# TYPICAL WIRING DIAGRAM



BATTERY NEGATIVE MUST BE GROUNDED

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 RESISTER MUST BE FITTED IF THE CONTROLLER IS THE FIRST OR LAST UNIT ON THE RS485 LINK
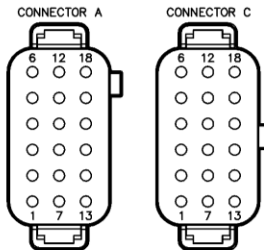
⚠NOTE: To meet UL requirements, fuse the module supply at 167% of supply current.

## DSEE400 Installation Instructions

### 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:

Editor
Enter Pin
# # # #

Editor - Display
Contrast
53%
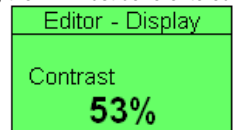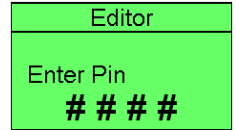
### EDITING A PARAMETER

- 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 Configuraiton Suite PC Software Manual*.

## FRONT PANEL EDITOR PARAMETERS

| Section | Parameter As Shown On Display | Value |
|---|---|---|
| Display | Contrast | 66 % |
| | Backlight Level | 100 % |
| | Language | English |
| | Current Date and Time | Day, month, year, hour, minute, seconds |
| Engine | 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 ºC, ºF |
| | Coolant Temp High Controlled Shutdown (If Set) | 92 ºC, ºF |
| | Coolant Temperature High Shutdown (If Set) | 95 ºC, ºF |
| | Pre Heat Temperature (If Set) | 50 ºC, ºF |
| | Pre Heat Timer | 0 h 0 m 0 s |
| | Post Heat Temperature (If Set) | 50 ºC, ºF |
| | 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 |
| Clutch Control | 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 |
| PLC Instruments | PLC Watched Item (1-16) | [PLC value] units |

| Section | Parameter As Shown On Display | Value |
|---|---|---|
| Speed Settings | 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 |
| Speed Control | 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> |
| Maintenance | 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 |
| CAN | CAN Terminator Active | Active, Inactive |
| | DPF Auto Regen Inhibit* | Active, Inactive |
| | DPF Manual Regen* | Active, Inactive |
| | DPF Manual Regen Cancel* | Active, Inactive |
| Flexible Sensors | 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> |
| Timers | 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 |
|---|---|---|
| Timers Cont…. | 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 |
| Scheduler | Schedule | Active, Inactive |
| | Schedule Period | Wkly/Mthly (If Active) |
| | Schedule Time & Date Selection (1-8) | See *Editing A Parameter* |
| | 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 |
| Active Configuration | 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 |