

DSE**7310/20 MKII** AUTO START & AUTO MAINS FAILURE CONTROL MODULES



The DSE7310 MKII is an Auto Start Control Module and the DSE7320 MKII is an Auto Mains (Utility) Failure Control Module suitable for a wide variety of single, diesel or gas, gen-set applications.

Monitoring an extensive number of engine parameters, the modules will display warnings, shutdown and engine status information on the back-lit LCD screen, illuminated LEDs, remote PC and via SMS text alerts (with external modem). The DSE7320 MKII will also monitor the mains (utility) supply. The modules include USB, RS232 and RS485 ports as well as dedicated DSENet® terminals for system expansion.

Both modules are compatible with electronic (CAN) and non-electronic (magnetic pick-up/alternator sensing) engines and offer an extensive number of flexible inputs, outputs and extensive engine protections so the system can be easily adapted to meet the most demanding industry requirements. The extensive list of features includes enhanced event and performance monitoring, remote communications & PLC functionality. Dual mutual standby is now available on both the DSE7310 MKII & DSE7320 MKII using RS232 or RS485 communications. This provides for a simpler and more convenient installation with more advanced features such as true engine hours balancing.

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 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

PROVIDED BY ENCLOSU 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

DSE2130 DSE2157 DSE2548 DSE2510/20	MODEM MODBUS	PC	a a	() 8	۲.		
DSENET [®] EXPANSION	RS232 AND RS485	USB PORT	CONFIGURABLE INPUTS	DC OUTPUTS	ANALOGUE INPUT	EMERGENCY STOP	DC POWER SUPPLY 8-35V
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DSE7310/20 MKII ∑ ∠ ↓ C € other							DEUTZ ISUZU PERKINS CATERPILLAR MTU VOLVO CUMMINS SCANIA
MAINS (UTILITY) SENSING DSE7320 MKII ONLY	N/C VOLT FREE OUTPUT	GENERATOR / LOAD CURRENT	N/O VOLT FREE OUTPUT	GENERATOR SENSING	CHARGE ALTERNATOR	FUEL & CRANK OUTPUTS (Flexible with CAN)	ELECTRONIC ENGINES & MAGNETIC PICK-UP
VOLTS	ţ,		ţ,		D+ W/L		
1ph 2ph 3ph N		1ph 2ph 3ph E/N		1ph 2ph 3ph N			





ISSUE 6



DSE7310/20 MKII **AUTO START & AUTO MAINS FAILURE CONTROL MODULES**

FEATURES



DSE7310 MKII



KEY FEATURES

- 4-Line back-lit LCD text display
- Multiple Display Languages
- Five key menu navigation
- LCD alarm indication
- Heated display option available • Customisable power-up text
- and images
- DSENet expansion compatibility
- Data logging facility •
- Internal PLC editor •
- Protections disable feature
- Fully configurable via PC using USB. RS232 & RS485 communication
- Front panel configuration with **PIN** protection
- Power save mode
- 3 phase generator sensing and protection
- . 3 phase mains (utility) sensing and protection (DSE7320 MKII only)
- Automatic load transfer control (DSE7320 MKII only)
- Generator current and power monitoring (kW, kvar, kVA, pf)
- Mains current and power monitoring (kW, kvar, kVA, pf) (DSE7320 MKII only)
- kW and kvar overload and reverse power alarms
- Over current protection
- Unbalanced load protection Independent earth fault
- protection Breaker control via fascia
- buttons

RELATED MATERIALS

TITLE

DSE7310 MKII & DSE7320 MKII Installation Instructions

DSE7310 MKII & DSE7320 MKII Operator Manual DSE7310 MKII & DSE7320 MKII Configuration Suite PC Manual

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Deep Sea Electronics Plc maintains a policy of continuous development and reserves the right to change

the details shown on this data sheet without prior notice. The contents are intended for guidance only.



· Fuel and start outputs configurable when using CAN

DSE7320 MKII

- 6 configurable DC outputs 2 configurable volt-free relay
- outputs 6 configurable analogue/digital
- inputs Support for 0 V to 10 V & 4 mA
- to 20 mA sensors
- 8 configurable digital inputs
- Configurable 5 stage dummy load and load shedding outputs
- CAN, MPU and alternator frequency speed sensing in one variant
- Real time clock
- Manual and automatic fuel pump control
- Engine pre-heat and post-heat functions
- · Engine run-time scheduler
- Engine idle control for starting & stopping
- Fuel usage monitor and low fuel level alarms
- Simultaneous use of RS232 and RS485 communication ports
- True dual mutual standby using RS232 or RS485 for accurate engine hours balancing.
- MODBUS RTU support with configurable MODBUS pages.
- Advanced SMS messaging (additional external modem required)
- Start & stop capability via SMS messaging

- 3 configurable maintenance alarms
- 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 supplied gasket) offers increased resistance to water ingress
- Modules can be integrated into building management systems (BMS) using MODBUS RTU

KEY BENEFITS

- Automatically transfers between mains (utility) and generator (DSE7320 MKII only) for convenience.
- 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 & displayed simultaneously for full visibility
- The module can be configured to suit a wide range of
- applications for user flexibility PLC editor allows user configurable functions to meet user specific application

requirements.

PART NO'S

053-181

057-253

057-243



SPECIFICATION

DC SUPPLY

CONTINUOUS VOLTAGE RATING 8 V to 35 V Continuous 5 V for upto 1 minute

CRANKING DROPOUTS

Able to survive 0 V for 100 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 510 mA at 12 V, 240 mA at 24

MAXIMUM STANDBY CURRENT 330 mA at 12 V, 160 mA at 24 V

CHARGE FAIL/EXCITATION RANGE 0 V to 35 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

MAGNETIC PICKUP VOLTAGE RANGE +/- 0.5 V to 70 \

FREQUENCY RANGE 10,000 Hz (max)

INPUTS DIGITAL INPUTS A TO H Negative switching

ANALOGUE INPUTS A & F

Configurable as: Negative switching digital input 0 V to 10 V sensor 4 mA to 20 mA sensor Resistive sensor

ANALOGUE INPUTS B. C. D & E Configurable as: Negative switching digital input Resistive sensor

OUTPUTS OUTPUT A & B (FUEL & 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

DIMENSIONS OVERALL

245 mm x 184 mm x 51 mm 9.6" x 7.2" x 2.0"

PANEL CUT-OUT 220 mm x 160 mm 87" x 63"

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

055-203/09/15 (1)

HEATED DISPLAY VARIANT -40 °C to +70 °C -40 °F to +158 °F

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