



## FEATURES

- **J1939 CANBus option to connect to the industry standard SAE J1939 'Eco friendly' engine management systems providing engine protection and instrumentation without requiring additional senders.**
- **Comprehensive remote communication via optional RS232 port. Provides RS232 Modem link to PC via either PSTN line or GSM network (using a suitable modem). The module can also signal engineers via their cell phones using the GSM SMS messaging system to advise of system alarms.**
- **Optional RS485 'Modbus' output. Using industry standard communication protocol allows full system integration into new and existing building management and control schemes.**
- **Engine diagnostic information removes the need for both service equipment and cryptic diagnostic lamp (when used in conjunction with J1939 engines)**
- **LCD 4-line text based display to provide 'at-a-glance' diagnosis of fault conditions, instrumentation and operating state.**
- **Comprehensive PC configuration and status monitoring using 5xxx PC software.**
- **PIN number protected front panel programming of selected trip points and timers, allows field changes to be made to the module settings.**
- **Built in exercise timer.**
- **'Sleep mode' to ensure very low battery power usage when in "Off" mode.**
- **Multiple LCD languages (English, French, Spanish, German etc) possible.**
- **Automatic and Manual operation modes.**
- **Six configurable auxiliary inputs for connection to external fault detection equipment.**
- **Three configurable outputs to help produce complex applications.**
- **Integral load switch control capability.**

## DESCRIPTION

The Model 5310 is an *Autostart Control Module*. The module is used to automatically start a generator set, upon application of a remote signal or by manual control. The module also provides indication of operational status and fault conditions, automatically shutting down the genset and indicating failures by means of an LCD display.

Alterations to the system are made using the 5xxx PC configuration software in conjunction with the 810 interface. This interface also provides real time diagnostic facilities.

Selected timers and alarms can be altered by the customer or site engineer, via the front panel. This can be PIN code protected to prevent unauthorised access.

**Easy push button control**

Operation of the module is via pushbutton controls (with security locking facility) mounted on the front panel with STOP/RESET, AUTO, MANUAL and START pushbuttons. The first three pushbuttons feature LED 'selected' indications. Further pushbuttons provide LCD DISPLAY SCROLL, LAMP TEST and MUTE functions.

**Microprocessor control**

The module features 16-Bit microprocessor control and a comprehensive list of timers and pre-configured sequences. This allows demanding industry specifications to be achieved.

Accessed via the LCD DISPLAY SCROLL push-buttons, the 5310 module provides the following instrumentation displays:

**Generator Instruments:**

Volts, Hz, Amps, kW, kVA, cos $\theta$

**Engine Instruments:**

RPM, Oil Pressure, Coolant Temperature, Hours Run, Charging voltage, Battery Volts.

**SAE J1939:**

Enhanced instrumentation and Engine ECU diagnostics via industry standard SAE J1939 interface when used in conjunction with J1939 engine ECU.



## SPECIFICATION

**DC Supply:**

8V to 35V Continuous.

**Cranking Dropouts:**

Able to survive 0V for 50mS, providing supply was at least 10V before dropout and supply recovers to 5V. *This is achieved without the need for internal batteries.*

**Max. Operating Current:**

12V – 400mA  
24V – 200mA

**Sleep Mode Current:**

12V – 70mA  
24V – 45mA

**Standby Current (when in auto):**

12V – 230mA  
24V – 120mA

**Auxiliary Outputs 1-3:**

Relay outputs 5A DC at supply voltage. Switches to battery negative when active

**Dimensions:**

240mm x 172mm x 57mm  
(9½" x 6¾" x 2¼")

**Panel cutout:**

220mm x 160mm  
(8.7" x 6.3")

**Operating Temperature Range:**

-30°C to +70°C

**Enclosure protection:** IP55 with optional gasket

**Engine ECU interface:**

SAE J1939 CANbus

Deep Sea Electronics plc. reserve the right to change specification without notice.

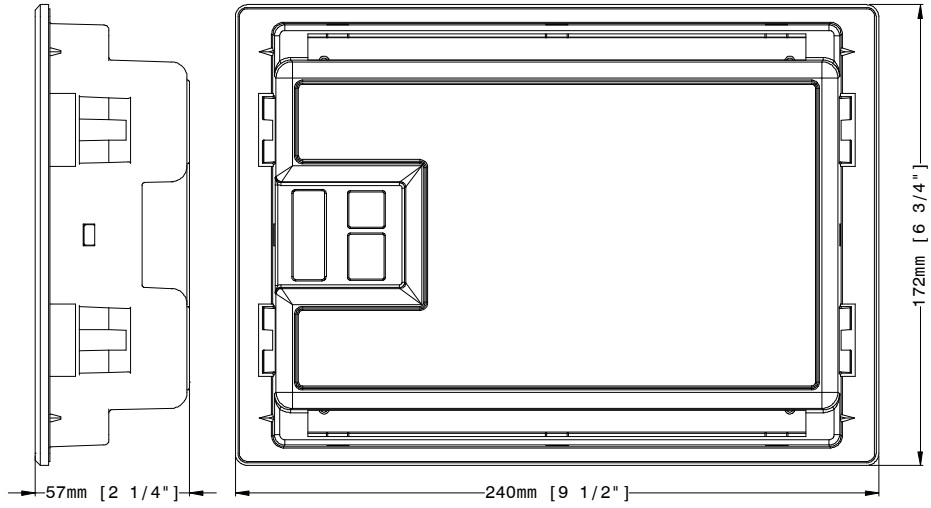
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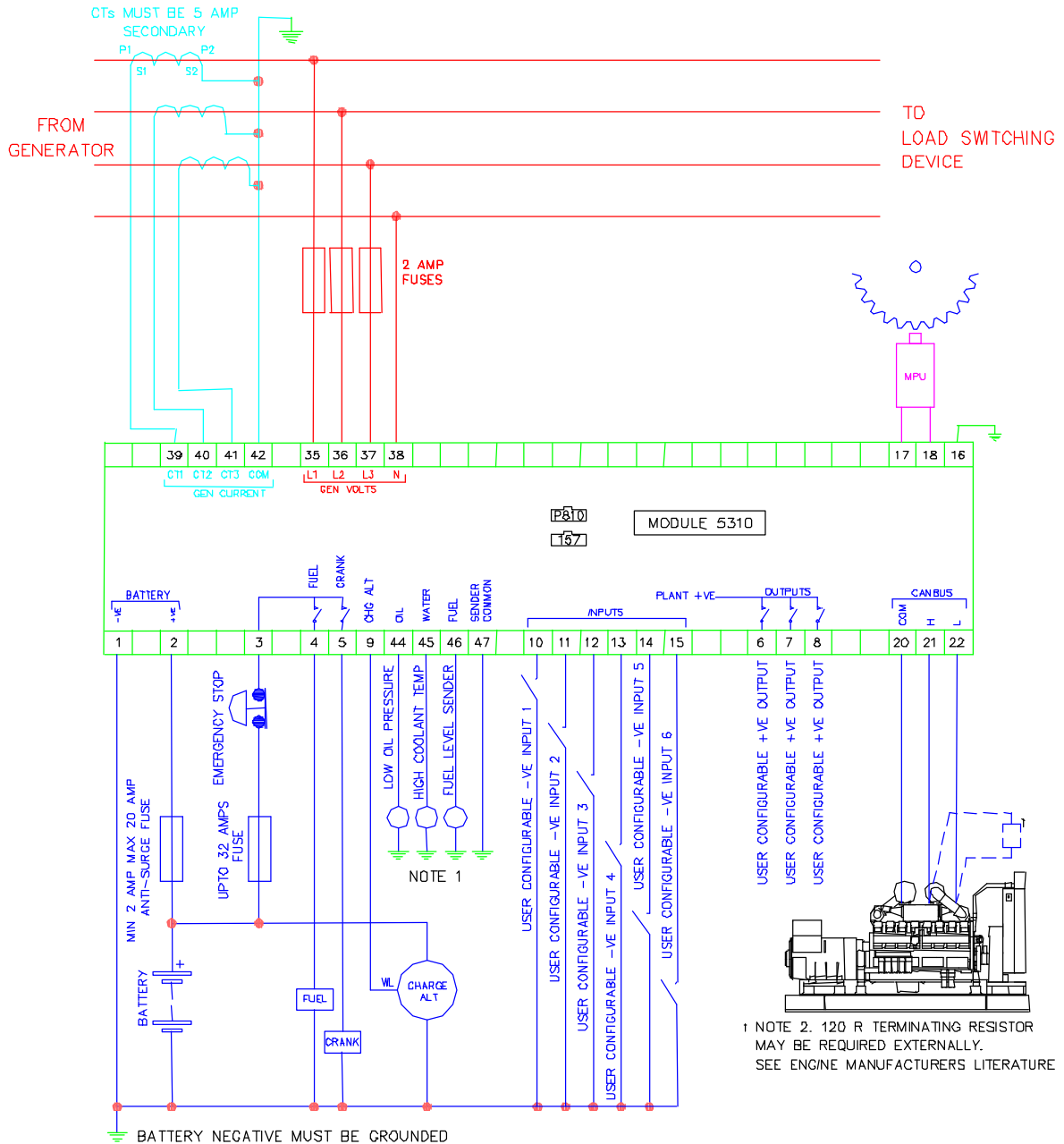
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# DIMENSIONS



Panel cut-out 220mm x 160mm (8.7" x 6.3")

# TYPICAL CONNECTIONS



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