



# DSEE800

## ENGINE CONTROLLER



### KEY FEATURES

- Built-in governor control
- Automatic speed control
- Manual speed control via push buttons, digital input or analogue input
- Automatic speed ramping
- Flexible automatic start control
- Clutch control
- 4-Line back-lit LCD text display
- Multiple display languages
- Five key menu navigation
- Front panel editing with PIN protection
- Customisable status screens
- Power save off mode
- Configurable digital inputs (11)
- Configurable ratiometric inputs (12)
- Configurable DC outputs (4)
- Configurable volt-free outputs (2)
- Configurable PWMi outputs (4)
- Configurable timers and alarms
- 3 configurable maintenance alarms
- Multiple date and time engine scheduler
- Configurable event log (250)
- CAN engine support
- Advanced Integral PLC editor
- CAN, Magnetic Pick-up or tachometer speed sensing
- Fuel usage monitor and low fuel alarms
- Charge alternator failure alarm
- Manual fuel pump control
- "Protections disabled" feature
- LED and LCD alarm indication
- USB connectivity
- Backed up real time clock
- Fully configurable via DSE Configuration Suite PC software
- Configurable display language
- Remote SCADA monitoring via DSE Configuration Suite PC software
- User selectable RS232, RS485 & Ethernet communications
- Modbus RTU & TCP support
- User configurable MODBUS pages
- Advanced SMS control and fault messaging (additional GSM modem required)
- Start & stop capability via SMS messaging
- Additional display screens to help with modem diagnostics
- DSENet® expansion compatible
- Data logging and trending

### 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
- Ethernet communications provides built in advanced remote monitoring.
- Can be integrated into remote monitoring systems
- Increased input and output expansion capability via DSENet®
- Licence-free PC software
- IP65 rating (with supplied gasket) offers increased resistance to water ingress
- Advanced PLC editor allows user configurable functions to meet application requirements.
- Automatic speed control
- Manual speed control via push buttons, digital input or analogue input

### SPECIFICATIONS

#### DC SUPPLY

**CONTINUOUS VOLTAGE RATING**  
8 V to 35 V continuous

#### CRANKING DROUPTS

Able to survive 0 V for 50 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

510 mA at 12 V, 238 mA at 24 V

#### MAXIMUM STANDBY CURRENT

226 mA at 12 V, 107 mA at 24 V

#### MAXIMUM OFF MODE CURRENT

180 mA at 12 V, 86 mA at 24 V

#### CHARGE FAIL/EXCITATION RANGE

0 V to 35 V

#### INPUTS

##### DIGITAL INPUTS A to K

Configurable as:  
Positive switching  
Negative switching

##### RATIOMETRIC INPUT A

Configurable as:  
Negative switching digital input  
0 V to 10 V  
4 mA to 20 mA  
0 Ω to 480 Ω

##### RATIOMETRIC INPUTS B to L

Configurable as:  
Negative switching digital input  
0 V to 10 V  
4 mA to 20 mA  
0 Ω to 1920 Ω

#### OUTPUTS

##### DC OUTPUT A (FUEL) & B (START)

10 A short term,  
5 A continuous at supply voltage

##### VOLT-FREE OUTPUTS C & D

5 A DC at 35 V DC  
8 A AC at 250 V AC

##### DC OUTPUTS E, F, G & H

2 A DC at supply voltage

##### PWMi OUTPUTS I, J, K & L

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

10,000 Hz (max)

##### BUILT-IN GOVERNOR CONTROL

##### MINIMUM LOAD IMPEDANCE

1000 Ω  
Fully isolated

##### GAIN VOLTAGE

0 V to 10 V DC

##### OFFSET VOLTAGE

±10 V DC

##### DIMENSIONS

##### OVERALL

240 mm x 172 mm x 57 mm  
9.4" x 6.8" x 2.2"

##### PANEL CUTOUT

220 mm x 160 mm  
8.7" x 6.3"

##### MAXIMUM PANEL THICKNESS

8 mm  
0.3"

##### OPERATING TEMPERATURE RANGE

-40 °C to +80 °C

##### STORAGE TEMPERATURE RANGE

-40 °C to +85 °C

### RELATED MATERIALS

#### TITLE

DSEE800 Installation Instructions  
DSEE800 Operator Manual  
DSEE800 PC Configuration Suite Manual

#### PART NO.

053-090  
057-202  
057-203

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# DSEE800

## ENGINE CONTROLLER

The DSEE800 is an easy to use engine controller designed to provide flexible control with built in monitoring and protection. The DSEE800 is compatible with both electronic and non-electronic diesel engines and fully configurable for a wide range of applications such as engine driven pumps, compressors, hydraulic power packs and off highway machinery.

Control of the application can be achieved both automatically and manually with engine start, speed and clutch control all built in. The monitoring and configuration of system variables allows the controller to start and stop the engine, increase and decrease engine speed as the output demands and program ramping for loading/unloading of the engine.

With the built in PLC editor the controller is fully flexible and can be adjusted to meet many different needs, providing the user with the ability to achieve special operating modes which are unique to their machine and application. A range of comprehensive communication and system expansion options ensures that the user can extend the input and output capability and communicate with other devices or systems offering further advanced and high level use in very demanding applications. On board event, data logging and trending makes it possible to determine preventative maintenance and improved performance criteria for the machine.

Using the DSE Configuration Suite PC Software the controller is easy to use and configure which allows alteration of operating parameters, sequences, timers and alarms.

### ENVIRONMENTAL TESTING STANDARDS

**ELECTRO MAGNETIC COMPATABILITY**  
 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 -30oC  
 BS EN 60068-2-2  
 Bb/Be Dry Heat +70oC

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

**HUMIDITY**  
 BS EN 60068-2-30  
 Db Damp Heat Cyclic 20/55oC @ 95% RH  
 48 Hours  
 BS EN 60068-2-78  
 Cab Damp Heat Static 40oC @ 93% RH  
 48 Hours

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

**DEGREES OF PROTECTION PROVIDED BY ENCLOSURES**  
 BS EN 60529  
 IP65 - Front of module when installed into the control panel with the supplied sealing gasket.

## COMPREHENSIVE FEATURE LIST TO SUIT A WIDE VARIETY OF ENGINE APPLICATIONS

