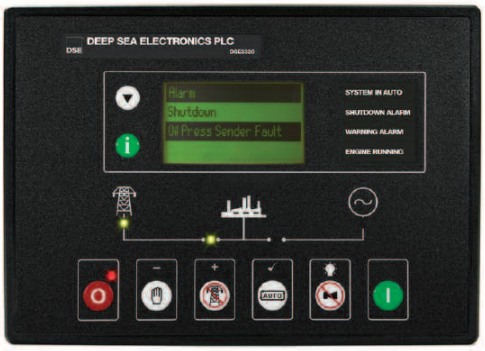
DSECONTROL®
MONITORING WITH INTELLIGENCE.

DSE5310 & DSE5320
AUTO START & AUTO MAINS FAILURE CONTROL MODULES (ELECTRONIC ENGINE ENABLED)

DSE5310

DSE5320



The DSE5310 is an Automatic Start Control Module designed to automatically start and stop diesel and gas generating sets that include non electronic and electronic engines. The module also provides advanced engine monitoring and protection features.

The module has the ability to monitor under speed, over speed, charge failure, emergency stop, low oil pressure, high engine temperature, fail to start, fail to stop, under/over generator volts, over current, under/over generator frequency, low/high DC battery volts, low fuel alarm and loss of the speed sensing signal. The module displays fault conditions on the LCD display and via the LED indicators on the front.

The DSE5320 is an Automatic Mains (utility) Failure Control Module and includes all the features of the DSE5310 plus the ability to monitor a mains (utility) supply. Upon detection of a mains (utility) failure the module automatically starts the generating set. Once the mains (utility) power has been restored the module instructs the generating set to stop.

Both modules include RS232 or RS485 communication capabilities for linking to a PC, sending SMS messages and interfacing with new and existing building management systems.

FEATURES
- Automatic start
- Automatic load transfer
- Automatic mains (utility) failure detection (DSE5320 only)
- Electronic engine connection
- RS232 or RS485 remote communications (to be specified on ordering)
- Modbus RTU
- Analogue inputs
- Audible alarm indication
- Back-lit character & 4-line text LCD display
- Configurable alarms & timers
- Configurable auxiliary inputs
- Digital inputs
- Emergency stop functions
- Engine history event log
- Engine exercise mode
- Engine protection
- Front panel mounting
- Front panel programming
- Full engine diagnostics
- Generator operating status warning
- LCD alarm indication
- LED alarm indication
- Manual start
- Multiple language options
- PC configurable
- PIN protected programming
- Power save mode
- Remote monitoring
- SMS messaging

BENEFITS
- Full integration into new & existing building management systems
- Full engine protection & instrumentation without the need for additional senders (Electronic engines only)
- In-built engine diagnostics removes the requirement for service equipment
- License free PC software
- Remote module control and monitoring using comprehensive DSE PC software
- Modules improve the life cycle of engine starter motors
- On-site and remote module configuration
- Modules send SMS messages to engineers to notify specific engine problems (GSM Modem and SIM Card required)
- User-friendly set-up and button layout

OPERATION
The modules are operated using the front STOP, AUTO and MANUAL push buttons. The DSE5320 also includes a TEST button. An additional push button allows the user to scroll through the LCD display.

SPECIFICATION

DC SUPPLY
8 V to 35 V continuous

CRANKING DROPOUTS
Able to survive 0V for 50mS, providing the supply was at least 10V before dropout and supply recovers to 5V

AUXILIARY OUTPUTS 1-3
5A DC at supply voltage

AUXILIARY OUTPUTS 4 & 5
(DSE5320 only)
8 A AC rated volt-free relay

MAXIMUM OPERATING CURRENT
400mA at 12V, 200mA at 24V

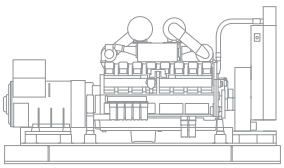
STANDBY CURRENT
(when in auto)
230mA at 12V, 120mA at 24V

SLEEP MODE CURRENT
70mA at 12V, 45mA at 24V

MODULE DIMENSIONS (WxH)
240mm x 172mm
9.4" x 6.8"

PANEL CUT-OUT (WxH)
220mm x 160mm
8.7" x 6.3"

MAXIMUM PANEL THICKNESS
8mm
0.3"



ELECTRONIC ENGINE CAPABILITY

ENVIRONMENTAL TESTING STANDARDS

ELECTRO MAGNETIC CAPABILITY
BS EN 61000-6-2
EMC Generic Emission 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 60068-2-2
Test Ab to +70°C 60067-2-2 Hot
Test Ab to -30°C 60068-2-1 Cold

VIBRATION
BS EN 60068-2-6
Ten sweeps in each of three major axes
5Hz to 8Hz @ +/-7.5mm, 8Hz to 500Hz @ 2gn

HUMIDITY
BS 2011 part 2.1 60068-2-30
Test Cb Ob Cyclic
93% RH @ 40°C for 48 hours

SHOCK
BS EN 60068-2-27
Three shocks in each of three major axes
15gn in 11mS

CONFIGURATION

The modules can be configured using the front panel buttons or the DSE810 interface and PC software.

COMMUNICATIONS

The DSE5310 & DSE5320 have a number of different communication capabilities.

SMS Messaging

When the module detects an alarm condition, it has the ability to send an SMS message to a dedicated mobile number, notifying an engineer of the problem. (GSM Modem and SIM Card required)

Remote Communications

When the module detects an alarm condition, it dials out using suitable modem, to a PC notifying the user of the exact alarm condition.

Building Management

The module has been designed to be integrated into new and existing building management systems.

PC Software

The module has the ability to be configured and monitored from a remote PC, using the DSE810 interface.

EVENT LOG

The module includes a comprehensive event log that shows the 30 most recent alarm conditions and the date and time that they occurred. This function assists the user when fault finding and maintaining a generating set.

INSTRUMENTATION

The modules provide advanced metering facilities, displaying the information on the LCD display. The information can be accessed using the display scroll push buttons located next to the LCD display.

5310	5320
Generator Instruments Volts, Hz, Amps, kW, kVA, Pf,Kwh, kVAr, kVArh, KVAh	**Generator Instruments** Volts, Hz, Amps, kW, kVA, Pf,Kwh, kVAr, kVArh, KVAh
Engine Instruments RPM, Oil Pressure, Coolant Temperature, Hours Run, Charging Voltage, Battery Volts.	**Engine Instruments** RPM, Oil Pressure, Coolant Temperature, Hours Run, Charging Voltage, Battery Volts.
Electronic Engines Enhanced Instrumentation and Engine ECU diagnostics via electronic engine interface.	**Electronic Engines** Enhanced instrumentation and Engine ECU diagnostics via electronic engine interface.
	Mains/Utility Instruments Volts, Frequency, Amps (optional when CT's are fitted load side of the line)

RELATED MATERIALS

TITLE	PART NO'S
DSE5310 Installation Instructions	053-012
DSE5320 Installation Instructions	053-014
DSE5310 Manual	057-013
DSE5320 Manual	057-014
DSE157 Data Sheet	055-045
DSE545 & DSE548 Data Sheet	055-049
DSE130 Data Sheet	055-047
52/53xx Software Manual	057-006
CAN & DSE wiring guide	057-004

EXPANSION MODULE COMPATIBILITY

DSE157 Relay Input Expansion Module
DSE545 & DSE 548 Remote Annunciation Expansion Module
DSE130 Input Expansion Module

ELECTRONIC ENGINE COMPATABILITY

- Cummins
- Deutz
- John Deere
- MTU
- Perkins
- Scania
- Volvo
- Generic
- Plus additional manufacturers

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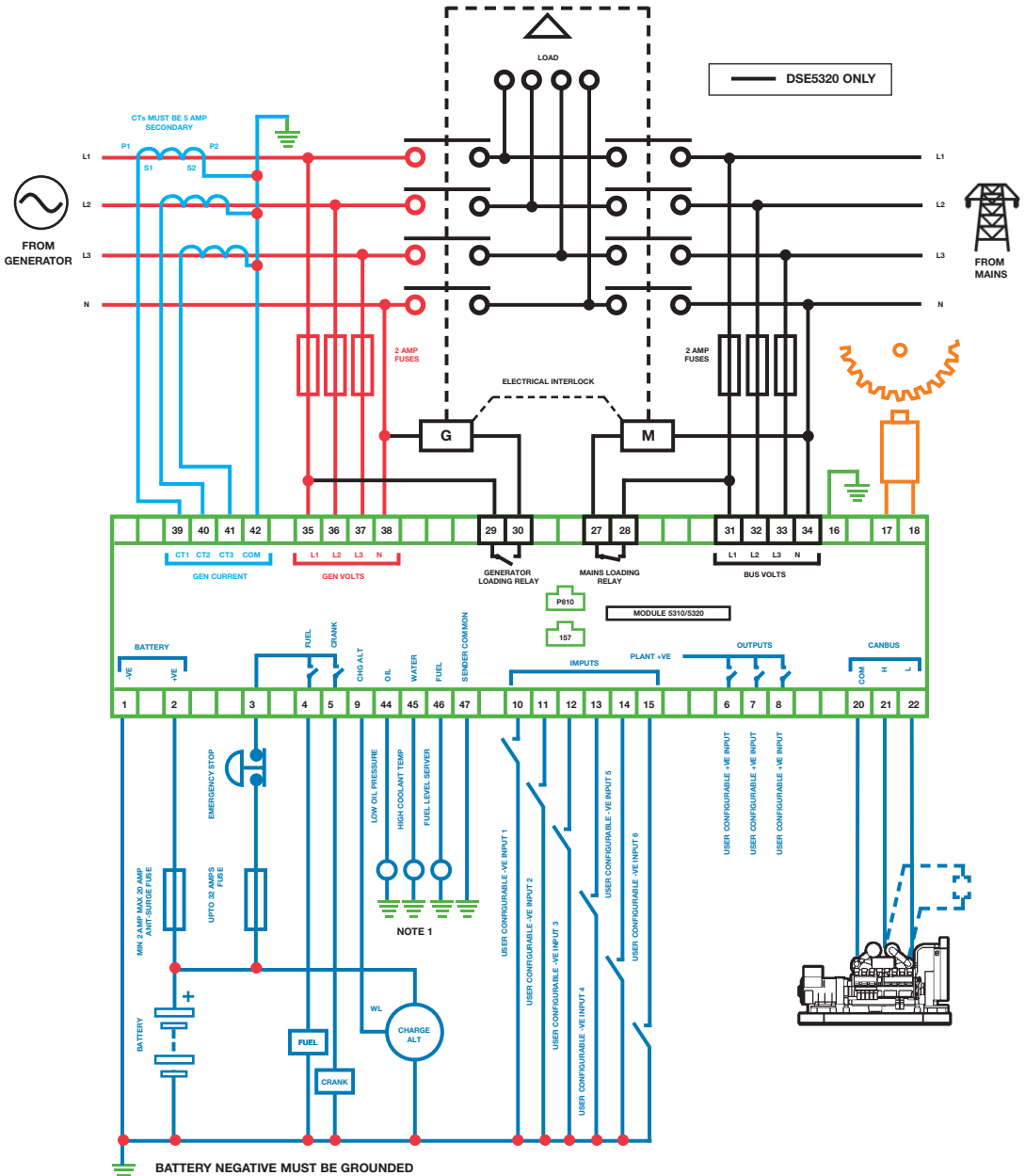

BATTERY NEGATIVE MUST BE GROUNDED

TERMINALS SUITABLE FOR 22-16 AWG (0.6mm - 1.3mm) FIELD WIRING

TIGHTENING TORQUE = 0.8Nm (7lb-in)

NOTE 1

THESE GROUND CONNECTIONS MUST BE ON THE ENGINE BLOCK, AND MUST BE TO THE SENDER BODIES. THE GROUND WIRE TO TERMINAL 47 MUST NOT BE USED TO PROVIDE A GROUND CONNECTION TO ANY OTHER DEVICE

NOTE 2. 120 R TERMINATING RESISTOR MAY BE REQUIRED EXTERNALLY SEE ENGINE MANUFACTURERS LITERATURE

DSE®

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