

DSEE400

ENGINE CONTROLLER

The DSEE400 is an easy to use engine controller designed to provide flexible control with built in monitoring and protection.

The DSEE400 is compatible with both electronic and mechanical diesel engines. It is fully configurable for a wide range of applications such as engine driven pumps and compressors.

All of the engine control functions, including the engine start, speed and clutch control can be achieved both automatically & manually.

The monitoring and configuration of the system variables allows the DSEE400 to start and stop the engine and increase and decrease engine speed as the output demand requires.

On board event, data logging and trending makes it possible to determine preventative maintenance and improved performance criteria for the machine.

The DSE Configuration Suite PC Software is used to easily make adjustments to the operating parameters, sequences, timers and alarms. Reducing valuable development and commissioning time

ENVIRONMENTAL TESTING STANDARDS

ELECTRO MAGNETIC COMPATIBILITY

BS EN 61000-6-2
EMC Generic Immunity Standard for the Industrial Environment
BS EN 61000-6-4
EMC Generic Emission Standard for the Industrial Environment

ELECTRICAL SAFETY

BS EN 60950
Safety of Information Technology Equipment, including Electrical Business Equipment

TEMPERATURE

BS EN 60068
Ab/Ae Cold Test -30 °C
BS EN 60068-2-2
Bb/Be Dry Heat +70 °C

VIBRATION

BS EN 60068-2-6
Ten sweeps in each of three major axes
5 Hz to 8 Hz at +/-7.5 mm, 8 Hz to 500 Hz at 2 gn

HUMIDITY

BS EN 60068-2-30
Db Damp Heat Cyclic 20/55 °C at 95% RH
48 Hours
BS EN 60068-2-78
Cab Damp Heat Static 40 °C at 93% RH
48 Hours

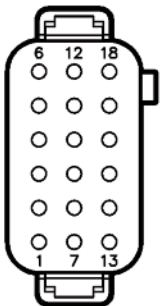
SHOCK

BS EN 60068-2-27
Three shocks in each of three major axes
15 gn in 11 ms

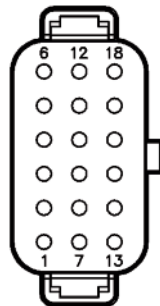
DEGREES OF PROTECTION PROVIDED BY ENCLOSURES

BS EN 60529
IP67.

CONNECTOR A



| PIN | DESCRIPTION |
|-----|------------------|
| 1 | Output C |
| 2 | Output D |
| 3 | Emergency Stop |
| 4 | Output A (Fuel) |
| 5 | Output B (Start) |
| 6 | Digital Input A |
| 7 | Plant Supply +ve |
| 8 | CAN Screen |
| 9 | CAN L |
| 10 | CAN H |
| 11 | Common |
| 12 | Digital Input B |
| 13 | Plant Supply -ve |
| 14 | Charge Fail |
| 15 | Analogue Input D |
| 16 | Analogue Input C |
| 17 | Analogue Input B |
| 18 | Analogue Input A |



CONNECTOR C

| PIN | DESCRIPTION |
|-----|-------------------|
| 1 | Governor B |
| 2 | RS485 A |
| 3 | RS485 Screen |
| 4 | Common |
| 5 | Analogue Input E |
| 6 | Analogue Input F |
| 7 | Governor A |
| 8 | RS485 B |
| 9 | MPU + |
| 10 | MPU - |
| 11 | MPU Screen |
| 12 | Flexible Sender G |
| 13 | PWMI Supply -ve |
| 14 | PWMI Supply +ve |
| 15 | PWMI Output F |
| 16 | PWMI Output E |
| 17 | Digital Input D |
| 18 | Digital Input C |

RELATED PARTS

TITLE

Deutsch connector A (DT16-18SA-K004), 18 way complete with pins
Deutsch connector C (DT16-18SC-K004), 18 way complete with pins
Set of 2 harnesses, A & C connectors, pre-wired, 1.2 m, cables marked.

PART NO'S

007-850
007-851
007-852

DSEE400

ENGINE CONTROLLER



KEY FEATURES

- Built-in governor control
- Automatic speed control
- Fill, empty, maintain fill and maintain empty control
- Manual speed control via push buttons, digital input or analogue input
- Automatic speed ramping
- Flexible automatic start control
- Clutch control
- LCD text display
- Multiple display languages
- Two-key menu navigation
- Front panel editing with PIN protection
- Customisable status screens
- Customisable multi instrumentation screens
- Configurable digital inputs (4)
- Configurable analogue inputs (7)
- Configurable DC outputs (2)
- Configurable PWM/PWMI outputs (2)
- Configurable analogue output (1)
- Configurable timers and alarms
- 3 configurable maintenance alarms
- Multiple date and time engine scheduler
- Configurable event log (250)
- CAN engine support
- CAN, magnetic pick-up or tachometer speed sensing
- Fuel usage monitor and low fuel alarms
- Charge alternator failure alarm
- "Protections disabled" feature
- LCD alarm indication
- Low power mode
- USB connectivity
- Backed-up real time clock
- Fully configurable via DSE Configuration Suite PC software
- Configurable display languages
- Remote SCADA monitoring via DSE Configuration Suite PC software
- Modbus RTU support by configurable RS485 port

KEY BENEFITS

- 132 x 64 pixel ratio display for clarity
- Real-time clock provides accurate event logging
- Set maintenance periods can be configured to maintain optimum engine performance
- Can be integrated into remote monitoring systems
- Licence-free PC software
- Uses DSE Configuration Suite PC Software for simplified configuration
- IP67 rating offers increased resistance to water ingress
- User friendly set-up and button layout for ease of use
- Compatible with a wide range of CAN engines.
- Multiple date and time scheduler

SPECIFICATION

DC SUPPLY

CONTINUOUS VOLTAGE RATING
5 V to 35 V continuous

CRANKING DROPOUTS

Able to survive 0 V for 100 ms, providing supply was at least 10 V before dropout and supply recovers to 5 V. This is achieved without the need for internal batteries.

MAXIMUM OPERATING CURRENT

326 mA at 12 V, 164 mA at 24 V

MAXIMUM STANDBY CURRENT

119 mA at 12 V, 60 mA at 24 V

MAXIMUM OFF MODE CURRENT

76 mA at 12 V, 38 mA at 24 V

CHARGE FAIL/EXCITATION RANGE

0 V to 35 V

INPUTS

DIGITAL INPUTS A to D

Configurable as:
Positive switching
Negative switching

ANALOGUE INPUT A to G

Configurable as:
Negative switching digital input
0 V to 10 V
4 mA to 20 mA
Resistive

OUTPUTS

DC OUTPUT A (FUEL) & B (START)

10 A DC for 10 seconds
5 A DC continuous at supply voltage

DC OUTPUTS C & D

2 A DC at supply voltage

PWMI OUTPUTS E & F

4 A at supply voltage
20 Hz to 250 Hz

PULSE PICK-UP VOLTAGE RANGE

0.5 V to 60 V RMS
Fully isolated

FREQUENCY RANGE

5 Hz to 10,000 Hz

GOVERNOR OUTPUT

Fully Isolated

VOLTAGE OUTPUT

0 V to 10 V range
1000 Ω minimum load impedance

CURRENT OUTPUT

0 to 20 mA range
500 Ω maximum load impedance

DIMENSIONS

OVERALL

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"

OPERATING TEMPERATURE RANGE

-30 °C to +80 °C
-40 °C to +80 °C with heated display option

STORAGE TEMPERATURE RANGE

-40 °C to +85 °C

RELATED MATERIALS

TITLE

DSEE400 Installation Instructions
DSEE400 Operator Manual
DSEE400 PC Configuration Suite Manual

PART NO'S

053-180
057-252
057-251

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