

# DSE6010/20 MKII

## AUTO START AND AUTO MAINS FAILURE CONTROL MODULES

### FEATURES



The DSE6010 MKII Auto Start Control Module and the DSE6020 MKII Auto Mains (Utility) Failure Control Module are suitable for a wide variety of single gen-set applications.

Monitoring engine speed, oil pressure, coolant temperature, frequency, voltage, current, power and fuel level, the modules give comprehensive engine and alternator protection. This is indicated on a large back-lit LCD icon display via an array of warning, electrical trip and shutdown alarms.

Electronic J1939 (CAN) and non-electronic MPU and alternator sensing engine support for diesel, gas and petrol engines all in one variant. With a number of flexible inputs, outputs and protections, the modules can be easily adapted to suit a wide range of applications.

Through USB Communication both modules can be configured using the DSE Configuration Suite PC Software or through the module's front panel editor.

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.

### AVAILABLE VARIANTS

6010-03	Auto Start with real time clock
6010-04	Auto start with real time clock and heated display
6020-03	Auto Mains Failure with real time clock
6020-04	Auto Mains Failure with real time clock and heated display

### 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 at +/-7.5 mm,  
8 Hz to 500 Hz @ 2 GN

#### HUMIDITY

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

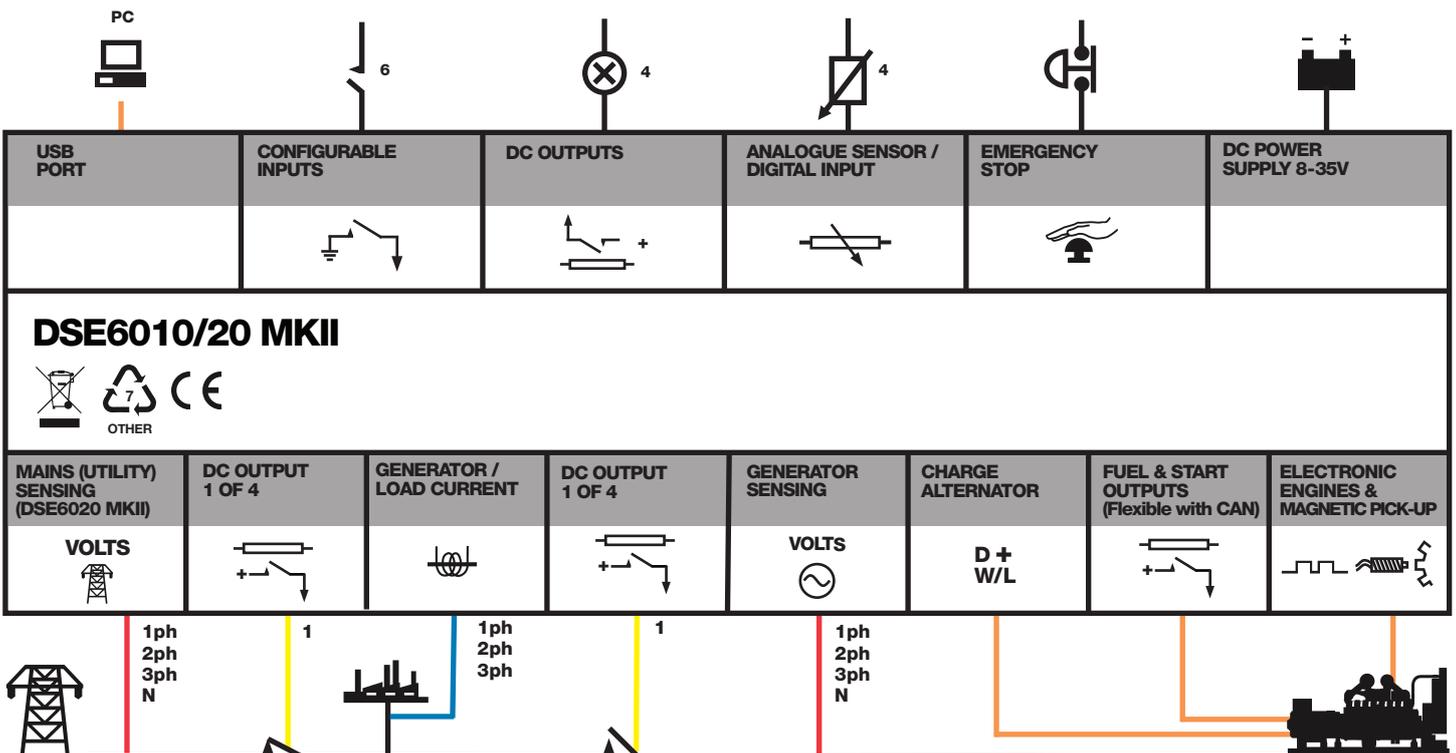
#### SHOCK

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 optional sealing gasket.

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



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### FEATURES



DSE6010 MKII



DSE6020 MKII



### KEY BENEFITS

- Automatically transfers between mains (utility) and generator (DSE6020 MKII only)
- Hours counter provides accurate information for monitoring and maintenance periods
- User-friendly set-up and button layout for ease of use
- Multiple parameters are monitored simultaneously which are clearly displayed on a large back-lit icon display
- The module can be configured to suit a wide range of applications
- Compatible with a wide range of CAN engines, including tier 4 engine support
- Uses DSE Configuration Suite PC Software for simplified configuration
- Licence-free PC software
- IP65 rating (with optional gasket) offers increased resistance to water ingress

### KEY FEATURES

- Large back-lit icon display
- Heated display option available
- Fully configurable via the fascia or PC using USB communication
- Efficient power save mode
- 3 phase generator sensing
- 3 phase mains (utility) sensing (DSE6020 MKII only)
- Generator/load power monitoring (kW, kV A, kV Ar, pf)
- Accumulated power monitoring (kW h, kVA h, kVAr h)
- Generator overload protection (kW)
- Generator/load current monitoring and protection
- Breaker control via fascia buttons
- Fuel and start outputs, configurable when using CAN
- 4 configurable DC outputs
- 4 configurable analogue/digital inputs
- 6 configurable digital inputs
- Support for 0-10 V & 4-20 mA oil pressure sensors
- Configurable staged loading outputs
- CAN, MPU and alternator speed sensing in one variant
- 3 engine maintenance alarms
- Engine speed protection
- Engine hours counter
- Engine pre-heat
- Engine run-time scheduler
- Engine idle control for starting & stopping
- Fuel pump control
- Real time clock
- Battery voltage monitoring
- Start on low battery voltage
- Configurable remote start input
- 1 alternative configuration
- Comprehensive warning, electrical trip or shutdown protection upon fault condition
- LCD and LED alarm indication
- Configurable event log (50)

### RELATED MATERIALS

#### TITLE

DSE6010/20 MKII Installation Instructions  
DSE6010/20 MKII Operator Manual  
DSE6010/20 MKII Configuration Suite PC Manual

#### PART NO'S

053-174  
057-230  
057-223

### 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. LEDs and backlight will not be maintained during cranking.

#### MAXIMUM OPERATING CURRENT

100 mA at 12 V, 105 mA at 24 V

#### MAXIMUM STANDBY CURRENT

60 mA at 12 V, 55 mA at 24 V

#### MAXIMUM SLEEP CURRENT

40 mA at 12 V, 35 mA at 24 V

#### GENERATOR & MAINS (UTILITY)

**VOLTAGE RANGE**  
15 V to 415 V AC (Ph to N)  
26 V to 719 V AC (Ph to Ph)

#### FREQUENCY RANGE

3.5 Hz to 75 Hz

#### INPUTS

**DIGITAL INPUTS A to F**  
Negative switching

#### ANALOGUE INPUTS A to C

Configurable as:  
Negative switching digital input  
0 Ω to 480 Ω

#### ANALOGUE INPUT D

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

#### OUTPUTS

##### OUTPUT A (FUEL)

10 A short term, 5 A continuous, at supply voltage

##### OUTPUT B (START)

10 A short term, 5 A continuous, at supply voltage

#### AUXILIARY OUTPUTS C, D, E & F

2 A DC at supply voltage

#### DIMENSIONS

##### OVERALL

216 mm x 158 mm x 43 mm  
8.5" x 6.2" x 1.5"

##### PANEL CUT-OUT

184 mm x 137 mm  
7.2" x 5.3"

#### 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

#### HEATED DISPLAY VARIANT

-40°C to +70°C  
-40°F to +158°F

### OPTIONAL PARTS

PART	PART NUMBER
IP65 Gasket	020-521