DSEGenset®

# DSE6110/20 MKII

## AUTO START & AUTO MAINS FAILURE CONTROL MODULES

DSE**6120 MKII**


DSE**6110 MKII**

### KEY FEATURES

- Large back-lit text display
- Multiple display languages
- Heated display option available
- DSENet® expansion compatible
- Data logging facility
- Fully configurable via PC using USB communication
- Front panel configuration
- Efficient power save mode
- 3 phase generator sensing
- 3 phase mains (utility) sensing (DSE6120 MKII only)
- Generator/load power monitoring (kW, kV A, kV Ar, pf)
- Accumulated power monitoring (kW h, kVA h, kVAr h)
- Generator/load current monitoring and protection
- Generator overload protection (kW)
- Breaker control via fascia buttons
- Fuel and start outputs, configurable when using CAN
- 4 configurable DC outputs
- 4 configurable analogue/digital inputs
- Support for 0 to10 V & 4 to 20 mA oil pressure sensors
- 6 configurable digital inputs
- 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
- Customisable information screens
- Configurable event log (100)
- Tier 4 ECO engine support including exhaust fluids & filters
- J1939-75 instrumentation output, configurable CAN instrumentation and alarms
- Start on low battery
- Enhanced alarm functionality
- Low load alarm

### KEY BENEFITS

- Automatically transfers between mains (utility) and generator (DSE6120 MKII only)
- Increased input and output expansion capability via DSENet®
- 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 text display via multiple languages
- The module can be configured to suit a wide range of applications
- Uses DSE Configuration Suite PC Software for simplified configuration
- Licence-free PC software
- IP65 rating (with optional gasket) offers increased resistance to water ingress

### RELATED MATERIALS

| TITLE | PART NO. |
|---|---|
| DSE6110/20 MKII Installation Instructions | 053-173 |
| DSE6110/20 MKII Operator Manual | 057-226 |
| DSE6110/20 MKII Configuration Suite PC Manual | 057-224 |

### SPECIFICATIONS

**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 INPUT A**
Configurable as:
Negative switching digital input
0 V to 10 V
4 mA to 20 mA
0 Ω to 240 Ω

**ANALOGUE INPUTS B TO D**
Configurable as:
Negative switching digital input
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**

**NON HEATED DISPLAY VARIANT**
-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 |


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# DSE6110/20 MKII

## AUTO START & AUTO MAINS FAILURE CONTROL MODULES

The DSE6110 MKII Auto Start Control Module and the DSE6120 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 text display via an array of warning, electrical trip and shutdown alarms in multiple languages.

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

| | |
|---|---|
| 6110-03 | Auto Start with real time clock |
| 6120-03 | Auto Mains Failure with real time clock |

### 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 at 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