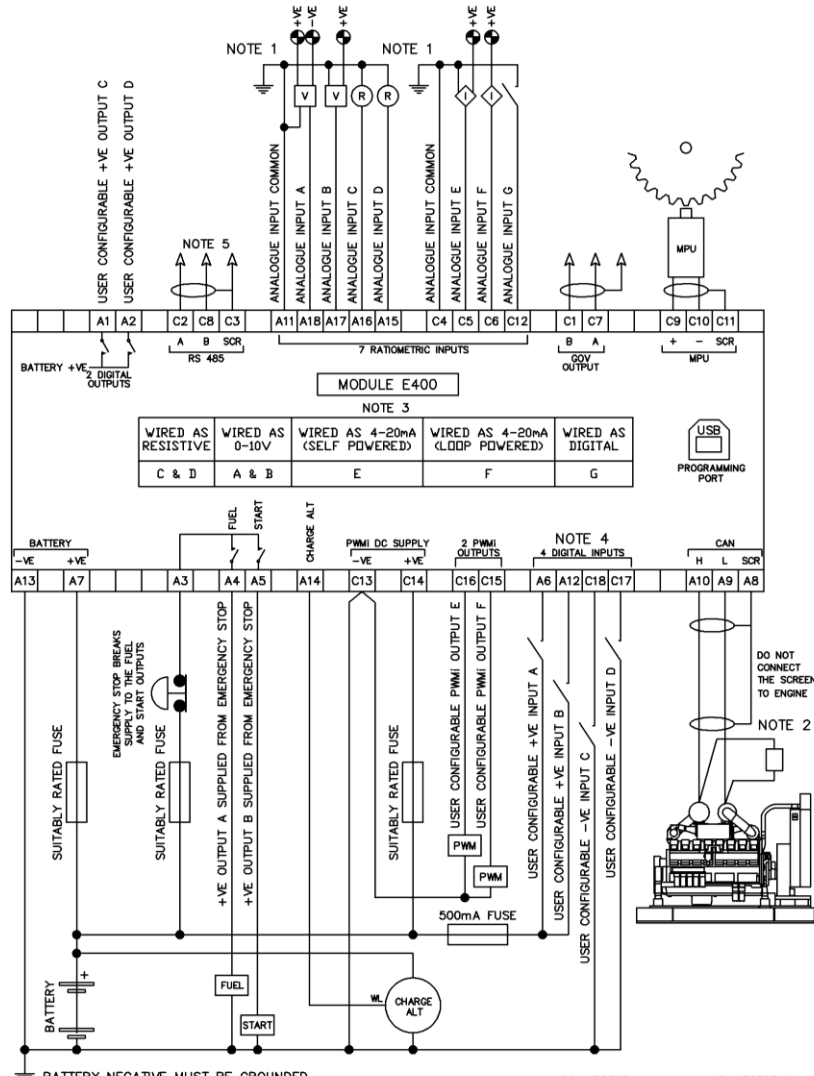


# TYPICAL WIRING DIAGRAM



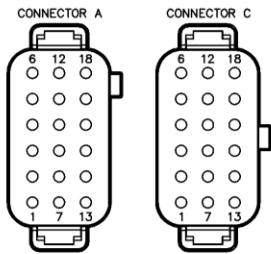
**NOTE 1:** THESE GROUND CONNECTIONS MUST BE ON THE ENGINE BLOCK, AND MUST BE TO THE SENSOR BODIES.

**NOTE 2:** 120 Ω TERMINATING RESISTOR MAY BE REQUIRED EXTERNALLY, SEE ENGINE MANUFACTURERS LITERATURE.

**NOTE 3:** ANALOGUE INPUTS CAN BE CONFIGURED AS EITHER A DIGITAL INPUT, RESISTIVE INPUT, 0-10V INPUT, 4-20mA INPUT OR ANY COMBINATION OF THE ABOVE.

**NOTE 4:** DIGITAL INPUTS CAN BE CONFIGURED AS EITHER +VE OR -VE SWITCHING.

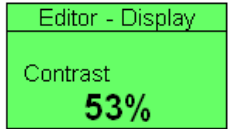
**NOTE 5:** AN EXTERNAL 120 Ω TERMINATING RESISTOR MUST BE FITTED IF THE CONTROLLER IS THE FIRST OR LAST UNIT ON THE RS485 LINK



**NOTE:** To meet UL requirements, fuse the module supply at 167% of supply current.

## ACCESSING THE FRONT PANEL EDITOR

- Ensure the engine is at rest and the module is in STOP mode by pressing the Stop/Reset button.
- Press and hold the Stop/Reset and Auto buttons simultaneously.
- If a module security PIN has been set, the PIN number request is then shown:
- Press the Auto button, the first '#' changes to '0'. Press Up or Down buttons to adjust it to the correct value.
- Press and hold the Up button when the first digit is correctly entered. The digit you have just entered will now show '#' for security.
- Repeat this process for the other digits of the PIN number. Press and hold the Down button if previous digits need to be edited. Press the Auto button to finish editing the PIN.
- Press the Auto button to check the PIN for validity. If the number is not correct, the PIN must be re-entered.
- If the PIN has been successfully entered (or the module PIN has not been enabled), the editor is displayed:



## EDITING A PARAMETER

- Enter the editor as described.
- Press and hold the Up or Down buttons to cycle to the section you wish to view/change.
- Press the Up or Down buttons to select the parameter you wish to view/change within the currently selected section.
- To edit the parameter, press the Auto button to enter edit mode. The parameter begins to flash to indicate that you are editing the value.
- Press the Up or Down buttons to change the parameter to the required value.
- Press the Auto button to save the value. The parameter ceases flashing to indicate that it has been saved.
- To exit the editor and save the changes, press and hold the Auto button.
- To exit the editor and not save the changes, press and hold the Stop/Reset button.

**NOTE:** The editor is exited after 5 minutes of inactivity to ensure security.

**NOTE:** The PIN number is automatically reset when the editor is exited (manually or automatically) to ensure security.

**NOTE:** More comprehensive module configuration is possible using the DSE Configuration Suite PC Software, refer to DSE publication 057-251 DSEE400 Configuration Suite PC Software Manual.

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## FRONT PANEL EDITOR PARAMETERS




Section	Parameter As Shown On Display	Value
<b>Display</b>	Contrast	66 %
	Backlight Level	100 %
	Language	English
	Current Date and Time	Day, month, year, hour, minute, seconds
<b>Engine</b>	Oil Pressure Low Shutdown (If Set)	1.03 bar, kPa, psi
	Oil Pressure Low Pre-Alarm (If Set)	1.24 bar, kPa, psi
	Coolant Temperature High Pre Alarm (If Set)	90 °C, °F
	Coolant Temp High Controlled Shutdown (If Set)	92 °C, °F
	Coolant Temperature High Shutdown (If Set)	95 °C, °F
	Pre Heat Temperature (If Set)	50 °C, °F
	Pre Heat Timer	0 h 0 m 0 s
	Post Heat Temperature (If Set)	50 °C, °F
	Post Heat Timer	0 h 0 m 0 s
	Under Speed Shutdown	Active, Inactive
	Under Speed Shutdown	1200 rpm
	Under Speed Warning	Active, Inactive
	Under Speed Warning	1260 rpm
	Over Speed Warning	Active, Inactive
	Over Speed Warning	1650 rpm
	Over Speed Shutdown	1710 rpm
	Overspeed Overshoot	0s
	Overspeed Overshoot	0%
	Battery Under Voltage Warning	Active, Inactive
	Battery Under Voltage Warning	10.0v
	Battery Under Voltage Warning Delay	0h 1m 0s
	Battery Over Voltage Warning	Active, Inactive
	Battery Over Voltage Warning	30.0v
	Battery Over Volts Warning Delay	0h 1m 0s
	Charge Alternator Failure Pre-Alarm	Active, Inactive
	Charge Alternator Failure Pre-Alarm	6.0v
	Charge Alternator Failure Pre-Alarm Delay	0h 0m 5s
	Charge Alternator Failure Shutdown	Active, Inactive
	Charge Alternator Failure Shutdown	4.0v
	Charge Alternator Shutdown Delay	0h 0m 5s
	Battery Under Voltage Warning	Active, Inactive
	Battery Under Voltage Warning	10.0v
	Battery Under Voltage Warning Delay	0h 1m 0s
	Battery Over Voltage Warning	Active, Inactive
	Battery Over Voltage Warning	30.0v
	Battery Over Volts Warning Delay	0h 1m 0s
	Charge Alternator Failure Pre-Alarm	Active, Inactive
	Charge Alternator Failure Pre-Alarm	6.0v
	Charge Alternator Failure Pre-Alarm Delay	0h 0m 5s
	Charge Alternator Failure Shutdown	Active, Inactive
Charge Alternator Failure Shutdown	4.0v	
Charge Alternator Shutdown Delay	0h 0m 5s	
<b>Clutch Control</b>	Clutch Disengage Low Speed	0 rpm
	Clutch Engage Speed	0 rpm
	Clutch Disengage High Speed	8000 rpm
	Clutch Re-Engage	0 rpm
	Clutch Disengage Low Speed	0 rpm
<b>PLC Instruments</b>	PLC Watched Item (1-16)	[PLC value] units

Section	Parameter As Shown On Display	Value	
<b>Speed Settings</b>	Cranking Speed	0 rpm	
	Warming Speed	0 rpm	
	Idle Speed	0 rpm	
	Priming Speed	0 rpm	
	DPF Regeneration Speed*	Active, Inactive	
	DPF Regeneration Speed*	0 rpm	
	Cooldown Speed	0 rpm	
	<b>Speed Control</b>	Min Speed	0 rpm
		Default Running Speed	0 rpm
		Max Speed	0 rpm
		Fixed Running Speed	0 rpm
		Selectable Speed 1	0 rpm
		Selectable Speed 2	0 rpm
		Selectable Speed 3	0 rpm
		Selectable Speed 4	0 rpm
Linear Min Sensor Value		[Val] <user/units>	
Linear Max Sensor Value		[Val] <user/units>	
Linear Speed at Min		0 rpm	
Linear Speed at Max		0 rpm	
Emptying Speed		0 rpm	
Filling Speed		0 rpm	
Maintain Empty Running Speed		0 rpm	
Maintain Empty Emptying Speed	0 rpm		
Maintain Empty Setpoint	[Val] <user/units>		
Maintain Empty Deadband	[Val] <user/units>		
Maintain Fill Running Speed	0 rpm		
Maintain Fill Filling Speed	0 rpm		
Maintain Fill Setpoint	[Val] <user/units>		
Maintain Fill Deadband	[Val] <user/units>		
Engine Start Value	[Val] <user/units>		
Engine Stop Value	[Val] <user/units>		
<b>Maintenance</b>	Maintenance PIN protect	Active, Inactive	
	Maintenance Alarm 1	10h	
	Maintenance Alarm 2	10h	
	Maintenance Alarm 3	10h	
	Maintenance Alarm 4	10h	
	Maintenance Alarm 5	10h	
	Maintenance Alarm 6	10h	
	Maintenance Alarm 7	10h	
	Maintenance Alarm 8	10h	
	Maintenance Alarm 9	10h	
Maintenance Alarm 10	10h		
<b>CAN</b>	CAN Terminator Active	Active, Inactive	
	DPF Auto Regen Inhibit*	Active, Inactive	
	DPF Manual Regen*	Active, Inactive	
	DPF Manual Regen Cancel*	Active, Inactive	
<b>Flexible Sensors</b>	Flexible Sensor (A-G) Low Alarm	Active, Inactive	
	Flexible Sensor (A-G) Low Alarm	[value] <unit>	
	Flexible Sensor (A-G) Low Pre-Alarm	Active/Inactive	
	Flexible Sensor (A-G) Low Pre-Alarm	[value] <unit>	
	Flexible Sensor (A-G) High Pre-Alarm	Active/Inactive	
	Flexible Sensor (A-G) High Pre-Alarm	[value] <unit>	
	Flexible Sensor (A-G) High Alarm	Active/Inactive	
Flexible Sensor (A-G) High Alarm	[value] <unit>		
<b>Timers</b>	LCD Page Timer	0h 5m 0s	
	LCD Scroll Delay	0h 0m 2s	
	Start Delay Off load	5s	
	Start Delay On load	5s	
	Start Delay Telemetry	5s	
	Delayed Engine Start	0h 0m 30s	
	Cranking	0m 10s	
	Cranking Rest	0m 10s	

Section	Parameter As Shown On Display	Value
<b>Timers Cont....</b>	Safety On Delay	0m 10s
	Smoke Limiting	0h 0s
	Smoke Limiting Off	0h 0s
	Warming	0h 0m 0s
	Return Delay	0h 0m 30s
	Cooling	0h 1m 0s
	Cooling at Idle	0h 1m 0s
	Failed To Stop Delay	0m 30s
	Delayed Engine Stop	0h 0m 30s
	Engine Speed Transient Delay	0.0s
	Priming Delay	0h 0m 30s
	Selectable Speed Transfer Delay	0m 0.2s
	DPF Ramp*	5s
	Run Time Enable	Active, Inactive
	Run Time	0h 15m 0s
<b>Scheduler</b>	Schedule	Active, Inactive
	Schedule Period	Wkly/Mthly (If Active)
	Schedule Time & Date Selection (1-8)	See <i>Editing A Parameter</i>
	1 Schedule	Off Load / On Load / Auto start inhibit
	Week 1 (If Monthly selected)	Wk1, Wk2, Wk3, Wk4
	On	00:00
	Run Time	00:00
	M T W T F S S	Select day
<b>Active Configuration</b>	Active Config Select	<Main Config> <Alt Config 1> <Alt Config 2> <Alt Config 3> <Alt Config 4>

\*Electronic Engines Only

## ACCESSING THE SPEED CONTROL EDITOR

- Ensure the engine is at rest and the module is in STOP mode by pressing the Stop/Reset  button.
- Navigate to the *Active Configuration* screen in the *Engine* section of the module's display.
- Press and hold the Up  and Down  buttons simultaneously to enter the editor, no PIN is required.
- Edit the parameters as described overleaf in the *Editing a Parameter* section.

## DIMENSIONS AND MOUNTING

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

### DIMENSIONS

189 mm x 125 mm x 54 mm  
(7.5" x 4.9" x 2.1")

### PANEL CUTOUT

148 mm x 112 mm  
(5.8" x 4.4")

### MOUNTING HOLE SPACING

165 mm x 68 mm  
(6.5" x 2.7")

### MOUNTING HOLE

**DIAMETER**  
Suitable for M4  
(5/32" diameter)

## CONNECTORS & WIRING HARNESS

Details	DSE Part Number	Manufacturer's Part Number	Manufacturer
Connector A	007-850	DT16-18SA-K004	Deutsch
Connector C	007-851	DT16-18SC-K004	Deutsch
1.2 m Wiring Harness Complete with Connector A & C.	007-852	-	DSE