

# DSE7410/20

## AUTO START & AUTO MAINS FAILURE MODULES

### FEATURES



The DSE7410 is an Auto Start Control Module and the DSE7420 is an Auto Mains (Utility) Failure Control Module suitable for a wide variety of single, diesel or gas, gen-set applications.

A sophisticated module monitoring an extensive number of engine parameters, the DSE74xx will announce warnings, shutdown and engine status information on the back-lit LCD screen, illuminated LED, remote PC, and audible alarms. The module includes RS232, RS485 & Ethernet ports as well as dedicated terminals for system expansion.

The DSE7400 Series modules are compatible with electronic (CAN) and non-electronic (magnetic pick-up/alternator sensing) engines and offer a comprehensive number of flexible inputs, outputs and extensive engine protections so the system can be easily adapted to meet the most demanding industry paralleling requirements.

The modules can be easily configured using the DSE Configuration Suite 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

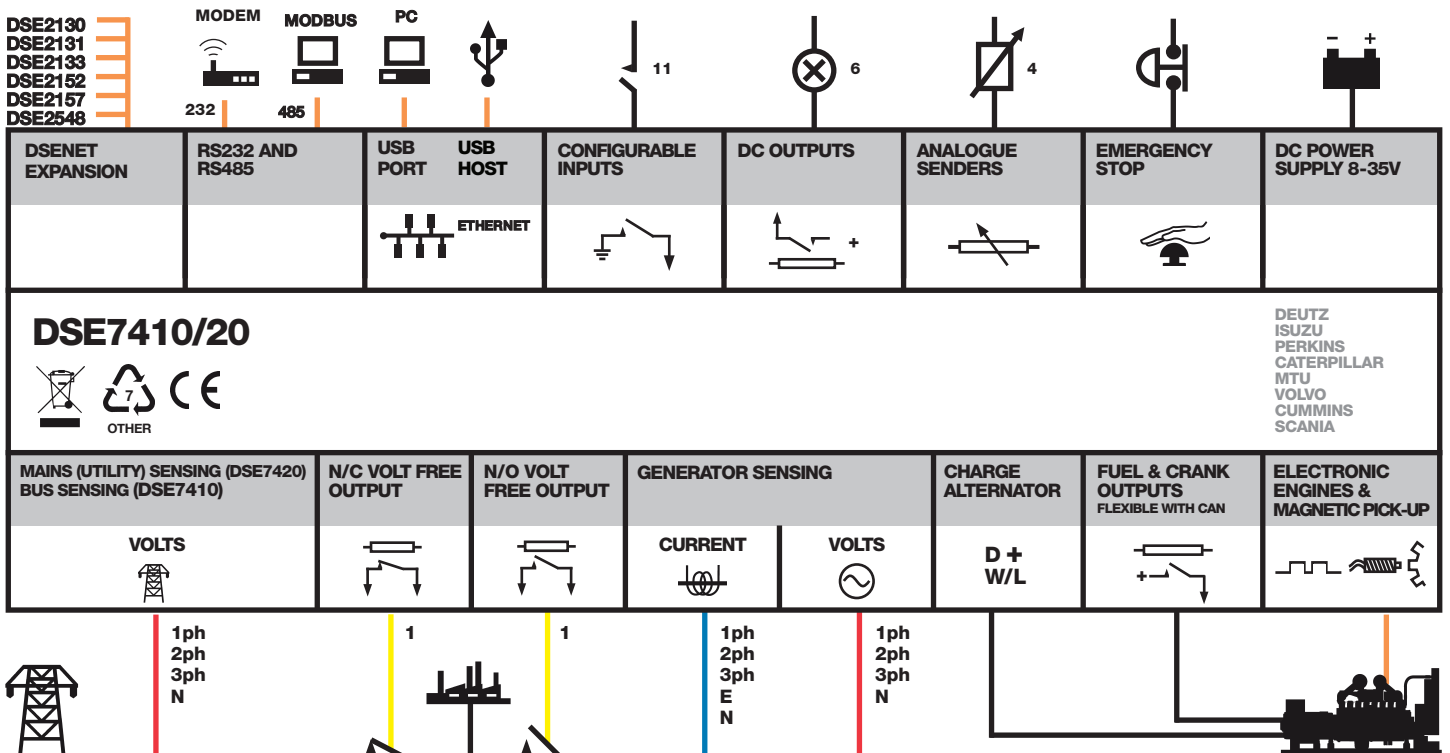
#### SHOCK

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



# DSE7410/20

## AUTO START & AUTO MAINS FAILURE MODULES

### FEATURES



DSE7410



### KEY FEATURES

- Configurable inputs (11)
- Configurable outputs (8)
- Voltage measurement
- Mains (utility) failure detection
- Dedicated load test button
- kW overload alarms
- Comprehensive electrical protection
- RS232, RS485 & Ethernet remote communications
- Modbus RTU/TCP
- PLC functionality
- Multi event exercise timer
- Back-lit LCD 4-line text display
- Multiple display languages
- Automatic start/Manual start
- Audible alarm
- Fixed and flexible LED indicators
- Event log (250)
- Engine protection
- Fault condition notification to a designated PC
- Front panel mounting
- Protected front panel programming
- Configurable alarms and timers
- Configurable start and stop timers

DSE7420



- Five key menu navigation
- Front panel editing with PIN protection
- 3 configurable maintenance alarms
- CAN and magnetic pick-up/Alt. sensing
- Fuel usage monitor and low fuel alarms
- Charge alternator failure alarm
- Manual speed control (on compatible CAN engines)
- Manual fuel pump control
- "Protections disabled" feature
- Reverse power protection
- Power monitoring (kW h, kV Ar, kV A h, kV Ar h)
- Load switching (load shedding and dummy load outputs)
- Automatic load transfer (DSE7420)
- Unbalanced load protection
- Independent earth fault trip
- Fully configurable via DSE Configuration Suite PC software
- Configurable display languages
- Remote SCADA monitoring via DSE Configuration Suite PC software

- Additional display screens to help with modern diagnostics
- DSENet® expansion
- Integral PLC editor

### KEY BENEFITS

- RS232, RS485 & Ethernet can be used at the same time
- DSENet® connection for system expansion
- PLC functionality
- Five step dummy load support
- Five step load shedding support
- High number of inputs and outputs
- Worldwide language support
- Direct USB connection to PC
- Ethernet monitoring
- USB host
- Data logging & trending

### 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 10 V before dropout and supply recovers to 5 V. This is achieved without the need for internal batteries

#### MAXIMUM OPERATING CURRENT

260 mA at 12 V, 130 mA at 24 V

#### MAXIMUM STANDBY CURRENT

120 mA at 12 V, 65 mA at 24 V

#### CHARGE FAIL/EXCITATION RANGE

0 V to 35 V

#### OUTPUTS

##### OUTPUT A (FUEL)

15 A DC at supply voltage

##### OUTPUT B (START)

15 A DC at supply voltage

##### OUTPUTS C & D

8 A AC at 250 V AC (Volt free)

##### AUXILIARY OUTPUTS E,F,G,H,I & J

2 A DC at supply voltage

#### GENERATOR

##### VOLTAGE RANGE

15 V to 333 V AC (L-N)

##### FREQUENCY RANGE

3.5 Hz to 75 Hz

#### MAINS (UTILITY) (DSE7420)

##### VOLTAGE RANGE

15 V to 333 V AC (L-N)

##### FREQUENCY RANGE

3.5 Hz to 75 Hz

#### BUS (DSE7410)

##### VOLTAGE RANGE

15 V to 333 V AC (L-N)

##### FREQUENCY RANGE

3.5 Hz to 75 Hz

#### MAGNETIC PICK UP

##### VOLTAGE RANGE

+/- 0.5 V to 70 V

##### FREQUENCY RANGE

10,000 Hz (max)

#### DIMENSIONS

##### OVERALL

240 mm x 181 mm x 42 mm  
9.4" x 6.8" x 1.6"

##### PANEL CUTOUT

220 mm x 160 mm  
8.7" x 6.3"

##### MAXIMUM PANEL THICKNESS

8 mm  
0.3"

#### STORAGE TEMPERATURE RANGE

-40 °C to +85°C  
-40 °F to +185 °F

#### OPERATING TEMPERATURE RANGE

-30 °C to +70 °C  
-22 °F to +158 °F

### RELATED MATERIALS

#### TITLE

DSE7410 Installation Instructions  
DSE7420 Installation Instructions  
DSE74xx Quick Start Guide  
DSE74xx Operator Manual  
DSE74xx PC Configuration Suite Manual

#### PART NO'S

053-085  
053-088  
057-162  
057-161  
057-160

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