

# DSE4410/20

## AUTO START & AUTO MAINS FAILURE CONTROL MODULES

### FEATURES



The DSE4410 is an Auto Start Control Module and the DSE4420 is an Auto Mains (Utility) Failure Control Module with 3 phase sensing, suitable for a wide variety of single, diesel or gas, gen-set applications.

Monitoring, speed, frequency, voltage, oil pressure, coolant temperature and fuel level, the modules will display warnings, shutdown and engine status information on the back-lit LCD screen and illuminated LED.

Both modules offer electronic (CAN) and non-electronic (magnetic pick-up/alternator sensing) engine versions and offer a number of flexible inputs, outputs and engine protections so the system can be easily adapted to suit a wide range of application demands.

The modules can be easily configured using the DSE Configuration Suite PC software. Selected front panel editing is also available.

### 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 60068-2-1  
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 @ +/-7.5 mm,  
8 Hz to 500 Hz @ 2 gn

#### HUMIDITY

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

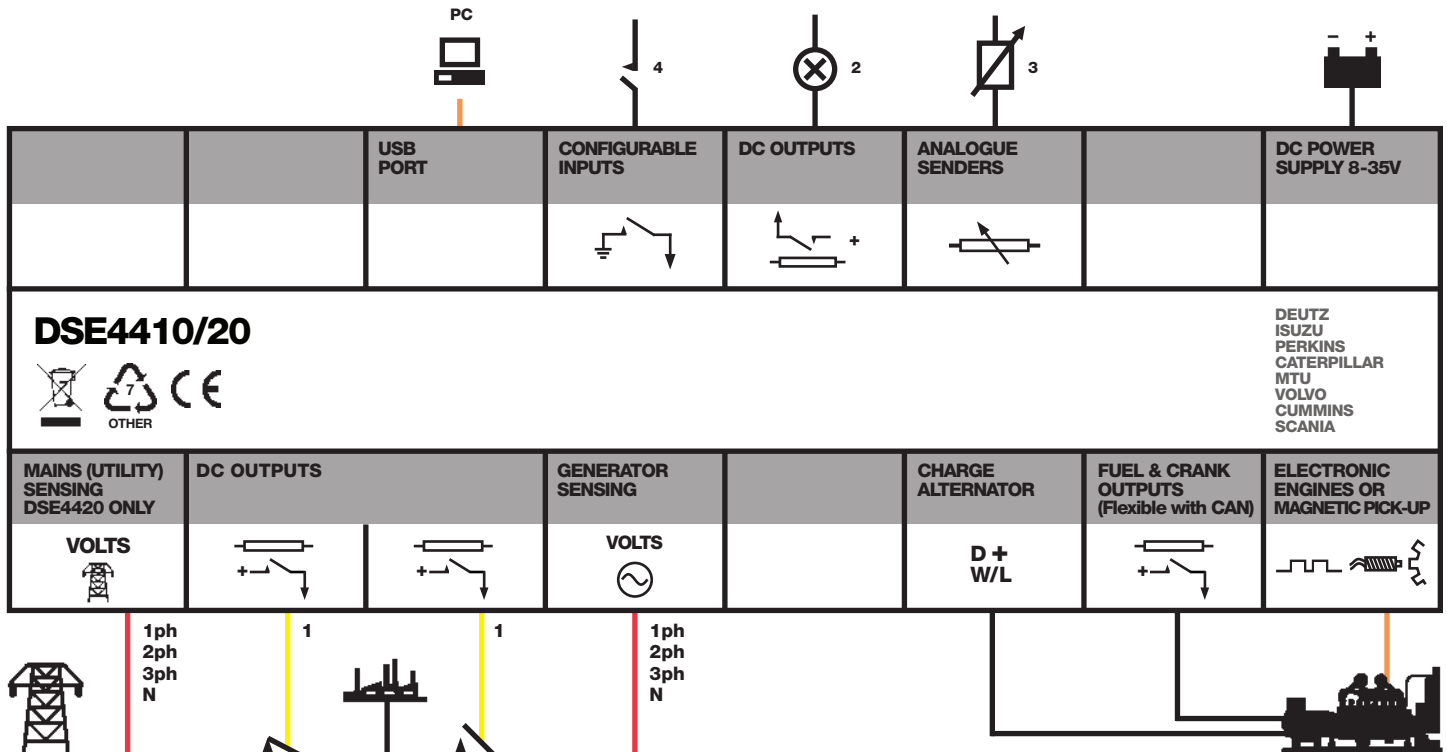
#### SHOCK

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  
IP65 - Front of module when installed into the control panel with the supplied sealing gasket.

### COMPREHENSIVE FEATURE LIST TO SUIT A WIDE VARIETY OF GEN-SET APPLICATIONS



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## AUTO START & AUTO MAINS FAILURE CONTROL MODULES

### FEATURES



DSE4410



DSE4420



### KEY FEATURES

- CAN and magnetic pick-up/Alt. sensing versions (specify on ordering)
- 3 phase generator monitoring
- Four digital inputs/three analogue inputs
- Six outputs (all six configurable on CANbus version, four configurable on magnetic pick-up version)
- Three phase sensing
- Event log (5)
- 50/60 Hz calibration setting
- Configurable timers
- Automatic shutdown or warning when fault conditions are detected
- Overspeed protection
- Manual and remote start

- Engine pre-heat
- Protected Solid State Outputs (PSS)
- Advanced metering capability
- Front panel/PC programming
- Hours counter
- LED indicators
- Back-lit character icon LCD display

### KEY BENEFITS

- Automatically 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
- Compatible with a wide range of CAN engines
- IP65 rating offers advanced resistance to water ingress when the gasket is fitted
- License-free PC software.

### SPECIFICATION

#### DC SUPPLY

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

#### CRANKING DROPOUTS

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

#### MAXIMUM OPERATING CURRENT

150 mA at 12 V, 80 mA at 24 V

#### MAXIMUM STANDBY CURRENT

50 mA at 12 V, 30 mA at 24 V

#### CHARGE FAIL/EXCITATION RANGE

0 V to 35 V

#### MAGNETIC PICK UP

**VOLTAGE RANGE**  
+/- 0.5 V to 70 V

#### 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,E,F

2 Amp DC at supply voltage

#### MAINS (UTILITY) DSE74420 ONLY

**VOLTAGE RANGE**  
15 V - 333 V AC (L-N)

#### FREQUENCY RANGE

3.5 Hz to 75 Hz

#### GENERATOR

##### VOLTAGE RANGE

15 V - 333 V AC (L-N)

#### FREQUENCY RANGE

3.5 Hz to 75 Hz

#### DIMENSIONS

##### OVERALL

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

##### PANEL CUT-OUT

154 mm x 98 mm  
6" x 3.9"

##### MAXIMUM PANEL THICKNESS

8 mm (0.3")

### RELATED MATERIALS

#### TITLE

DSE4410 Installation Instructions  
DSE4420 Installation Instructions  
DSE4400 Quick Start Guide  
DSE4400 Operator Manual  
DSE4400 Configuration Suite PC Manual

#### PART NO'S

053-078  
053-079  
057-103  
057-111  
057-093

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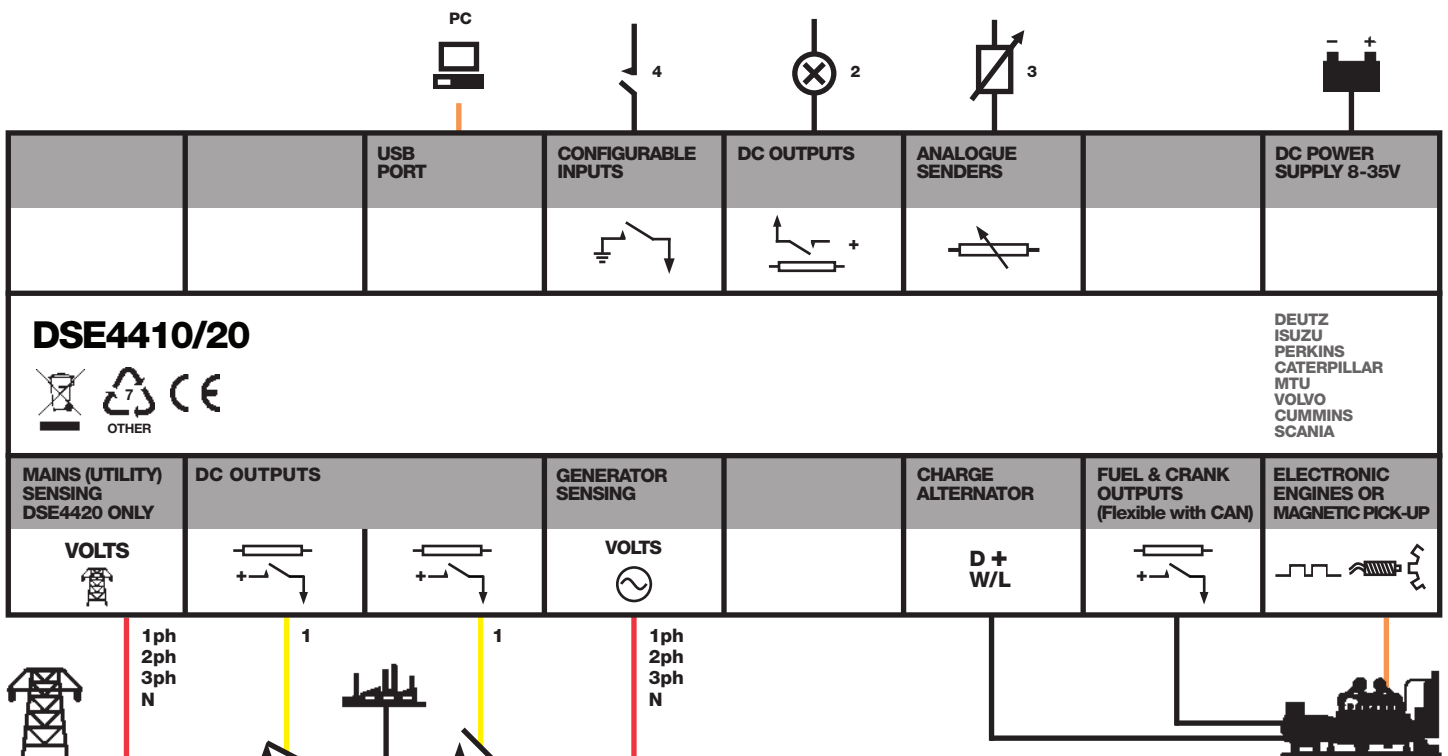
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