

# DSEULTRA® STARTING WITH QUALITY.



## DSE4410 & DSE4420

AUTO START & AUTO MAINS (UTILITY) FAILURE CONTROL MODULES



The DSE4410 is an Auto Start Control Module and the DSE4420 is an Auto Mains (Utility) Failure Control Module for single gen-set applications. Both modules have been designed to work with electronic and non electronic engines providing advanced engine monitoring and protection features.

Both modules are available in magnetic pick-up and Canbus versions.

The modules include a back-lit LCD display which clearly show the status of the engine at all times. They monitor frequency, voltage, oil pressure, coolant temperature and fuel level. The modules have also been designed to display the warning and shutdown status of the engine.

Both modules include six digital inputs and six outputs. Four outputs are configurable on the magnetic pick-up version and six are configurable on the Canbus version. The modules can either be programmed using the front panel or by using the DSE Configuration Suite PC software.

### CONFIGURATION

The modules can be configured using the front panel or by remote PC using a USB connection lead and the DSE Configuration Suite PC software.

### FEATURES

- PC and front panel configurable
- CAN and magnetic pick-up versions
- Six digital inputs/one analogue input
- Six outputs (all six configurable on CANbus version, four configurable on magnetic pick-up version)
- Automatic mains (utility) supply monitoring (DSE4420 only)
- Event log (5)
- 50/60 Hz calibration setting
- Configurable timers
- Automatic shutdown or warning when fault conditions are detected
- Manual and remote start
- Engine pre-heat
- Protected Solid State Outputs (PSS)
- Advanced metering capability
- Front panel/PC programming
- Engine hours counter
- LED indicators
- Icon LCD display

### BENEFITS

- Transfers between mains (utility) and generator power (DSE4420 only)
- Hours counter provides accurate information for monitoring and maintenance periods
- User-friendly set-up and button layout
- Multiple engine parameters are monitored simultaneously
- Module can be configured to suit individual applications
- Wide range of engines can be specified
- IP65 rating offers advanced resistance to water ingress when gasket is fitted
- License free PC software

### OPERATION

The module is operated using the front STOP/RESET, AUTO and START push buttons.

Two additional push buttons next to the LCD display are provided to scroll through the modules' metering displays and to access the event log.

### OVERSPEED PROTECTION

The engine over speed trip setting can be calibrated for 50Hz or 60Hz nominal operation. During engine cranking and for a user configurable time after the engine starts running, all alarm conditions are suspended to allow the engine to reach its optimum running speed.

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### ELECTRONIC ENGINE COMPATIBILITY

- CAT
- Cummins
- Deutz
- John Deere
- MTU
- Perkins
- Scania
- Volvo
- Generic
- Plus additional manufacturers

### SPECIFICATION

#### DC SUPPLY

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8V to 35V Continuous

##### CRANKING DROPOUTS

Able to survive 0V for 50mS, providing supply was at least 10V before dropout and supply recovers to 5V. This is achieved without the need for internal batteries. LEDs and backlight will not be maintained during cranking.

##### MAXIMUM OPERATING CURRENT

110mA at 12V 135mA at 24V

##### MAXIMUM STANDBY CURRENT

70mA at 12V 50mA at 24V

##### GENERATOR INPUT RANGE

15V to 333V AC (L-N) absolute maximum 50Hz - 60Hz (min 15V AC)

##### CHARGE FAIL/EXCITATION RANGE

0V to 35V

#### MAGNETIC PICKUP

##### VOLTAGE RANGE

0.5V RMS minimum

##### FREQUENCY RANGE

10,000 Hz (max)

#### OUTPUTS

##### OUTPUT A (FUEL)

2 Amp DC at supply voltage

##### OUTPUT B (START)

2 Amp DC at supply voltage

##### AUXILIARY OUTPUTS C,D

2 Amp DC at supply voltage

#### MAINS (UTILITY) SENSING INPUT RANGE (DSE4420 ONLY)

15V to 333V AC (L-N) maximum  
25V to 576V AC (L-L) maximum  
50Hz - 60Hz (min 15V AC)

#### DIMENSIONS

##### OVERALL

180mm x 116mm x 42mm  
7.1" x 4.6" x 1.7"

##### PANEL CUT-OUT

154mm x 98mm  
6" x 3.9"

##### MAXIMUM PANEL THICKNESS

8mm (0.3")

