



Deep Sea Electronics Plc

500 Series CONTROL MODULES

MODEL 509 AUTOMATIC MAINS FAILURE MODULE

DESCRIPTION

The Deep Sea Electronics Model 509 in its basic form, has been designed to be configured to meet most of the industry's complex specifications. Variations of the unit allow many other functions such as the RS232 interface for communicating with building management systems or remote monitoring by a Volt free relay module or Annunciator.

The DSE 509 Automatic Mains Failure Module has been primarily designed to start a generator on a mains failure, transfer the load when the engine's operating criteria have been met. On restoration of the mains the engine is returned to a standby mode.

Once activated the 509 module carries out all the start and stop procedures of the engine, indicating the operational status and fault conditions; automatically shutting-down the engine and giving a true first up fault condition of an engine failure. This information is displayed on an illuminated Liquid Crystal Display.

Selective operational sequences and text can be altered by the customer. Alterations to the system are made by the use of the 801 Calibration Unit. The adjustable parameters are displayed on the screen when the **CONFIGURATION** mode is activated.

Access to the critical operational sequences and timers for use by qualified engineers are barred by a security code.

Operation of the module is via a four position rotary switch (key-switch option available) mounted on the front panel with STOP, AUTO, MANUAL (Off-load run) and TEST (on-load run) positions.

Relay outputs are provided for Fuel Solenoid Output, Start Output, Alarm output and one configurable output. Normally the configurable relay is configured as pre-heat. However the relay function is configurable to activate on a range of 6 different functions, conditions or alarms. The relays supply positive plant supply out.

Configurable inputs are available for Low Oil Pressure, High Engine Temperature allowing the module to function with N/O or N/C switches. Three fully configurable auxiliary inputs are provided to give protection expansion. These can be selected to be indication, warning or shutdown inputs either immediate or held off during start up. Alternatively they may be configured to provide additional control feature to the module.

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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.*

Mains Input Range:

100 - 300 V ac RMS

Mains Trip Range:

75 - 275 V ac RMS

Alternator Input Range:

15 - 300 V ac RMS

Alternator Input Frequency:

50 - 60 Hz at rated engine speed.

Magnetic Input Range:

0.5 V to +/- 70 V (Clamped by transient suppressors)

Magnetic Input Frequency: 2300Hz to 6,000 Hz at rated engine speed.

Start/Fuel Relay Output:

16 Amp DC at supply voltage.

Auxiliary/Alarm Relay Outputs:

6 Amp DC at supply voltage.

Contactor Relay Outputs:

8 Amp RMS AC at Mains voltage.

Dimensions:

72 X 144 X 140.0 (Excluding Key-switch)

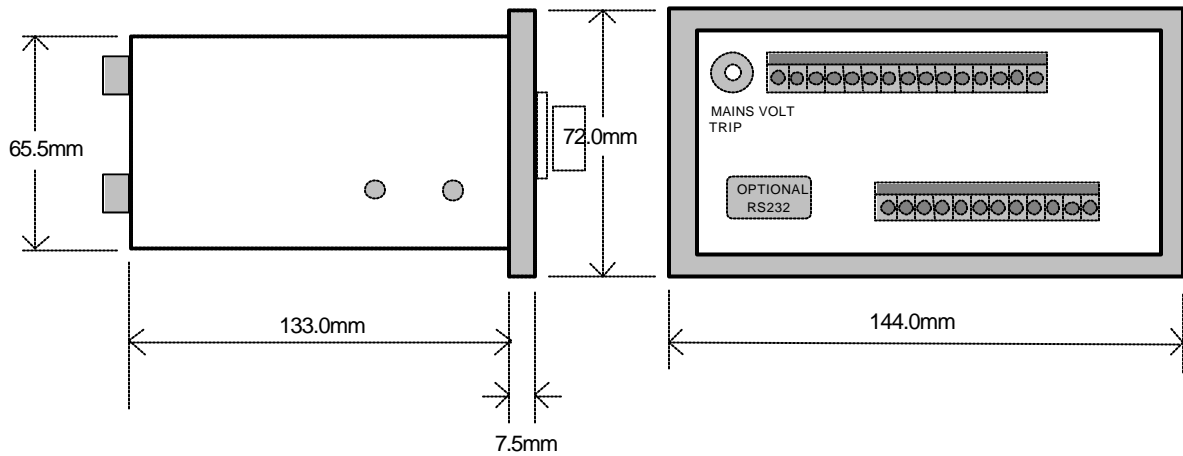
Charge Fail / Excitation Range:

0 V to 35 V

Operating Temperature Range:

-10 to +60°C

CASE DIMENSIONS



TYPICAL CONNECTIONS

Insert 509 Typical connection Diagram here

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