

Configuration Parameters – Module (Page 1)			
101	Contrast	0 (%)	118 Use Module Charge Alt On (1), Off (0)
102	Fast Loading Enabled	On (1), Off (0)	119 Disable CAN Speed Control On (1), Off (0)
103	All Warnings Latched	On (1), Off (0)	120 CT Position Gen (0), Load(1)
104	Lamp Test At Startup	On (1), Off (0)	121 Generator Voltage Display On (1), Off (0)
105	Power Save Mode Enable	On (1), Off (0)	122 Mains Voltage Display On (1), Off (0)
106	RESERVED		123 Generator Frequency Display On (1), Off (0)
107	RESERVED		124 Mains Frequency Display On (1), Off (0)
108	Event Log Display Format	On (1), Off (0)	125 Current Display On (1), Off (0)
109	Power Up Mode	0 (Power Up Mode)	126 kW Display On (1), Off (0)
110	DTC String Enable	On (1), Off (0)	127 kVAr Display On (1), Off (0)
111	RESERVED		128 kVA Display On (1), Off (0)
112	Pin Protected Maintenance Reset	On (1), Off (0)	129 pf Display On (1), Off (0)
113	Stop Button Countdown	On (1), Off (0)	130 kWh Display On (1), Off (0)
114	Use Module Oil Pressure	On (1), Off (0)	131 kVArh Display On (1), Off (0)
115	Use Module Coolant Temp	On (1), Off (0)	132 kVAh Display On (1), Off (0)
116	Use Module Engine Hours	On (1), Off (0)	133 Hold Start Button to Crank On (1), Off (0)
117	Use Module RPM	On (1), Off (0)	

Configuration Parameters – CAN Application (Page 2)			
201	CAN Alternative 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 s

Configuration Parameters – Digital Inputs (Page 3)			
301	Digital Input A Source	0 (Input Source)	
302	Digital Input A Polarity	0 (Polarity)	
303	Digital Input A Action (If Source = User Config)	0 (Action)	
304	Digital Input A Arming (If Source = User Config)	0 (Arming)	
305	Digital Input A Activation Delay (If Source = User Config)	0 s	
306	Digital Input B Source	0 (Input Source)	
307	Digital Input B Polarity	0 (Polarity)	
308	Digital Input B Action (If Source = User Config)	0 (Action)	
309	Digital Input B Arming (If Source = User Config)	0 (Arming)	
310	Digital Input B Activation Delay (If Source = User Config)	0 s	
311	Digital Input C Source	0 (Input Source)	
312	Digital Input C Polarity	0 (Polarity)	
313	Digital Input C Action (If Source = User Config)	0 (Action)	
314	Digital Input C Arming (If Source = User Config)	0 (Arming)	
315	Digital Input C Activation Delay (If Source = User Config)	0 s	
316	Digital Input D Source	0 (Input Source)	
317	Digital Input D Polarity	0 (Polarity)	
318	Digital Input D Action (If Source = User Config)	0 (Action)	
319	Digital Input D Arming (If Source = User Config)	0 (Arming)	
320	Digital Input D Activation Delay (If Source = User Config)	0 s	
321	Digital Input E Source	0 (Input Source)	
322	Digital Input E Polarity	0 (Polarity)	
323	Digital Input E Action (If Source = User Config)	0 (Action)	
324	Digital Input E Arming (If Source = User Config)	0 (Arming)	
325	Digital Input E Activation Delay (If Source = User Config)	0 s	
326	Digital Input F Source	0 (Input Source)	
327	Digital Input F Polarity	0 (Polarity)	
328	Digital Input F Action (If Source = User Config)	0 (Action)	
329	Digital Input F Arming (If Source = User Config)	0 (Arming)	
330	Digital Input F Activation Delay (If Source = User Config)	0 s	
331	Analogue Input A (Set As Digital) Source	0 (Input Source)	
332	Analogue Input A (Set As Digital) Polarity	0 (Polarity)	
333	Analogue Input A (Set As Digital) Action (If Source = User Config)	0 (Action)	
334	Analogue Input A (Set As Digital) Arming (If Source = User Config)	0 (Arming)	
335	Analogue Input A (Set As Digital) Activation Delay (If Source = User Config)	0 s	
336	Analogue Input B (Set As Digital) Source	0 (Input Source)	
337	Analogue Input B (Set As Digital) Polarity	0 (Polarity)	
338	Analogue Input B (Set As Digital) Action (If Source = User Config)	0 (Action)	
339	Analogue Input B (Set As Digital) Arming (If Source = User Config)	0 (Arming)	
340	Analogue Input B (Set As Digital) Activation Delay (If Source = User Config)	0 s	
341	Analogue Input C (Set As Digital) Source	0 (Input Source)	
342	Analogue Input C (Set As Digital) Polarity	0 (Polarity)	
343	Analogue Input C (Set As Digital) Action (If Source = User Config)	0 (Action)	
344	Analogue Input C (Set As Digital) Arming (If Source = User Config)	0 (Arming)	
345	Analogue Input C (Set As Digital) Activation Delay (If Source = User Config)	0 s	
346	Analogue Input D (Set As Digital) Source	0 (Input Source)	
347	Analogue Input D (Set As Digital) Polarity	0 (Polarity)	
348	Analogue Input D (Set As Digital) Action (If Source = User Config)	0 (Action)	
349	Analogue Input D (Set As Digital) Arming (If Source = User Config)	0 (Arming)	
350	Analogue Input D (Set As Digital) Activation Delay (If Source = User Config)	0 s	

Pressure Sensor List		Temperature Sensor List		Percentage Sensor List	
Index	Type	Index	Type	Index	Type
0	Not used	0	Not Used	0	Not Used
1	Dig Closed for Alarm	1	Dig Closed for Alarm	1	Dig Closed for Alarm
2	Dig Open for Alarm	2	Dig Open for Alarm	2	Dig Open for Alarm
3	VDO 5 Bar	3	VDO 120 °C	3	VDO Ohm (10-180)
4	VDO 10 Bar	4	Datcon High	4	VDO Tube (90-0)
5	Datcon 5 Bar	5	Datcon Low	5	US Ohm (240-33)
6	Datcon 10 Bar	6	Murphy	6	GM Ohm (0-90)
7	Datcon 7 Bar	7	Cummins	7	GM Ohm (0-30)
8	Murphy 7 Bar	8	PT100	8	Ford (73-10)
9	CMB812	9	Veglia	9	User Defined
10	Veglia	10	Beru		
11	User Defined	11	User Defined		

Configuration Parameters – Outputs (Page 4)					
401	Digital Output A Source	0 (Output Source)	413	Digital Output G Source	0 (Output Source)
402	Digital Output A Polarity	0 (Output Polarity)	414	Digital Output G Polarity	0 (Output Polarity)
403	Digital Output B Source	0 (Output Source)	415	Digital Output H Source	0 (Output Source)
404	Digital Output B Polarity	0 (Output Polarity)	416	Digital Output H Polarity	0 (Output Polarity)
405	Digital Output C Source	0 (Output Source)	417	LED Indicator 1 Source	0 (Output Source)
406	Digital Output C Polarity	0 (Output Polarity)	418	LED Indicator 1 Polarity	0 (Output Polarity)
407	Digital Output D Source	0 (Output Source)	419	LED Indicator 2 Source	0 (Output Source)
408	Digital Output D Polarity	0 (Output Polarity)	420	LED Indicator 2 Polarity	0 (Output Polarity)
409	Digital Output E Source	0 (Output Source)	421	LED Indicator 3 Source	0 (Output Source)
410	Digital Output E Polarity	0 (Output Polarity)	422	LED Indicator 3 Polarity	0 (Output Polarity)
411	Digital Output F Source	0 (Output Source)	423	LED Indicator 4 Source	0 (Output Source)
412	Digital Output F Polarity	0 (Output Polarity)	424	LED Indicator 4 Polarity	0 (Output Polarity)

Configuration Parameters – Timers (Page 5)					
501	Mains Transient Delay	510 Return Delay	519 Delayed Load Output 2		
502	Start Delay	511 Cooling Time	520 Delayed Load Output 3		
503	Purgeheat Timer	512 ETS Solenoid Hold	521 Delayed Load Output 4		
504	Crank Time	513 Failed To Stop Delay	522 Power Save Mode Delay		
505	Crank Rest Time	514 Generator Transient Delay	523 RESERVED		
506	Smoke Limiting	515 Transfer Time	524 Page Timer		
507	Smoke Limiting Off	516 Breaker Trip Pulse	525 Cooling Time at Idle		
508	Safety On Delay	517 Breaker Close Pulse	526 Manual Crank Limit		
509	Warm Up Time	518 Delayed Load Output 1			

Configuration Parameters – Generator (Page 6)					
601	Alternator Fitted	On (1), Off (0)	620	Over Frequency Warning Enable	On (1), Off (0)
602	Alternator Poles	0	621	Over Frequency Warning Return	0.0 Hz
603	Under Voltage Shutdown Enable	On (1), Off (0)	622	Over Frequency Warning Trip	0.0 Hz
604	Under Voltage Trip Shutdown	0 V	623	Over Frequency Shutdown Enable	On (1), Off (0)
605	Under Voltage Warning Enable	On (1), Off (0)	624	Over Frequency Shutdown Trip	0.0 Hz
606	Under Voltage Warning Trip	0 V	625	AC System	0 (Ac System)
607	RESERVED		626	CT Primary	0 A
608	Loading Voltage	0 V	627	Full Load Rating	0 A
609	Over Voltage Warning Enable	On (1), Off (0)	628	Immediate Over Current Enable	On (1), Off (0)
610	Over Voltage Warning Return	0 V	629	Delayed Over Current Alarm	On (1), Off (0)
611	Over Voltage Warning Trip	0 V	630	Delayed Over Current Alarm Action	0 (Action)
612	Over Voltage Shutdown Trip	0 V	631	Over Current Delay Time	0 s
613	Under Frequency Shutdown	On (1), Off (0)	632	Over Current Trip	0 %
614	Under Frequency Shutdown Trip	0.0 Hz	633	kW Rating	0 kW
615	Under Frequency Warning Enable	On (1), Off (0)	634	Over kW Protection Enable	On (1), Off (0)
616	Under Frequency Warning Trip	0.0 Hz	635	Over kW Protection Action	0 (Action)
617	RESERVED		636	Over kW Protection Trip	0 %
618	Loading Frequency	0.0 Hz	637	Over kW Protection Trip Delay	0 s
619	Nominal Frequency	0.0 Hz			

Configuration Parameters – Mains (Page 7)					
701	AC System	0 (AC System)	709	Over Voltage Level Trip	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 Trip	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 Trip	0.0 Hz
708	Over Voltage Return	0 V			

Configuration Parameters – Engine (Page 8)					
801	Start Attempts	0	819	High Battery Voltage Enable	On (1), Off (0)
802	Over Speed Overshoot	0 %	820	High Battery Voltage Return	0.0 V
803	Over Speed Delay	0 s	821	High Battery Voltage Trip	0.0 V
804	Gas Choke Timer (Gas Engine Only)	0 s	822	High Battery Voltage Warning Delay	0 s
805	Gas On Delay (Gas Engine Only)	0 s	823	Charge Alt Shutdown Enable	On (1), Off (0)
806	Gas Ignition Off Delay (Gas Engine Only)	0 s	824	Charge Alt Shutdown Trip	0.0 V
807	Crank Disconnect On Oil Pressure Enable	On (1), Off (0)	825	Charge Alt Shutdown Delay	0 s
808	Check Oil Pressure Prior To Starting	On (1), Off (0)	826	Charge Alt Warning Enable	On (1), Off (0)
809	Crank Disconnect On Oil Pressure	0.00 Bar	827	Charge Alt Warning Trip	0.0 V
810	Crank Disconnect On Frequency	0.0 Hz	828	Charge Alt Warning Delay	0 s
811	Crank Disconnect On Engine Speed	0 RPM	829	Low Battery Start Arming	On (1), Off (0)
812	Under Speed Enable	On (1), Off (0)	830	Low Battery Start Threshold	0.0 V
813	Under Speed Trip	0 RPM	831	Low Battery Start Delay	0 s
814	Over Speed Trip	0 RPM	832	Low Battery Start Run Time	0 s
815	Low Battery Voltage Enable	On (1), Off (0)	833	Magnetic Pickup Fitted	On (1), Off (0)
816	Low Battery Voltage Trip	0.0 V	834	Flywheel Teeth	0
817	Low Battery Voltage Return	0.0 V	835	Crank Disconnect On Oil Pressure Delay	0 s
818	Low Battery Voltage Delay	0:00:00			

Digital Input Polarity						Output Polarity		Alarm Action		Fuel Sensor Units	
Index	Polarity	Index	Polarity	Index	Action	Index	Units				
0	Close to Activate	0	Energise	0	Electrical Trip	0	Litres				
1	Open to Activate	1	De-Energise	1	Shutdown	1	Imperial Gallons				
				2	Warning	2	US Gallons				

Configuration Parameters – Analogue Inputs (Page 9)									
901	Low Oil Pressure Enable	On (1), Off (0)	902	Low Oil Pressure Trip	0 Bar	903	Oil Pressure Sender Open Circuit	On (1), Off (0)	904
904	Analogue Input A Sensor Usage	Digital Input (0), Flexible (1), Oil Pressure (3) Sensor							

Configuration Parameters – Scheduler (Page 10)

1001	Enable Scheduler	On (1), Off (0)
1002	Schedule Run On or Off Load	On (1), Off (0)
1003	Scheduler Period	Weekly(0), Monthly(1)
1004, 1008, 1012, 1016, 1020, 1024, 1028, 1032	Start Time (Entry 1-8)	0:00:00
1005, 1009, 1013, 1017, 1021, 1025, 1029, 1033	Day (Entry 1-8)	0 (1=Monday)
1006, 1010, 1014, 1018, 1022, 1026, 1030, 1034	Week (Entry 1-8)	1, 2, 3 or 4
1007, 1011, 1015, 1019, 1023, 1027, 1031, 1035	Duration (Entry 1-8)	0 s

Configuration Parameters – Time (Page 11)

1101	Time of Day	00:00:00	1104	Day of Month	1-31
1102	RESERVED		1105	Month of Year	1-12
1103	RESERVED		1106	Year	0-99

Configuration Parameters – Maintenance Alarms (Page 12)

1201	Oil Maintenance Alarm Enable	On (1), Off (0)	1206	Air Maintenance Alarm Engine Hours	0 h
1202	Oil Maintenance Alarm Action	0 (Action)	1207	Fuel Maintenance Alarm Enable	On (1), Off (0)
1203	Oil Maintenance Alarm Engine Hours	0 h	1208	Fuel Maintenance Alarm Action	0 (Action)
1204	Air Maintenance Alarm Enable	On (1), Off (0)	1209	Fuel Maintenance Alarm Engine Hours	0 h
1205	Air Maintenance Alarm Action	0 (Action)			

Configuration Parameters – Alternate Configuration (Page 20)

For information on this section, refer to DSE Publication: 057-182 DSE7110 MKII & DSE7120 MKII Operators Manual

Output Sources

0	Not Used	34	Gas Choke On	68	Waiting For Manual Restore
1	Air Flap Relay	35	Gas Ignition	69	Flexible Sender C High Alarm
2	Audible Alarm	36	Generator Available	70	Flexible Sender C High Alarm
3	Battery Over Volts Warning	37	Generator Over Voltage Shutdown	71	Flexible Sender C Low Pre-Alarm
4	Battery Under Volts Warning	38	Generator Under Voltage Shutdown	72	Flexible Sender C Low Alarm
5	CAN ECU Data Fail	39	kW Overload Alarm	73	Flexible Sender D High Alarm
6	CAN ECU Error	40	Over Current Immediate Warning	74	Flexible Sender D High Alarm
7	CAN ECU Fail	41	Delayed Over Current Trip Alarm	75	Flexible Sender D Low Pre-Alarm
8	CAN ECU Power	42	High Coolant Temperature Shutdown	76	Flexible Sender D Low Alarm
9	CAN ECU Stop	43	Low Oil Pressure Shutdown	77	Flexible Sender High Alarm
10	Charge Alternator Shutdown	44	Mains High Frequency	78	Fuel Sender High Alarm
11	Charge Alternator Warning	45	Mains High Voltage	79	Fuel Sender Low Pre-Alarm
12	Close Gen Output	46	Mains Low Frequency	80	Fuel Sender Low Alarm
13	Close Gen Output Pulse	47	Mains Low Voltage	81	Delayed Load Output 1
14	Close Mains Output	48	Oil Pressure Sender Open Circuit	82	Delayed Load Output 2
15	Close Mains Output Pulse	83	Open Gen Output	83	Delayed Load Output 3
16	Combined Mains Failure	84	Open Gen Output Pulse	84	Delayed Load Output 4
17	Common Alarm	85	Open Mains Output	85	Air Filter Maintenance Output
18	Common Electrical Trip	86	Open Mains Output Pulse	86	Oil Filter Maintenance Output
19	Common Shutdown	87	Gen Over Frequency Shutdown	87	Fuel Filter Maintenance Output
20	Common Warning	88	Over Speed Shutdown	88	System In Stop Mode
21	Cooling Down	89	Preheat During Preheat Timer	89	System In Auto Mode
22	Digital Input A	90	Preheat Until End Of Crank	90	System In Manual Mode
23	Digital Input B	91	Preheat Until End Of Safety Timer	91	Fuel Pump Control
24	Digital Input C	92	Preheat Until End Of Warming	92	Analogue Input A (Digital)
25	Digital Input D	93	Smoke Limiting	93	Analogue Input B (Digital)
26	Digital Input E	94	Start Relay	94	Analogue Input C (Digital)
27	Digital Input F	95	Temperature Sender Open Circuit	95	Analogue Input D (Digital)
28	RESERVED	96	Under Frequency Shutdown	96	System In Test Mode
29	Emergency Stop	97	Under Speed Shutdown	97	Loss Of MPU Signal
30	Energise To Stop	98	Remote Start Off Load	98	MPU Open Circuit
31	Fail To Start	99	Remote Start On Load	99	Over Speed Overshoot
32	Fail To Stop	100	Simulate Auto Button	101	Over Frequency Overshoot
33	Fuel Relay	101	Simulate Heater Fitted and Active		

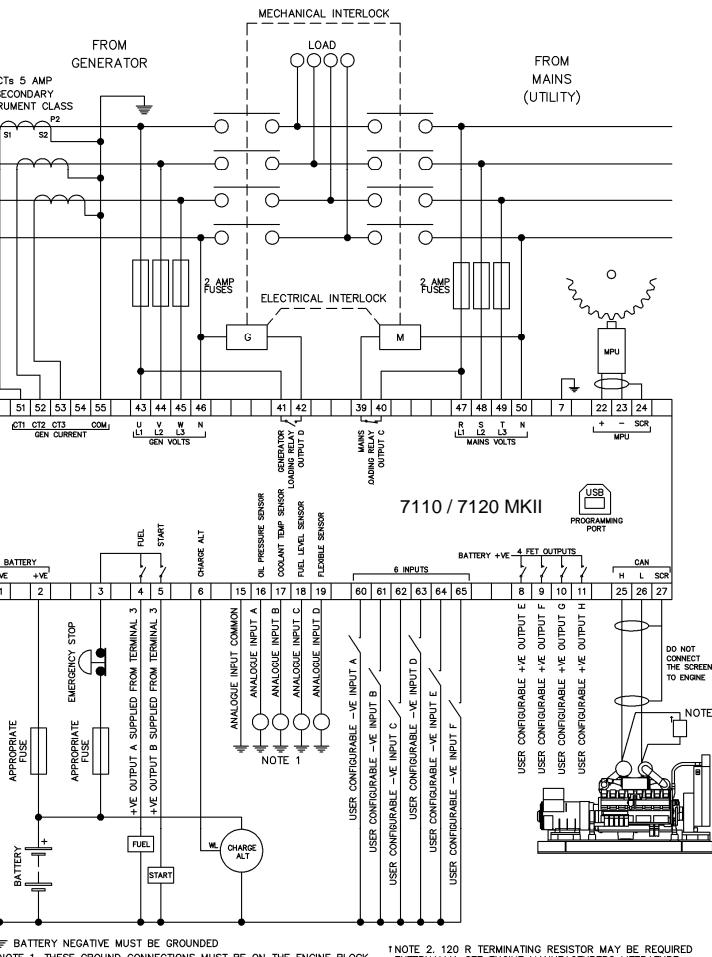
Input Sources

0	User Configured	10	Generator Load Inhibit	20	Simulate Start Button
1	Alarm Mute	11	Lamp Test	21	Smoke Limiting
2	Alarm Reset	12	Low Fuel Level Switch	22	Close Generator Open Mains
3	Alternative Configuration	13	Mains Load Inhibit	23	Close To Mains Open Generator
4	Auto Restore Inhibit	14	Oil Pressure Switch	24	Maintenance Reset Oil
5	Auto Start Inhibit	15	Remote Start Off Load	25	Maintenance Reset Air
6	Auxiliary Mains Fail	16	Remote Start On Load	26	Maintenance Reset Fuel
7	Coolant Temperature Switch	17	Simulate Mains Available	27	Simulate Manual Button
8	RESERVED	18	Simulate Stop Button	28	Simulate Test Button
9	External Panel Lock	19	Simulate Auto Button	29	Manual Mode And Start Request

Sensor Type	AC System	Digital Input	Alarm Arming	Power Up Mode
0	Percentage Sensor	0	2 Phase 3 Wire (L1-L2)	0 Always
1	Pressure Sensor	1	2 Phase 3 Wire (L1-L3)	1 From Safety On
2	Temperature Sensor	2	3 Phase 3 Wire	2 From Starting
3		3	3 Phase 4 Wire	2 Auto
4		4	3 Phase 4 Wire (Delta)	3 Never
5		5	Single Phase 2 Wire	

Functionality in DSE7110 MKII and DSE7120 MKII
Functionality in DSE7120 MKII only

TYPICAL WIRING DIAGRAM



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 20 AWG to 13 AWG (0.5 mm ² to 2.5 mm ²). • 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 +122 °F (-30 °C to +50 °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 +122 °F (-30 °C to +50 °C)
Storage Temperature	• -40 °F to +158 °F (-40 °C to +70 °C)



DEEP SEA ELECTRONICS PLC
DSE7110 MKII & DSE7120 MKII Installation Instructions
Applicable to module version 1.1.58 and upwards.

EDITING A PARAMETER

- Press the () and () buttons together to enter the editor mode.
- Press the () (left or right) navigation buttons to cycle through the front panel editor in increments of 100.
- Press the () (up or down) navigation buttons to cycle through the front panel editor in increments of 1.
- When viewing the parameter to be edited, press the () button, the value begins to flash.
- Press the () (up or down) navigation buttons to adjust the value to the required setting.
- Press the () button the save the current value, the value ceases flashing.
- Press and hold the () button to save and exit the editor, the configuration icon is removed from the display.

NOTE: Pressing and holding the () navigation buttons gives an auto-repeat functionality. Values can be changed quickly by holding the navigation buttons for a prolonged period of time.

DIMENSIONS	PANEL CUTOUT	TERMINALS
240 mm x 181 mm x 42 mm (9.4" x 6.8" x 1.6")	220 mm x 160 mm (8.7" x 6.3")	Tightening Torque: 0.5 Nm (4.5 lb-in) Conductor Size: 0.5 mm ² to 2.5 mm ² (AWG 20 to AWG 13)

NOTE: Terminals 47, 48, 49 & 50 are not fitted to DSE7110 MKII

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