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DSEMARINE[®] ON-BOARD WITH CONFIDENCE.



DSE5310M

AUTO & MANUAL START CONTROL MODULE (ELECTRONIC ENGINE ENABLED)



The DSE5310M 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 module includes RS232 or RS485 communication capabilities for linking to a PC, sending SMS messages and interfacing with new and existing vessel management systems.

FEATURES

- Automatic start
- Automatic load transfer
- Electronic engine connection
- RS232 or RS485 remote communications
- 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 vessel 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
- Module improves the life cycle of engine starter motors
- On-site and remote module configuration using suitable modem
- Module sends SMS messages to engineers to notify specific engine problems (GSM Modem and SIM Card required)
- User-friendly set-up and button layout

OPERATION

The module is operated using the front STOP, AUTO and MANUAL push buttons. An additional push button allows the user to scroll through the LCD display.

CONFIGURATION

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

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

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)

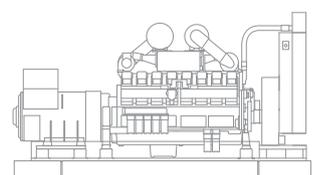
220mm x 160mm

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

COMMUNICATIONS

The DSE5310M has 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.

Vessel Management

The module has been designed to be integrated into new and existing vessel 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 module provides 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.

EXPANSION MODULE COMPATIBILITY

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

ELECTRONIC ENGINE COMPATIBILITY

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

5310M

Generator Instruments

Volts, Hz, Amps, kW, kVA, Pf, Kwh, kVAr, kVAh, KVAh

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.

RELATED MATERIALS

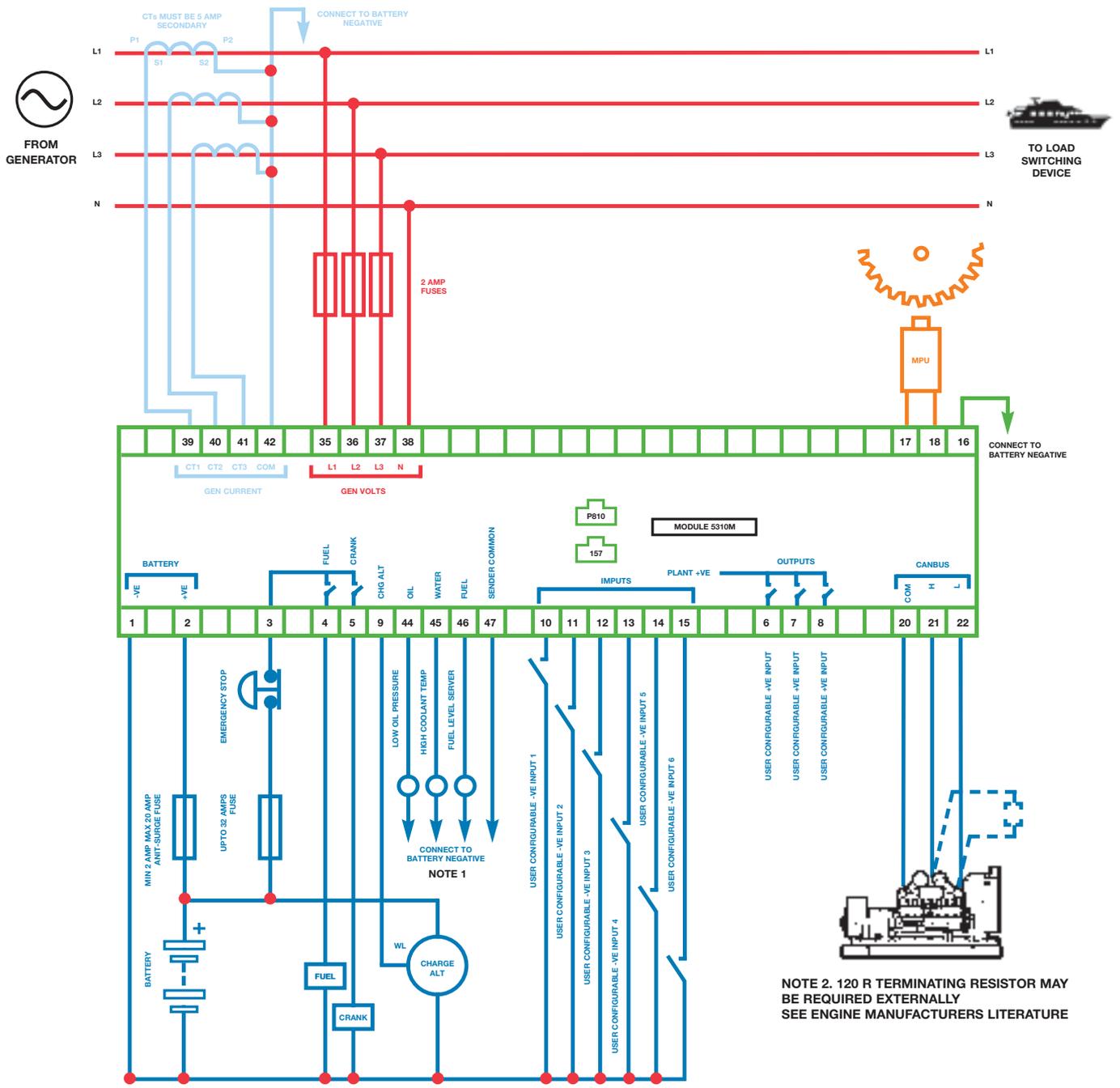
TITLE

DSE5310M Installation Instructions
DSE5310M Manual
DSE157 Data Sheet
DSE545 & DSE548 Data Sheet
DSE130 Data Sheet
52/53xx Software Manual
CAN & DSE wiring guide

PART NO'S

053-047
057-079
055-045
055-049
055-047
057-006
057-004

DSE5310M



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

TIGHTENING TORQUE = 0.8Nm (7lb-in)

NOTE 1
 THESE CONNECTIONS MUST BE ON THE ENGINE BLOCK, AND MUST BE TO THE SENDER BODIES.
 THE WIRE TO TERMINAL 47 MUST NOT BE USED TO PROVIDE A BATTERY NEGATIVE CONNECTION TO ANY OTHER DEVICE

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