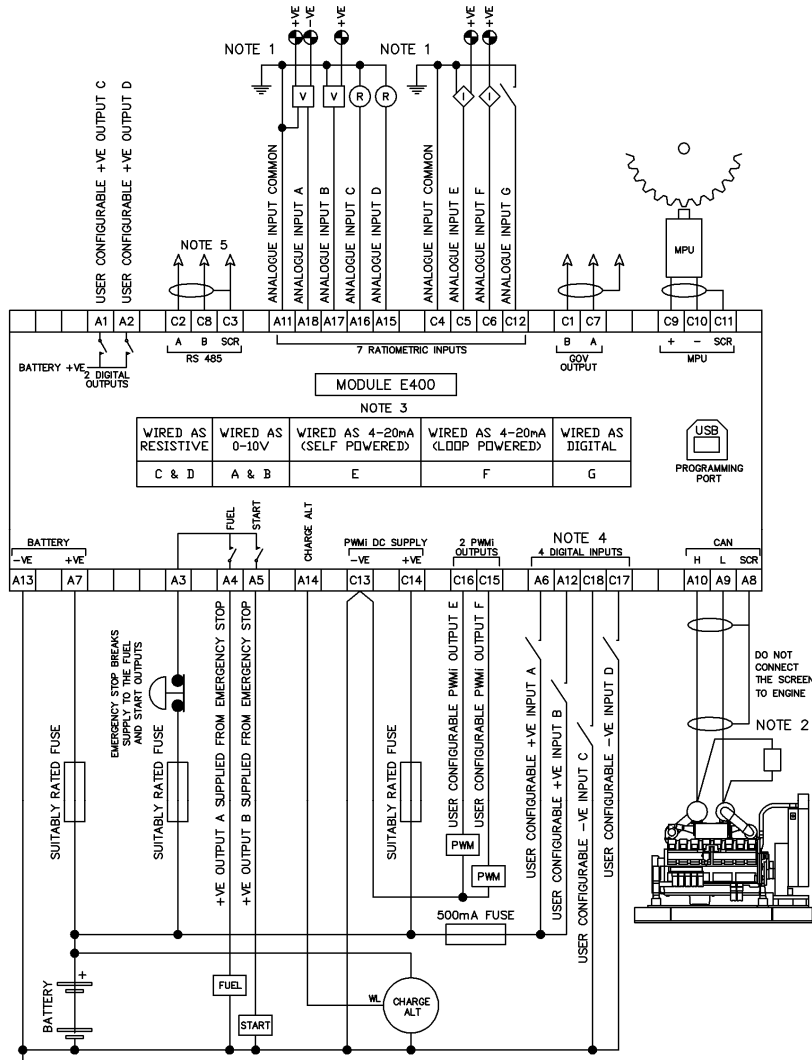


TYPICAL WIRING DIAGRAM



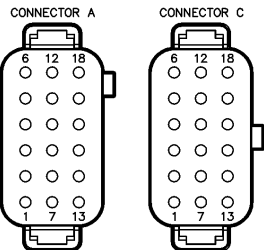
NOTE 1: THESE GROUND CONNECTIONS MUST BE ON THE ENGINE BLOCK, AND MUST BE TO THE SENSOR BODIES.

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

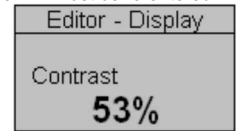
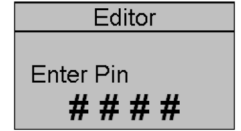


NOTE: To meet UL requirement, fuse the module supply at 167% of supply current.



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 finished 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 Configuraition Suite PC Software Manual.

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FRONT PANEL EDITOR PARAMETERS

| Section | Parameter As Shown On Display | Value |
|------------------------|--|--|
| Display | Contrast | 0 % |
| | Backlight Level | 0 % |
| | Language | English |
| | Current Date and Time | Day:month:year, hour:minute:seconds |
| Engine | Oil Pressure Low Shutdown (When Enabled) | 0.00 bar, kPa, psi |
| | Oil Pressure Low Pre Alarm (When Enabled) | 0.00 bar, kPa, psi |
| | Coolant Temperature High Pre Alarm (When Enabled) | 0 °C, °F |
| | Coolant Temp High Controlled Shutdown (When Enabled) | 0 °C, °F |
| | Coolant Temperature High Shutdown (When Enabled) | 0 °C, °F |
| | Start Delay Off Load | 0 h 0 m 0 s |
| | Start Delay On Load | 0 h 0 m 0 s |
| | Start Delay Telemetry | 0 h 0 m 0 s |
| | Pre Heat Temperature (When Enabled) | 0 °C, °F |
| | Pre Heat Timer | 0 h 0 m 0 s |
| | Post Heat Temperature (When Enabled) | 0 °C, °F |
| | Post Heat Timer | 0 h 0 m 0 s |
| | Crank Duration | 0 m 0 s |
| | Crank Rest Time | 0 m 0 s |
| | Safety On Delay | 0 m 0 s |
| | Smoke Limiting | 0 m 0 s |
| | Smoke Limiting Off | 0 m 0 s |
| | Warm Up Time | 0 m 0 s |
| | Cool Down Time | 0 h 0 m 0 s |
| | Under Speed Shutdown | Active, Inactive |
| | Under Speed Shutdown (When Enabled) | 0 rpm |
| | Under Speed Warning | Active, Inactive |
| | Under Speed Warning (When Enabled) | 0 rpm |
| | Over Speed Warning | Active, Inactive |
| | Over Speed Warning (When Enabled) | 0 rpm |
| | Over Speed Shutdown | 0 rpm |
| | Speed Overshoot Delay | 0 m 0 s |
| | Speed Overshoot | 0 % |
| | Fail To Stop Delay | 0 m 0 s |
| | Battery Under Voltage Warning | Active, Inactive |
| | Battery Under Voltage Warning Delay (When Enabled) | 0 h 0 m 0 s |
| | Battery Under Voltage Warning | 0 V |
| | Battery Over Voltage Warning | Active, Inactive |
| | Battery Over Voltage Warning Delay (When Enabled) | 0 h 0 m 0 s |
| | Battery Over Voltage Warning | 0 V |
| | Charge Alternator Failure Warning | Active, Inactive |
| | Charge Alternator Warning Delay (When Enabled) | 0 h 0 m 0 s |
| | Charge Alternator Failure Warning | 0.0 V |
| | Charge Alternator Failure Shutdown | Active, Inactive |
| | Charge Alternator Shutdown Delay (When Enabled) | 0 h 0 m 0 s |
| | Charge Alternator Failure Shutdown (When Enabled) | 0.0 V |
| | Priming Delay | 0 s |
| | Clutch Engage Speed | 0 rpm |
| Clutch Disengage Speed | 0 rpm | |

| Section | Parameter As Shown On Display | Value |
|--------------------------------------|---|---------------------|
| Engine Continued | Idle Speed | 0 rpm |
| | Warming Speed | 0 rpm |
| | Cooldown Speed | 0 rpm |
| | Starting | 0 rpm |
| | Priming Speed | 0 rpm |
| | Min Speed | 0 rpm |
| | Default Running Speed | 0 rpm |
| | Max Speed | 0 rpm |
| | Cooldown at Idle Delay | 0 h 0 m 0 s |
| | Delayed Engine Start | 0 h 0 m 0 s |
| | Delayed Engine Stop | 0 h 0 m 0 s |
| | Engine Speed Transient Delay | 0.0 s |
| | Selectable Speed Transfer Time | 0 m 0.0 s |
| | DPF Auto Regen Inhibit (Electronic Engines Only) | Active, Inactive |
| | DPF Manual Regen (Electronic Engines Only) | Active, Inactive |
| | DPF Manual Regen Cancel (Electronic Engines Only) | Active, Inactive |
| | DPF Regeneration Speed (Electronic Engines Only) | Active, Inactive |
| | DPF Regeneration Speed (Electronic Engines Only) | 0 rpm |
| | CAN Terminator | Active, Inactive |
| | Timers | LCD Page Timer |
| Scroll Delay | | 0 h 0 m 0 s |
| Engine Pre Heat Timer (When Enabled) | | 0 m 0 s |
| Crank Duration Timer | | 0 m 0 s |
| Crank Rest Timer | | 0 m 0 s |
| Safety On Delay | | 0 m 0 s |
| Smoke Limiting | | 0 m 0 s |
| Smoke Limiting Off | | 0 m 0 s |
| Warm Up Time | | 0 h 0 m 0 s |
| Cool Down Time | | 0 h 0 m 0 s |
| Engine Speed Overshoot Delay | | 0 m 0 s |
| Fail To Stop Delay | | 0 m 0 s |
| Battery Under Voltage Warning Delay | | 0 h 0 m 0 s |
| Battery Over Voltage Warning Delay | 0 h 0 m 0 s | |
| Return Delay | 0 h 0 m 0 s | |
| DPF Ramp (Electronic Engines Only) | 0 s | |
| Schedule | Schedule | Active, Inactive |
| | Schedule Period (When Enabled) | Weekly, Monthly |
| Active Config | Active Config | Default Config |
| | Running Speed (When Enabled) | 0 rpm |
| | Min (When Enabled) | 0 (Configured Unit) |
| | Max (When Enabled) | 0 (Configured Unit) |
| | Speed at Min (When Enabled) | 0 rpm |
| | Speed at Max (When Enabled) | 0 rpm |
| | Speed Priority 1 (When Enabled) | 0 rpm |
| Speed Priority 2 (When Enabled) | 0 rpm | |
| Speed Priority 3 (When Enabled) | 0 rpm | |
| Speed Priority 4 (When Enabled) | 0 rpm | |
| Emptying Speed (When Enabled) | 0 rpm | |
| Filling Speed (When Enabled) | 0 rpm | |
| Setpoint (When Enabled) | 0 (Configured Unit) | |
| Deadband (When Enabled) | 0 (Configured Unit) | |
| Engine Start Value (When Enabled) | 0 (Configured Unit) | |
| Engine Stop Value (When Enabled) | 0 (Configured Unit) | |

| Section | Parameter As Shown On Display | Value |
|----------------------|-----------------------------------|---------------------|
| Active Config | Speed Priority 2 (When Enabled) | 0 rpm |
| | Speed Priority 3 (When Enabled) | 0 rpm |
| Continued | Speed Priority 4 (When Enabled) | 0 rpm |
| | Emptying Speed (When Enabled) | 0 rpm |
| | Filling Speed (When Enabled) | 0 rpm |
| | Setpoint (When Enabled) | 0 (Configured Unit) |
| | Deadband (When Enabled) | 0 (Configured Unit) |
| | Engine Start Value (When Enabled) | 0 (Configured Unit) |
| | Engine Stop Value (When Enabled) | 0 (Configured Unit) |

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.

SPEED CONTROL EDITOR PARAMETERS

| Section | Parameter As Shown On Display | Value |
|----------------------|-----------------------------------|---------------------|
| Active Config | Active Config | Default Config |
| | Running Speed (When Enabled) | 0 rpm |
| | Min (When Enabled) | 0 (Configured Unit) |
| | Max (When Enabled) | 0 (Configured Unit) |
| | Speed at Min (When Enabled) | 0 rpm |
| | Speed at Max (When Enabled) | 0 rpm |
| | Speed Priority 1 (When Enabled) | 0 rpm |
| | Speed Priority 2 (When Enabled) | 0 rpm |
| | Speed Priority 3 (When Enabled) | 0 rpm |
| | Speed Priority 4 (When Enabled) | 0 rpm |
| | Emptying Speed (When Enabled) | 0 rpm |
| | Filling Speed (When Enabled) | 0 rpm |
| | Setpoint (When Enabled) | 0 (Configured Unit) |
| | Deadband (When Enabled) | 0 (Configured Unit) |
| | Engine Start Value (When Enabled) | 0 (Configured Unit) |
| | Engine Stop Value (When Enabled) | 0 (Configured Unit) |

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 |