

# DSE8620

## AUTO MAINS FAILURE & INSTRUMENTATION CONTROL MODULE

### FEATURES



The DSE8620 is an Auto Mains (Utility) Failure Control Module suitable for paralleling single gen-sets (diesel or gas) with the mains (utility) supply. The module will automatically start the generator on detection of a mains failure, and will control the switchover from and back to the mains (utility) supply, offering an uninterrupted return.

The modules synchronising functions include automatic synchronising with built-in synchroscope and closing onto dead bus. Direct and flexible outputs from the module are provided to allow connection to the most commonly used speed governors and automatic voltage regulators (AVRs).

A sophisticated module monitoring an extensive number of engine parameters, the DSE8620 will announce warnings, shutdown and engine status information on the back-lit LCD screen, illuminated LED, remote PC, audible alarm and via SMS text alerts. The module includes RS232 and RS485 ports as well as dedicated terminals for system expansion.

The DSE8620 is compatible with electronic (CAN) and non-electronic (magnetic pick-up/alternator sensing) engines and offers 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

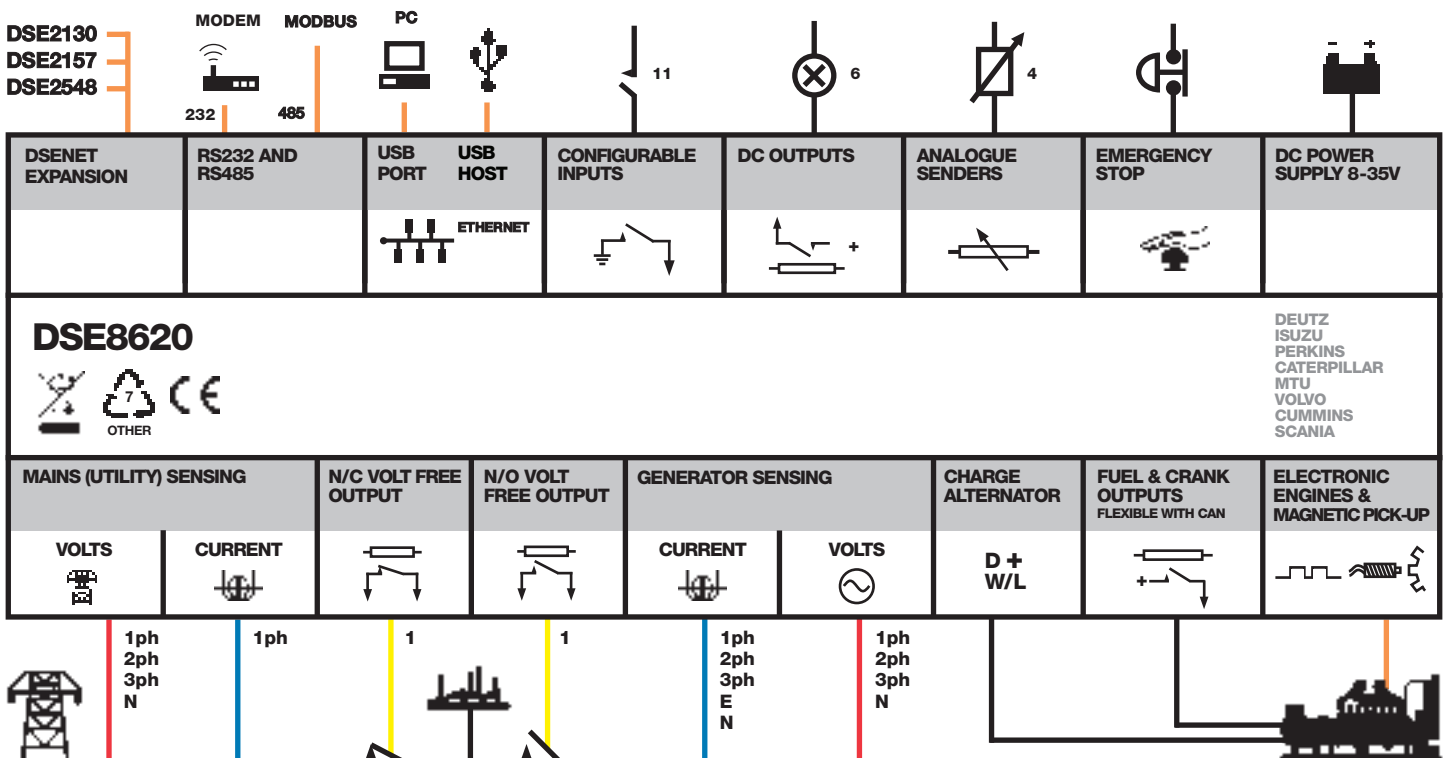
#### SHOCK

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 FOR SINGLE GEN-SET PARALLELING WITH MAINS (UTILITY)



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### FEATURES



### KEY LOAD SHARE FEATURES

- No-break return
- Peak shaving/peak lopping
- kW on mains (utility) level
- Mains (utility) decoupling test mode
- Manual speed/frequency adjust
- RCOF & vector shift
- Direct governor & AVR control
- Volts & frequency matching
- kW and kV Ar load sharing
- Manual voltage & frequency adjust

### KEY FEATURES

- Configurable inputs (11)
- Configurable outputs (8)
- Voltage measurement
- Built-in governor and AVR control
- Mains (utility) failure detection
- Dedicated load test button
- MV-LV synchronising
- kW overload alarms
- Comprehensive electrical protection

- Magnetic pick-up
- Electronic engine capability
- RS232 & RS485 remote communications
- Modbus RTU
- 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
- PC configuration
- Configurable alarms and timers
- Configurable start and stop timers
- SMS alert messaging
- Remote monitoring

### KEY BENEFITS

- RS232 & RS485 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
- Configuration Suite PC software
- Direct USB connection to PC
- Ethernet monitoring
- USB host
- Data logging & trending

### DSENet® EXPANSION DEVICES

- DSE2548 LED Expansion Module
- DSE2130 Input Expansion Module
- DSE2157 Output Expansion Module

### 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

460 mA at 12 V, 245 mA at 24 V

#### MAXIMUM STANDBY CURRENT

375 mA at 12 V, 200 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

2 A DC at supply voltage

#### GENERATOR AND MAINS (UTILITY)

##### 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)

#### BUILT-IN GOVERNOR AND AVR CONTROL

##### MINIMUM LOAD IMPEDANCE

1000Ω

Fully isolated

##### GAIN VOLTAGE

0 V to 10 V DC

Fully isolated

##### OFFSET VOLTAGE

+/- 10 V DC

Fully isolated

#### 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"

### RELATED MATERIALS

#### TITLE

DSE8620 Installation Instructions  
DSE8620 Operator Manual  
DSE8600 PC Configuration Suite Manual

#### PART NO'S

053-129  
057-142  
057-119

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