

Configuration Parameters – Module (Page 1)		
101	Contrast	0 (%)
102	Fast Loading Enabled	On (1), Off (0)
103	All Warnings Latched	On (1), Off (0)
104	Lamp Test At Startup	On (1), Off (0)
105	Power Save Mode Enable	On (1), Off (0)
106	Deep Sleep Mode Enable	On (1), Off (0)
107	Protected Start Enable	On (1), Off (0)
108	Event Log Display Format	On (1), Off (0)
109	Power Up Mode	0 (Power Up Mode)
110	DTC String Enable	On (1), Off (0)
111	Pin Protected Maintenance Reset	On (1), Off (0)
112	Stop Button Coldown	On (1), Off (0)
113	Use Module Oil Pressure	On (1), Off (0)
114	Use Module Coolant Temp	On (1), Off (0)
115	Use Module Engine Hours	On (1), Off (0)
116	Use Module RPM	On (1), Off (0)
117	Use Module Charge Alt	On (1), Off (0)
Configuration Parameters – CAN Application (Page 2)		
201	CAN Alternative Engine Speed	On (1), Off (0)
202	CAN ECU Data Fail Enable	On (1), Off (0)
Configuration Parameters – Digital Inputs (Page 3)		
301	Low Fuel Shutdown Light Output 1	Enable
302	Low Fuel Shutdown Light Output 1	0%
303	Low Fuel Shutdown Light Output 1	Timer
304	Low Fuel Shutdown Light Output 2	Enable
305	Low Fuel Shutdown Light Output 2	0%
306	Low Fuel Shutdown Light Output 2	Timer
307	Low Fuel Shutdown Light Output 3	Enable
308	Low Fuel Shutdown Light Output 3	0%
309	Low Fuel Shutdown Light Output 3	Timer
310	Low Fuel Shutdown Light Output 4	Enable
311	Low Fuel Shutdown Light Output 4	0%
312	Low Fuel Shutdown Light Output 4	Timer
313	Digital Input A Source	0 (Input Source)
314	Digital Input A Polarity	0 (Polarity)
315	Digital Input A Action (If Source = User Config)	0 (Action)
316	Digital Input A Arming (If Source = User Config)	0 (Arming)
317	Digital Input A Activation Delay (If Source = User Config)	0 s
318	Digital Input B Source	0 (Input Source)
319	Digital Input B Polarity	0 (Polarity)
320	Digital Input B Action (If Source = User Config)	0 (Action)
321	Digital Input B Arming (If Source = User Config)	0 (Arming)
322	Digital Input B Activation Delay (If Source = User Config)	0 s
323	Digital Input C Source	0 (Input Source)
324	Digital Input C Polarity	0 (Polarity)
325	Digital Input C Action (If Source = User Config)	0 (Action)
326	Digital Input C Arming (If Source = User Config)	0 (Arming)
327	Digital Input C Activation Delay (If Source = User Config)	0 s
328	Digital Input D Source	0 (Input Source)
329	Digital Input D Polarity	0 (Polarity)
330	Digital Input D Action (If Source = User Config)	0 (Action)
331	Digital Input D Arming (If Source = User Config)	0 (Arming)
332	Digital Input D Activation Delay (If Source = User Config)	0 s
333	Digital Input E Source	0 (Input Source)
334	Digital Input E Polarity	0 (Polarity)
335	Digital Input E Action (If Source = User Config)	0 (Action)
336	Digital Input E Arming (If Source = User Config)	0 (Arming)
337	Digital Input E Activation Delay (If Source = User Config)	0 s
338	Digital Input F Source	0 (Input Source)
339	Digital Input F Polarity	0 (Polarity)
340	Digital Input F Action (If Source = User Config)	0 (Action)
341	Digital Input F Arming (If Source = User Config)	0 (Arming)
342	Digital Input F Activation Delay (If Source = User Config)	0 s
343	Analogue Input A (Set As Digital) Source	0 (Input Source)
344	Analogue Input A (Set As Digital) Polarity	0 (Polarity)
345	Analogue Input A (Set As Digital) Action (If Source = User Config)	0 (Action)
346	Analogue Input A (Set As Digital) Arming (If Source = User Config)	0 (Arming)
347	Analogue Input A (Set As Digital) Activation Delay (If Source = User Config)	0 s
348	Analogue Input B (Set As Digital) Source	0 (Input Source)
349	Analogue Input B (Set As Digital) Polarity	0 (Polarity)
350	Analogue Input B (Set As Digital) Action (If Source = User Config)	0 (Action)
351	Analogue Input B (Set As Digital) Arming (If Source = User Config)	0 (Arming)
352	Analogue Input B (Set As Digital) Activation Delay (If Source = User Config)	0 s
353	Analogue Input C (Set As Digital) Source	0 (Input Source)
354	Analogue Input C (Set As Digital) Polarity	0 (Polarity)
355	Analogue Input C (Set As Digital) Action (If Source = User Config)	0 (Action)
356	Analogue Input C (Set As Digital) Arming (If Source = User Config)	0 (Arming)
357	Analogue Input C (Set As Digital) Activation Delay (If Source = User Config)	0 s
Digital Input Polarity		
Index	Polarity	Index
0	Close to Activate	0
1	Open to Activate	1
		De-Energise
		Shutdown
		Warning

Configuration Parameters – Outputs (Page 4)			
401	Digital Output A Source	0 (Output Source)	411
402	Digital Output A Polarity	0 (Output Polarity)	412
403	Digital Output B Source	0 (Output Source)	413
404	Digital Output B Polarity	0 (Output Polarity)	414
405	Digital Output C Source	0 (Output Source)	415
406	Digital Output C Polarity	0 (Output Polarity)	416
407	Digital Output D Source	0 (Output Source)	417
408	Digital Output D Polarity	0 (Output Polarity)	418
409	Digital Output E Source	0 (Output Source)	419
410	Digital Output E Polarity	0 (Output Polarity)	420

Configuration Parameters – Timers (Page 5)			
501	Start Delay	513	Generator Transient Delay
502	RESERVED	514	Light Start-Up Timer 1
503	Crank Time	515	Light Start-Up Timer 2
504	Crank Rest Time	516	Light Start-Up Timer 3
505	Smoke Limiting	517	Light Start-Up Timer 4
506	Smoke Limiting Off	518	Light Shutdown Timer 1
507	Safety On Delay	519	Light Shutdown Timer 2
508	Warm Up Time	520	Light Shutdown Timer 3
509	Return Delay	521	Light Shutdown Timer 4
510	Cooling Time	522	Light Re-Strike Timer 1
511	ETS Solenoid Hold	523	Light Re-Strike Timer 2
512	Failed To Stop Delay	524	Light Re-Strike Timer 3

Configuration Parameters – Generator (Page 6)			
601	Alternator Fitted	On (1), Off (0)	633
602	Alternator Poles	0	634
603	Under Voltage Shutdown Enable	On (1), Off (0)	635
604	Under Voltage Shutdown Trip	0 V	636
605	Under Voltage Warning Enable	On (1), Off (0)	637
606	Under Voltage Warning Trip	0 V	638
607	RESERVED		639
608	Loading Voltage	0 V	640
609	Over Voltage Warning Enable	On (1), Off (0)	641
610	Over Voltage Warning Return	0 V	642
611	Over Voltage Warning Trip	0 V	643
612	Over Voltage Shutdown Trip	0 V	644
613	Under Frequency Shutdown Enable	On (1), Off (0)	645
614	Under Frequency Shutdown Trip	0.0 Hz	646
615	Under Frequency Warning Enable	On (1), Off (0)	647
616	Under Frequency Warning Trip	0.0 Hz	648
617	Loading Frequency	0.0 Hz	649
618	Nominal Frequency	0.0 Hz	650
619	Over Frequency Warning Enable	On (1), Off (0)	651
620	Over Frequency Warning Return	0.0 Hz	652
621	Over Frequency Warning Trip	0.0 Hz	653
622	Over Frequency Shutdown Enable	On (1), Off (0)	654
623	Over Frequency Shutdown Trip	0.0 Hz	655
624	System Topology	0 (System Topology)	656
625	CT Enable	On (1), Off (0)	657
626	CT Primary	0 A	658
627	Full Load Rating	0 A	659
628	Immediate Over Current Enable	On (1), Off (0)	660
629	Delayed Over Current Alarm Enable	On (1), Off (0)	661
630	Delayed Over Current Alarm Action	0 (Action)	662
631	Over Current Delay Time	0 s	663
632	Over Current Trip	0 %	664

Input Sources			
0	User Configured	15	Light Output Activation 3
1	Alarm Mute	16	Light Output Activation 4
2	Alarm Reset	17	Low Fuel Level Switch
3	Alternative Configuration	18	Oil Pressure Switch
4	Auto Start Inhibit	19	Override Fuel Shutdown
5	Coolant Temperature Switch	20	Photocell Start
6	Emergency Stop	21	Remote Start Off Load
7	External Panel Lock	22	Remote Start On Load
8	Inhibit Light Output 1	23	Simulate Stop Button
9	Inhibit Light Output 2	24	Simulate Auto Button
10	Inhibit Light Output 3	25	Simulate Start Button
11	Inhibit Light Output 4	26	Smoke Limiting
12	Lamp Test	27	Maintenance Reset Oil
13	Light Output Activation 1	28	Maintenance Reset Air
14	Light Output Activation 2	29	Maintenance Reset Fuel

Configuration Parameters – Engine (Page 7)			
701	Start Attempts	0	725
702	Gas Choke Timer	0 s	726
703	Gas On Delay	0 s	727
704	Gas Ignition Off Delay	0 s	728
705	Crank Disconnect On Oil Pressure Enable	On (1), Off (0)	729
706	Check Oil Pressure Prior To Starting	On (1), Off (0)	730
707	Crank Disconnect On Oil	0.00 Bar	731
708	Crank Disconnect On Frequency	0.0 Hz	732
709	Crank Disconnect On Engine Speed	0 RPM	733
710	Under Speed Enable	On (1), Off (0)	734
711	Under Speed Trip	0 RPM	735
712	Over Speed Trip	0 RPM	736
713	Low Battery Voltage Trip	On (1), Off (0)	737
714	Low Battery Voltage Trip	0.0 V	738
715	Low Battery Voltage Return	0.0 V	739
716	Low Battery Voltage Delay	0 s	740
717	High Battery Voltage Enable	On (1), Off (0)	741
718	High Battery Voltage Return	0.0 V	742
719	High Battery Voltage Trip	0.0 V	743
720	High Battery Voltage Delay	0 s	744
721	Charge Alt Shutdown Enable	On (1), Off (0)	745
722	Charge Alt Shutdown Trip	0.0 V	746
723	Charge Alt Shutdown Delay	0 s	747
724	Charge Alt Warning Enable	On (1), Off (0)	748

Configuration Parameters – Alternate Configuration (Page 8)			
801-867 For information on this section, refer to DSE Publication: 057-221 DSEL401 MKII Operators Manual			

Configuration Parameters – Scheduler (Page 9)			
901	Enable Scheduler	On (1), Off (0)	
902	Schedule Bank A Period	Weekly(0), Monthly(1), Daily (2)	
903	909, 915, 919, 921, 927, 933, 939, 945	Auto Mode (Entry 1-8)	(On 1), Off (0)
904	910, 916, 922, 928, 934, 940, 946	Schedule Mode (Entry 1-8)	Off Load (0), On Load (1), Lights Only (2)
905	911, 917, 923, 929, 935, 941, 947	Start Time (Entry 1-8)	0:00:00
906	912, 918, 924, 930, 936, 942, 948	Day (Entry 1-8)	(0 1=Monday)
907	913, 919, 925, 931, 937, 943, 949	Week (Entry 1-8)	1, 2, 3 or 4
908	914, 920, 926, 932, 938, 944, 950	Duration (Entry 1-8)	0 s
951		Schedule Bank B Period	Weekly(0), Monthly(1), Daily (2)
952	958, 964, 970, 976, 982, 988, 994	Auto Mode (Entry 9-16)	(On 1), Off (0)
953	959, 965, 971, 977, 983, 989, 995	Schedule Mode (Entry 9-16)	Off Load (0), On Load (1), Lights Only (2)
954	960, 966, 972, 978, 984, 990, 996	Start Time (Entry 9-16)	0:00:00
955	961, 967, 973, 979, 985, 991, 997	Day (Entry 9-16)	(0 1=Monday)
956	962, 968, 974, 980, 986, 992, 998	Week (Entry 9-16)	1, 2, 3 or 4
957	963, 969, 975, 981, 987, 993, 999	Duration (Entry 9-16)	0 s

Configuration Parameters – Maintenance Alarms (Page 11)			
1101-1109 For information on this section, refer to DSE Publication: 057-221 DSEL401 MKII Operators Manual			

Sensor Type			
Index	Type	Index	Arming
0	None	0	Always
1	Digital Input	1	From Safety On
2	Percentage Sensor	2	From Starting
3	Pressure Sensor	3	Never
4	Temperature Sensor	4	

System Topology			
Index	Type	Index	Type
0	2 Phase, 3 Wire (L1-L2)	6	3 Phase, 4 Wire Delta (L2-N-L3)
1	2 Phase, 3 Wire (L1-L3)	7	Single Phase, 2 Wire
2	3 Phase, 3 Wire	8	Single Phase, 3 Wire (L1-L2)
3	3 Phase, 4 Wire	9	Single Phase, 3 Wire (L1-L3)
4	3 Phase, 4 Wire Delta (L1-N-L2)	10	2 Wire Unearthed DC
5	3 Phase, 4 Wire Delta (L1-N-L3)		

Pressure Sensor List			

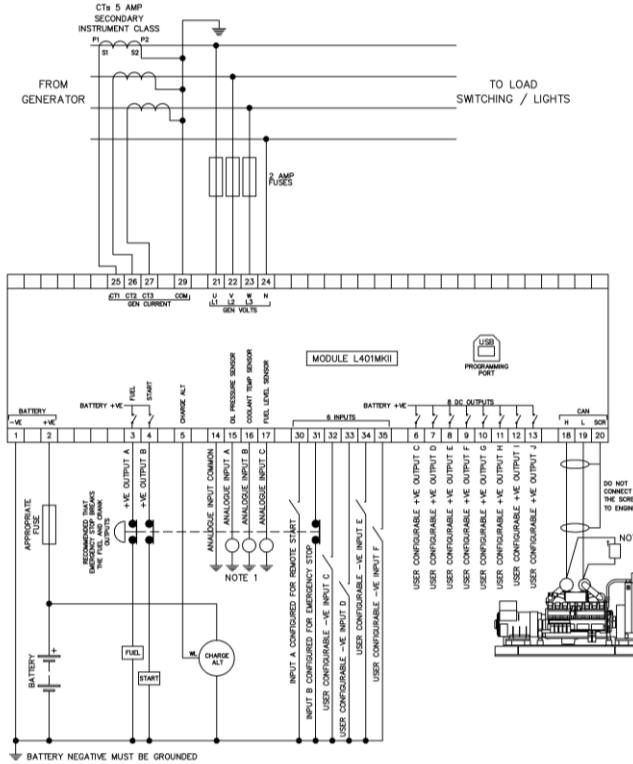
<tbl_r cells="4" ix="2" maxcspan="1" maxrspan="1" used

Output Sources		
0 Not Used	42 Gen Under Voltage Shutdown	83 Mains Low Voltage Shutdown
1 Air Filter Maintenance	43 Generator Over Current	84 Gen/Mains High Frequency
2 Air Flap Relay	44 Generator Delayed Over Current	85 Gen/Mains High Voltage
3 Audible Alarm	45 High Coolant Temp Shutdown	86 Gen/Mains Low Frequency
4 System In Auto Mode	46 Light Output 1	87 Gen/Mains Low Voltage
5 Battery Over Volts Warning	47 Light Output 2	88 Combined Mains Supply Failure
6 Battery Under Volts Warning	48 Light Output 3	89 Combined Gen/Mains Failure
7 CAN ECU Data Fail	49 Light Output 4	90 Mains Supply Active
8 CAN ECU Error	50 Low Oil Pressure Shutdown	91 RESERVED
9 CAN ECU Fail	51 System In Manual Mode	92 Gen Under Frequency Warning
10 CAN ECU Power	52 Oil Filter Maintenance	93 Gen Over Frequency Warning
11 CAN ECU Stop	53 Oil Pressure Open Circuit	94 Gen Low Voltage Warning
12 Charge Alternator Shutdown	54 Gen Over Frequency Shutdown	95 Gen High Voltage Warning
13 Charge Alternator Warning	55 Over Speed Shutdown	96 SCR Inducement
14 Common Alarm	56 Preheat During Preheat Timer	97 Water in Fuel
15 Common Electrical Trip	57 Preheat Until End of Crank	98 DEF Level Low
16 Common Shutdown	58 Preheat Until End of Safety Timer	99 DPTC Filter
17 Common Warning	59 Preheat Until End of Warming	100 HEST Active
18 Cooling Down	60 Smoke Limiting	101 DPF Regeneration in Progress
19 Digital Input A	61 Start Relay	102 DPF Non-Mission State
20 Digital Input B	62 System In Stop Mode	103 DPF Forced Regen Requested
21 Digital Input C	63 Temp Sender Open Circuit	104 DPF Regen Interlock Active
22 Digital Input D	64 Gen Under Frequency Shutdown	105 DPF Auto Regen Inhibit Request
23 Digital Input E	65 Under Speed Shutdown	106 Mains High Frequency Warning
24 Digital Input F	66 Gen Over Frequency Overshoot	107 Mains Low Frequency Warning
25 Analogue Input A (Digital)	67 Over Speed Overshoot	108 Mains High Voltage Warning
26 Analogue Input B (Digital)	68 Low Current Alarm	109 Mains Low Voltage Warning
27 Analogue Input C (Digital)	69 System In Stop Mode	110 RESERVED
28 Emergency Stop	70 Flexible Senor C High Shutdown	113 RESERVED
29 Energiere To Stop	71 Flexible Senor C Low Warning	114 Block Heater
30 Fail To Start	72 Flexible Senor C High Warning	115 Fuel Pull in Coil
31 Fail To Stop	73 Flexible Senor C Low Shutdown	116 to RESERVED
32 Fuel Filter Maintenance	74 Fuel Sensor High Shutdown	119
33 Fuel Relay	75 Fuel Sensor High Warning	120 Overspeed Delayed Shutdown
34 Fuel Sender Trip 1	76 Fuel Sensor Low Warning	121 Gen High Frequency Overshoot Warning
35 Fuel Sender Trip 2	77 Fuel Sensor Low Shutdown	122 Gen High Frequency Delayed Warning
36 Fuel Sender Trip 3	78 Mast Up	123 Gen High Frequency Delayed Shutdown
37 Fuel Sender Trip 4	79 Mast Down	124 Oil Pressure Switch
38 Gas Choke On	80 Mains High Frequency Shutdown	125 Coolant Temperature Switch
39 Gas Ignition	81 Mains Low Frequency Shutdown	126 Fuel Level Switch
40 Generator Available	82 Mains High Voltage Shutdown	127 Low Battery Start
41 Gen Over Voltage Shutdown	83 Mains Low Voltage Shutdown	128 Generator Within Standards
		129 Bund Tank
		130 Controlled Stop

Configuration Parameters - Analogue Inputs (Page 12)		
1201	Analogue Input A Sensor Type	0 (Sensor Type)
1202	Analogue Input A Sensor Selection	0 (Pressure Sensor List)
1203	Low Oil Pressure Enable	On (1), Off (0)
1204	Low Oil Pressure Trip	0 Bar
1205	Oil Pressure Sensor Open Circuit	On (1), Off (0)
1206	Analogue Input B Sensor Type	0 (Sensor Type)
1207	Analogue Input B Sensor Selection	0 (Temperature Sensor List)
1208	High Engine Temperature Trip	0.00 °C
1209	Temperature Sensor Open Circuit	On (1), Off (0)
1210	Analogue Input C Sensor Usage	Flexible Sensor (1), Fuel Level Sensor (0)
1211	Analogue Input C Sensor Type	0 (Sensor Type)
1212	Analogue Input C Sensor Selection	0 (Pressure / Temperature / Percentage Sensor List)
1213	Flexible Sensor C Arming	0 (Arming)
1214	Flexible Sensor C Low Alarm Action	0 (Action)
1215	Flexible Sensor C Low Alarm Trip	0 % / Bar / °C
1216	RESERVED	
1217	Flexible Sensor C Low Pre-Alarm Enable	On (1), Off (0)
1218	Flexible Sensor C Low Pre-Alarm Trip	0 % / Bar / °C
1219	Flexible Sensor C Low Pre-Alarm Return	0 % / Bar / °C
1220	RESERVED	
1221	Flexible Sensor C High Pre-Alarm Enable	On (1), Off (0)
1222	Flexible Sensor C High Pre-Alarm Return	0 % / Bar / °C
1223	Flexible Sensor C High Pre-Alarm Trip	0 % / Bar / °C
1224-1225	RESERVED	
1226	Flexible Sensor C High Alarm Action	0 (Action)
1227	Flexible Sensor C High Alarm Trip	0 % / Bar / °C
1228-1229	RESERVED	
1230	Fuel Sensor C Low Shutdown Enable	On (1), Off (0)
1231	Fuel Sensor C Low Shutdown Trip	0 %
1232	Fuel Sensor C Low Shutdown Delay	0 s
1233	Fuel Sensor C Low Pre-Alarm Enable	On (1), Off (0)
1234	Fuel Sensor C Low Pre-Alarm Trip	0 %
1235	Fuel Sensor C Low Pre-Alarm Return	0 %
1236	Fuel Sensor C Low Pre-Alarm Delay	0 s
1237	Fuel Sensor C High Pre-Alarm Enable	On (1), Off (0)
1238	Fuel Sensor C High Pre-Alarm Return	0 %
1239	Fuel Sensor C High Pre-Alarm Trip	0 %
1240	Fuel Sensor C High Pre-Alarm Delay	0 s

Configuration Parameters - Analogue Inputs (Page 12) Continued		
1241	RESERVED	
1242	Fuel Sensor C High Alarm Action	0 (Action)
1243	Fuel Sensor C High Alarm Trip	0 %
1244	Fuel Sensor C High Alarm Delay	0 s
1245	Fuel Sensor Units	0 (Fuel Sensor Units)
1246	Fuel Tank Size	0

TYPICAL WIRING DIAGRAM



NOTE: A larger version of the typical wiring diagram is included in the product's operator manual. Refer to DSE Publication:
057-221 DSEL401 MKII Operator Manual

DIMENSIONS

140 mm x 113 mm x 43 mm
(5.5" x 4.4" x 1.7")

PANEL CUTOUT

118 mm x 92 mm
(4.6" x 3.6")

TERMINALS

Tightening Torque: 0.5 Nm (4.5 lb-in)
Conductor Size: 0.5 mm² to 2.5 mm²
(20 AWG to 13 AWG)

REQUIREMENTS FOR UL CERTIFICATION

Specification	Description
Screw Terminal Tightening Torque	• 4.5 lb-in (0.5 Nm)
Conductors	• Terminals suitable for connection of conductor size 13 AWG to 20 AWG (0.5 mm² to 2.5 mm²). • Conductor protection must be provided in accordance with NFPA 70, Article 240. • Low voltage circuits (35 V or less) must be supplied from the engine starting battery or an isolated secondary circuit. • The communication, sensor, and/or battery derived circuit conductors shall be separated and secured to maintain at least 1/4" (6 mm) separation from the generator and mains connected circuit conductors unless all conductors are rated 600 V or greater.
Current Inputs	• Must be connected through UL Listed or Recognized isolating current transformers with the secondary rating of 5 A max.
Communication Circuits	• Must be connected to communication circuits of UL Listed equipment
DC Output Pilot Duty	• 0.5 A
Mounting	• Suitable for use in type 1 Enclosure Type rating with surrounding air temperature -22 °F to +158 °F (-30 °C to +70 °C) • Suitable for pollution degree 3 environments when voltage sensing inputs do not exceed 300 V. When used to monitor voltages over 300 V device to be installed in an unventilated or filtered ventilation enclosure to maintain a pollution degree 2 environment.
Operating Temperature	• -22 °F to +158 °F (-30 °C to +70 °C)
Storage Temperature	• -40 °F to +176 °F (-40 °C to +80 °C)



DEEP SEA ELECTRONICS
DSEL401 MKII Installation Instructions

EDITING A PARAMETER

- Press the Stop/Reset Mode (O) (-) and Auto Mode (AUTO) (✓) buttons together to enter the editor mode.
- Press the Up (↑) or Down (↓) navigation buttons to change between User (User) or Configuration Editor (Configuration Editor) icons.
- Press the Auto Mode (AUTO) (✓) to enter the required editor.
- Press the Up (↑) or Down (↓) navigation buttons to cycle through the front panel editor in increments of 100.
- Press the Manual/Start Mode (I) (+) or Stop/Reset Mode (O) (-) buttons to cycle through the front panel editor in increments of 1.
- When viewing the parameter to be edited, press the Auto Mode (AUTO) (✓) button and the value begins to flash.
- Press the Manual/Start Mode (I) (+) or Stop/Reset Mode (O) (-) navigation buttons to adjust the value to the required setting.
- Press the Auto Mode (AUTO) (✓) button to save the current value, the value ceases flashing.
- Press and hold the Auto Mode (AUTO) (✓) button to save and exit the editor, the configuration icon (configuration icon) is removed from the display.

NOTE: Pressing and holding the **Manual/Start Mode** (I) (+) or **Stop/Reset Mode** (O) (-) buttons will give auto-repeat functionality.

NOTE: More comprehensive module configuration is possible via PC configuration software. For further details of module configuration, refer to DSE Publication: **057-222 DSEL401 MKII Configuration Suite PC Software Manual**.

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