DEEP SEA ELECTRONICS

4220

J1939 ENABLED AUTO MAINS FAILURE MODULE

UL508 pending

Issue 1
01/09/03 AM

FEATURES

- ***J1939 CANBus link to connect to the industry standard SAE J1939 'Eco friendly' engine management systems providing engine protection and instrumentation without requiring additional senders.***
- ***Engine diagnostic information negating the need for service equipment, replacing the 'cryptic' diagnostic lamp!***
- ***Integral mains (utility) monitoring and load switch control capability.***
- ***LCD text based display to provide at a glance diagnosis of fault conditions, instrumentation and operating state.***
- ***Comprehensive PC configuration and status monitoring using 42xx PC software.***
- ***PIN number protected front panel programming of selected trip points and timers, allows field changes to be made to the module settings.***
- ***Inbuilt exercise timer.***
- ***'Sleep mode' to ensure very low battery power usage when in "Off" mode.***
- ***Multiple LCD languages (English, French, Spanish, German etc)***
- ***Automatic, Manual and Test operation modes.***
- ***Three fully user customisable auxiliary inputs for connection to external fault detection equipment.***
- ***Five fully configurable outputs to help produce complex applications.***

DESCRIPTION

The Model 4220 is an *Automatic Mains Failure Control Module.* The module is used to monitor a mains supply and automatically start a standby generator set. 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 42xx 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 from the front panel. The front panel editor 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, TEST and START pushbuttons. The first four 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 specifications to be achieved.

The 4220 module provides an LCD display with the following instrumentation displays, accessed via the LCD DISPLAY SCROLL push-buttons:

Engine Speed RPM.
Engine Oil Pressure.
Engine Coolant Temperature.
Engine Hours Run.
Auxiliary Charging voltage (where supported by the ECU).
Plant battery Volts
Mains voltage and frequency
Engine ECU diagnostics information via industry standard SAE J1939 interface.

SPECIFICATION

DC Supply:
8 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 5V. *This is achieved without the need for internal batteries.*

Max. Operating Current:
290mA at 12V & 180mA at 24V.

Typical Standby Current:
190mA at 12V & 110mA at 24V.

Auxiliary Outputs 1-4:
Solid state outputs -1.2A DC at supply voltage. Switches to battery negative when active.

Auxiliary Output 5:
16 Amp DC volts-free relay

Dimensions:
171mm x 115mm x 49mm
(6¾'' x 4½'' x 2'')

Operating Temperature Range:
-30 to +70°C

Mains Sensing Input Range:
15V(ph-N) to 277V(ph-N) AC (+20%)

Mains Sensing Input Frequency:
50 - 60 Hz

Engine ECU interface:
J1939 SAE J1939 CANbus

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

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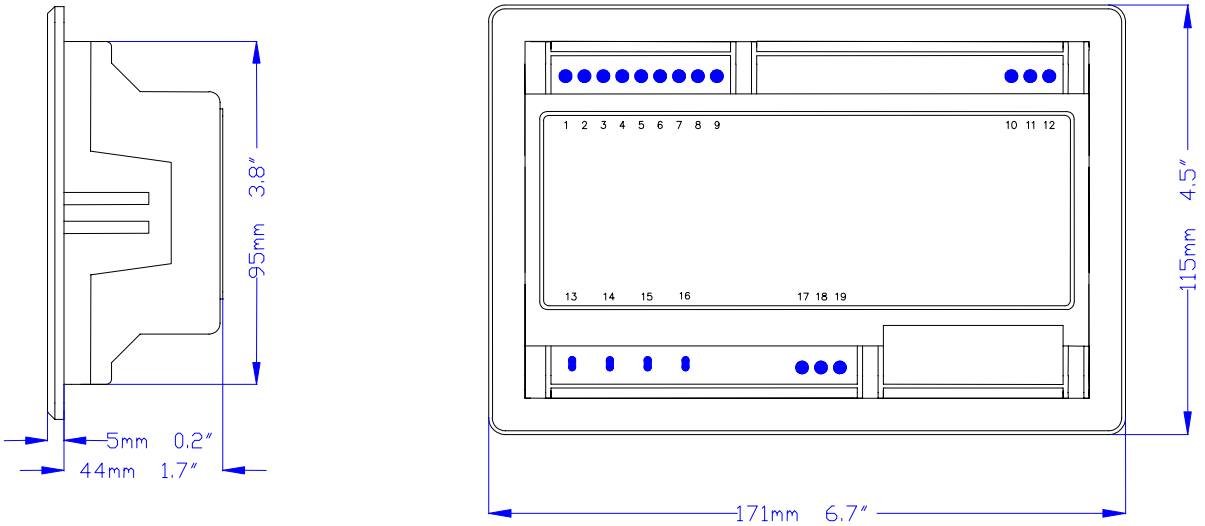
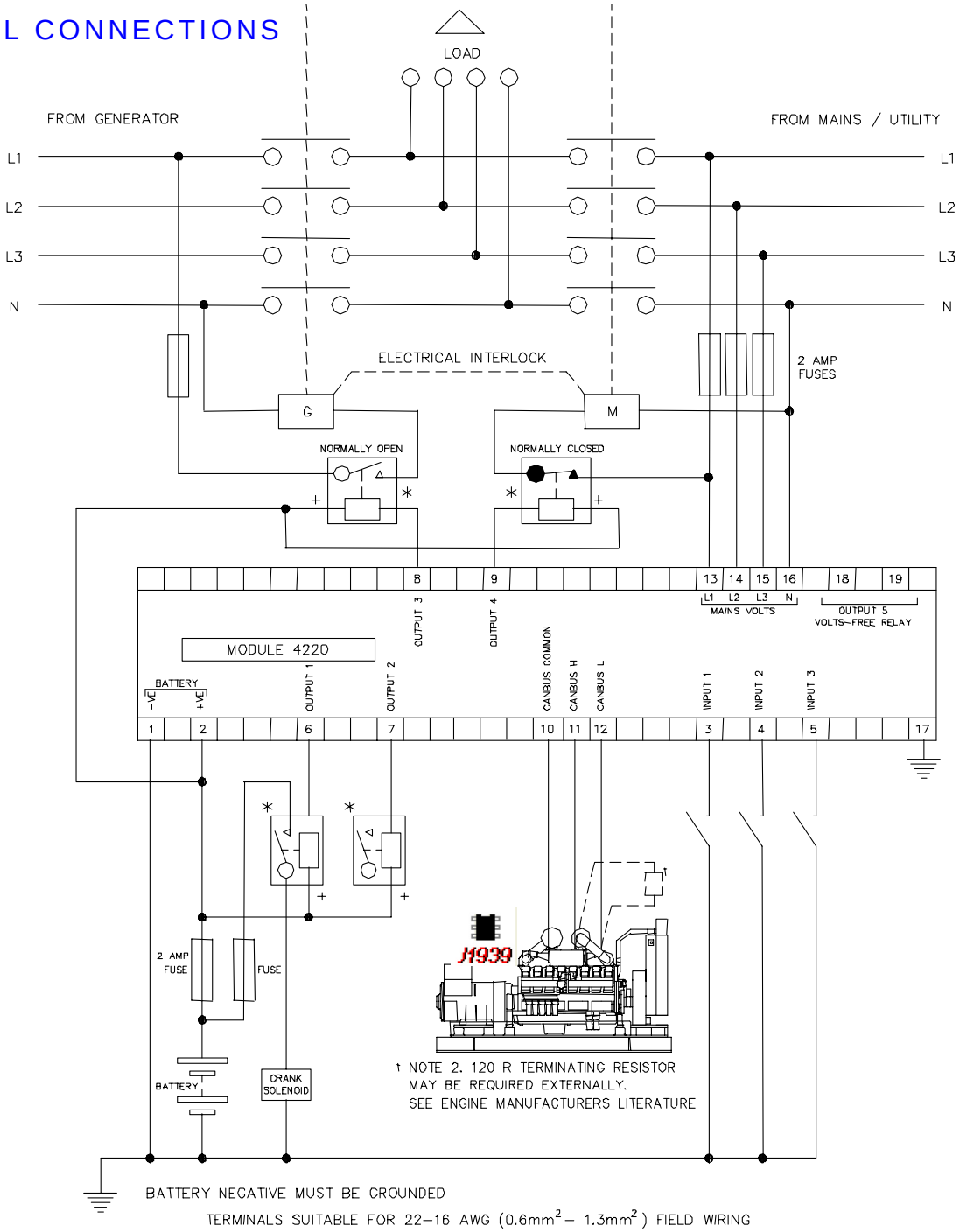
DIMENSIONS



Panel cutout 154mm x 98mm (6.1” x 3.9”)

TYPICAL CONNECTIONS



BATTERY NEGATIVE MUST BE GROUNDED

TERMINALS SUITABLE FOR 22–16 AWG (0.6mm^2 – 1.3mm^2) FIELD WIRING

TIGHTENING TORQUE = 0.8Nm (7lb–in)

* NOTE. SOME OF THE OUTPUTS ARE SOLID STATE AND ARE NEGATIVE SWITCHING