From Safety On
2	From Starting
3	Never

INPUT POLARITY LIST	
Index	Action
0	Close to Activate
1	Open to Activate

OUTPUT POLARITY LIST	
Index	Arming
0	Energise
1	De-energise

CAN DATA FAIL ACTION	
Index	Action
0	None
1	Shutdown
2	Warning Always Latched

CAN DATA FAIL ARMING	
Index	Arming
0	From Safety On
1	From Starting

FLEXIBLE SENSOR ALARM ACTION LIST	
Index	Action
0	None
1	Shutdown
2	Electrical Trip

AC SYSTEM	
Index	Type
0	2 Phase 3 Wire (L1-L2)
1	2 Phase 3 Wire (L1-L3)
2	3 Phase 3 Wire
3	3 Phase 4 Wire
4	3 Phase 4 Wire (Delta)
5	Single Phase 2 Wire

FLEXIBLE SENSOR TYPE	
Index	Type
0	None
1	Digital Input
2	Percentage Sensor
3	Pressure Sensor
4	Temperature Sensor

LEVEL VALUE UNITS	
0	Litres
1	Imperial Gallons
2	U.S. Gallons

SENSOR SELECTIONS FOR PERCENTAGE	
0	Not Used
1	Dig Closed For Alarm
2	Dig Open For Alarm
3	VDO Ohm (10-180)
4	VDO Tube (90-0)
5	Us Ohm (240-33)
6	GM Ohm (0-90)
7	GM Ohm (0-30)
8	Ford (73-10)
9	User Defined

SENSOR SELECTIONS FOR OIL PRESSURE	
0	Not Used
1	Dig Closed For Alarm
2	Dig Open For Alarm
3	VDO 5 Bar
4	VDO 10 Bar
5	Datacon 5 Bar
6	Datacon 10 Bar
7	Datacon 7 Bar
8	Murphy 7 Bar
9	CMB812
10	Veglia
11	User defined

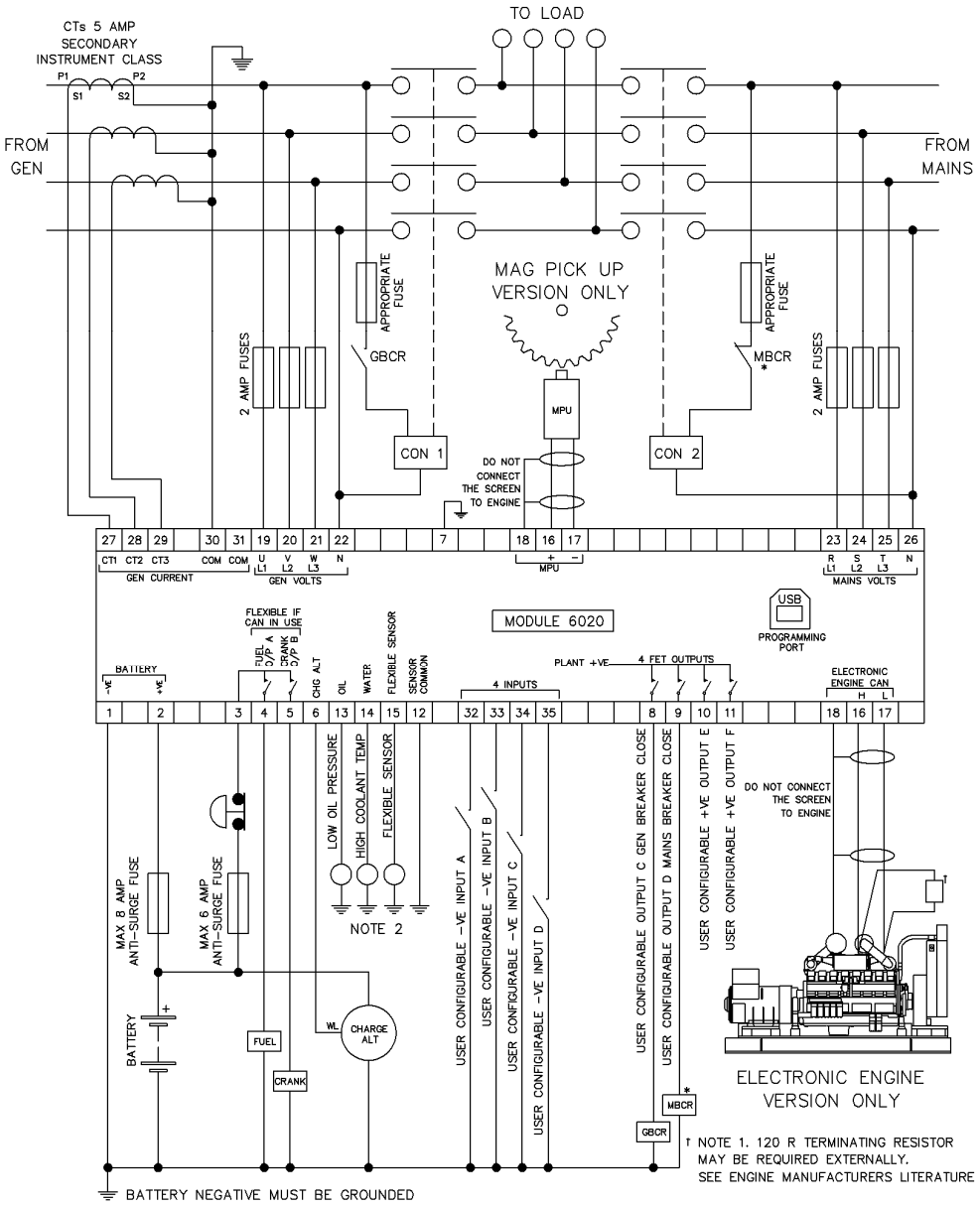
SENSOR SELECTIONS FOR COOLANT TEMPERATURE	
0	Not Used
1	Dig Closed For Alarm
2	Dig Open For Alarm
3	VDO 120 °C
4	Datacon High
5	Datacon Low
6	Murphy
7	Cummins
8	PT100
9	Veglia
10	Beru
11	User defined

Dig = Digital Switch

OUTPUT SOURCE LIST		
0	Not Used	
1	RESERVED	
2	RESERVED	
3	Audible Alarm	
4	Battery Over Volts Warning	
5	Battery Under Volts Warning	
6	CAN ECU Data Fail	CAN
7	CAN ECU Error	CAN
8	CAN ECU Fail	CAN
9	CAN ECU Power	CAN
10	CAN ECU Stop	CAN
11	Charge Alternator Shutdown	
12	Charge Alternator Warning	
13	Close Gen Output	
14	Close Gen Output Pulse	
15	Close Mains Output	
16	Close Mains Output Pulse	
17	Combined Mains Failure	
18	Common Alarm	
19	Common Electrical Trip	
20	Common Shutdown	
21	Common Warning	
22	RESERVED	
23	RESERVED	
24	RESERVED	
25	RESERVED	
26	RESERVED	
27	RESERVED	
28	RESERVED	
29	Emergency Stop	
30	Energise To Stop	
31	RESERVED	
32	Fail To Start	
33	Fuel Relay	
34	Gas Choke On	
35	Gas Ignition	
36	Generator Available	
37	Generator High Volts Shutdown	
38	Generator Low Volts Shutdown	
39	RESERVED	
40	RESERVED	
41	Low Fuel Level	
42	Low Oil Pressure Shutdown	
43	RESERVED	
44	RESERVED	
45	RESERVED	
46	RESERVED	
47	Open Gen Output	
48	Open Gen Output pulse	
49	Open Mains Output	
50	Open Mains Output pulse	
51	RESERVED	
52	RESERVED	
53	Preheat During Preheat Timer	
54	Preheat Until End Of Crank	
55	Preheat Until End Of Safety Timer	
56	Preheat Until End Of Warming Timer	
57	Smoke Limiting	
58	Start Relay	
59	RESERVED	
60	RESERVED	
61	RESERVED	
62	Flexible Sensor High Shutdown	
63	Flexible Sensor High Warning	
64	Flexible Sensor Low Shutdown	
65	Flexible Sensor Low Warning	

60xx – 02 (CAN option) only
60xx – 01 (Magnetic pickup option) only CAN

TYPICAL WIRING DIAGRAM



DEEP SEA ELECTRONICS

DSE6020 INSTALLATION INSTRUCTIONS

ACCESSING THE FRONT PANEL CONFIGURATION EDITOR

Ensure the engine is at rest and the module is in stop mode by pressing the stop/reset button.

Press the stop/reset and info buttons simultaneously.

The configuration icon is displayed, along with the first configurable parameter.

EDITING A PARAMETER

Press to select the required 'page' as detailed in the configuration tables.

Press (+) to select the next parameter or (-) to select the previous parameter within the current page.

When viewing the parameter to be changed, press the button. The value begins to flash.

Press (+) or (-) to adjust the value to the required setting.

Press the save the current value, the value ceases flashing.

Press and hold the button to exit the editor, the configuration icon will be removed from the display.

NOTE: - pressing and holding the + / - buttons will give auto-repeat functionality. Large values can be changed quicker by holding the buttons for a prolonged period. For instance large timers increment in 1 second steps to 1 minute, then in 30 second steps to 1 hour, then in 30 minute steps.

DIMENSIONS AND MOUNTING

For flat surface mounting in a Type 1 enclosure to meet UL requirements.

DIMENSIONS
216mm x 158mm x 42mm
(8.5" x 6.2" x 1.6")

PANEL CUTOUT
182mm x 137mm
(7.2" x 3.9")

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