



FEATURES

- **Micro-processor based design**
- **Automatic Mains (utility) failure detection**
- **Control of the Contactors or change-over device**
- **Configurable via front panel**
- **Simple pushbutton controlled operation**
- **Configurable Timer Settings**
- **Fully protected Solid State Start Outputs – no moving parts**
- **External Remote Start Input**
- **LED Mimic indication**
- **Mains Fail/ Return Delay Timer**
- **Warm-up/Cooling Timer**
- **Single/Three phase mains(utility) sensing**
- **Mains (utility) failure detection with configurable fail and return timers.**
- **Adjustable Warming and cooling timers.**
- **Adjustable Mains (utility) Fail voltage level.**
- **Changeover contactor control with LED mimic.**
- **Generator available indication (from genset frequency).**
- **Engine Start signal.**
- **Load contactor control Solid State Outputs**
- **Load shedding input (“Close to Neutral position”)**

DESCRIPTION

The 4130 is an Automatic Transfer Switch controller which will monitor the incoming AC mains (utility) supply. Should a Mains (utility) failure occur the 4130 will instruct the genset to start and take load. It utilises advanced surface mount construction techniques to provide a compact yet highly specified module.


Operation of the module is via three pushbuttons mounted on the front panel with Manual off load, Manual on load and Auto positions. Selection of the Auto mode is confirmed by LED indicator, and monitors the incoming mains (utility) supply (3 phase or single phase). Should the incoming AC mains (utility) supply fall below a configurable pre-set limit (180V default), the generator will be requested to start, and load transferred to the genset.


When the AC mains (utility) supply returns within limits, the module will wait for a configurable, stabilisation period, and then transfer load back to the mains. The engine will be requested to stop after a cool-down period.

The module's microprocessor provides a comprehensive list of timers and functions, and access to the settings is via a small Configuration Switch on the rear of the module. Parameter settings can be adjusted using the front panel pushbuttons once in Configuration Mode.

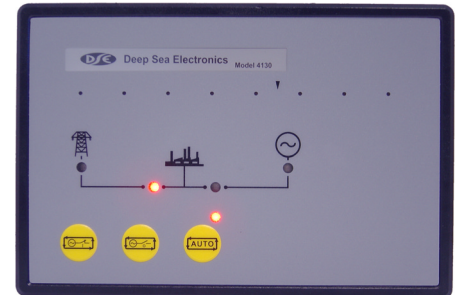
Issues such as environmental compliance and EMC have been carefully engineered into the design. Advanced features such as Protected Solid State Outputs mean that there are no moving parts or contacts to burn out.

OPERATION

Manual off load  **mode** - This is used to manually start and run the engine off load. Should the mains (utility) supply fail, then the load is transferred to the generator automatically.

Manual on load  **mode** - This is used to manually start and run the engine on load.

AUTO mode - This selects the automatic mode of operation, in which the module will await a mains failure. Once detected, the module will initiate its pre-configured start sequence, observing the Start Delay Timer before starting the engine. When the mains supply returns, the module will initiate its pre-configured stopping sequence.



SPECIFICATION

DC Supply:

8V to 35V Continuous.

Cranking Dropouts:

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

Max. Current:

50mA (12V and 24V)

Typical Current

15mA (12V and 24V)

Alternator Input Range:

75V(ph-N) to 277V(ph-N) 3 Phase 4wire AC (+20%)

Alternator Input Frequency:

50Hz - 60Hz at rated engine speed (Minimum: 75V AC Ph-N) (Crank Disconnect from 15V Ph-N @ 20Hz) Overspeed +14% (+24% overshoot) Underspeed -20%

Start/Run Outputs:

1.2 Amp DC at supply voltage. Switches to battery negative when active.

Close Gen / Mains control outputs:

1.2 Amp DC at supply voltage. Switches to battery negative when active.

Auxiliary Outputs:

1.2 Amp DC at supply voltage. Switches to battery negative when active.

Dimensions:

171mm x 115mm x 49mm (6¾" x 4½" x 2")

Charge Fail:

12V = 8V CF 24V = 16V CF

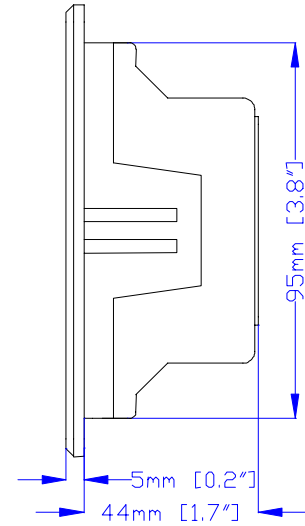
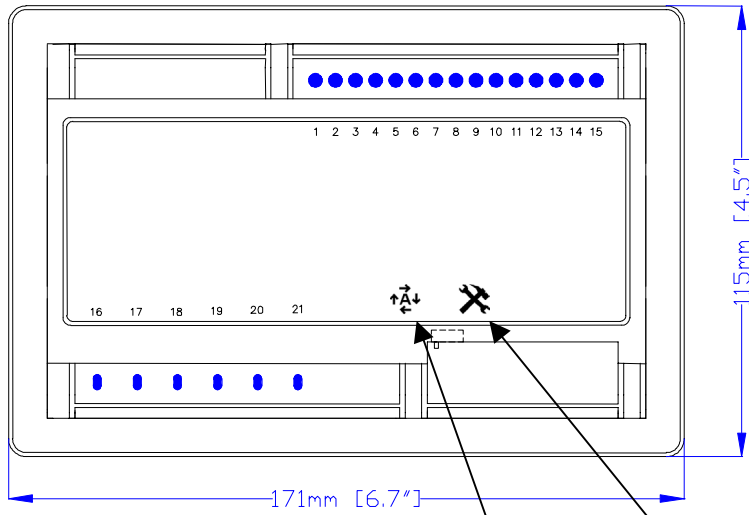
Operating Temperature Range:

-30°C to + 70°C

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*The 4100 series modules have been designed for **front panel mounting**. The module is fitted into the cutout, and is held with clips.*

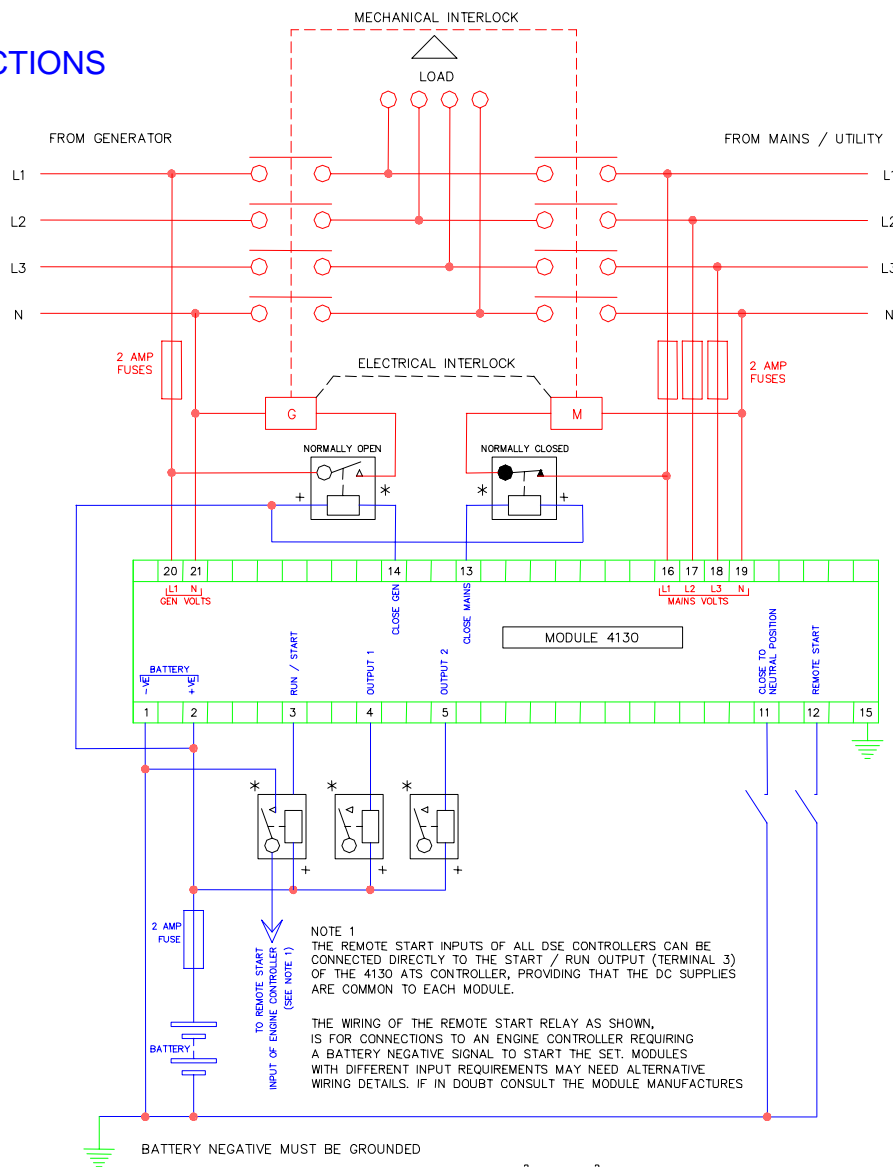
DIMENSIONS



Configure mode selector switch position : Normal mode Configure mode

Panel Cut Out :
154mm x 98mm (6.1 x 3.9")

TYPICAL CONNECTIONS



<p>Deep Sea Electronics Plc. Highfield House, Hunmanby Industrial Estate, North Yorkshire. YO14 0PH. ENGLAND Tel: +44 (0)1723 890099. Fax: +44 (0)1723 893303. Email: sales@deepseapl.com Web: www.deepseapl.com</p>	<p>Deep Sea Electronics inc. 5301 E. State St. - Suite 202 Rockford, Illinois 61108 U.S.A. Phone: +1 (815) 316-8706 Fax: +1 (815) 316-8708 Email: dsesales@deepseausa.com Web: www.deepseausa.com</p>
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