ES & ELS Series
Engine Shutdown/Override System

ES-3000 (3 Circuit Engine Shutdown)
ES-5000 (5 Circuit Engine Shutdown)
ES-8000 (8 Circuit Engine Shutdown)
ES-5015 (5 Circuit Engine Shutdown, 15 Second)
ES-8015 (8 Circuit Engine Shutdown, 15 Second)
ELS-3510 (3 Circuit Engine Shutdown, Low Current)
ELS-5510 (5 Circuit Engine Shutdown, Low Current)
ELS-8510 (8 Circuit Engine Shutdown, Low Current)

Owner's Manual
&
Installation Instructions

Read and comply with all instructions, warnings, and limitations before installing, servicing, or removing this device.

Additional copies of this manual are available at no charge by contacting the manufacturer, distributor, or dealer. Fireboy-Xintex reserves the right to change features without notice.

Part Number 18005, N, 09/04/2024

General Information

The Fireboy Engine Shutdown/Override Systems are an effective means to automatically shut down engines, generators, and blower systems in the event of a fire. By shutting down your engine room systems, you will ensure that the fire cannot be fueled by the continued operation of components on the engine as well as maintaining the proper agent concentration needed to extinguish the fire.
The Engine Shutdown/Override System consists of a Shutdown Control Module and a Helm Display Unit with an Override button. Both should be installed at the helm so that there is access to the ignition wiring.

Specification

System Specifications (ES-3000-XX)
Operating Voltage: 9-38V DC
Maximum Current Draw: 196mA @ 12V DC
Operating Temperature: 22°F (-6°C) to 158°F (70°C)
Circuits: (3) 20 Amp

System Specifications (ES-5000-XX)
Operating Voltage: 9-38V DC
Maximum Current Draw: 310mA @ 12V DC
Operating Temperature: 22°F (-6°C) to 158°F (70°C)
Circuits: (5) 20 Amp

System Specifications (ES-8000-XX)
Operating Voltage: 9-38V DC
Maximum Current Draw: 448mA @ 12V DC
Operating Temperature: 22°F (-6°C) to 158°F (70°C)
Circuits: (8) 20 Amp

System Specifications (ES-5015-XX)
Operating Voltage: 9-38V DC
Maximum Current Draw: 310mA @ 12V DC
Operating Temperature: 22°F (-6°C) to 158°F (70°C)
Circuits: (5) 20 Amp

System Specifications (ES-8015-XX)
Operating Voltage: 9-38V DC
Maximum Current Draw: 448mA @ 12V DC
Operating Temperature: 22°F (-6°C) to 158°F (70°C)
Circuits: (8) 20 Amp

Specification Continued

System Specifications (ELS-3510-XX)
Operating Voltage: 9-38V DC
Maximum Current Draw: 133mA @ 24V DC
Operating Temperature: 22°F (-6°C) to 158°F (70°C)
Circuits: (2) 2 Amp, (1) 20 Amp

System Specifications (ELS-5510-XX)
Operating Voltage: 9-38V DC
Maximum Current Draw: 216mA @ 24V DC
Operating Temperature: 22°F (-6°C) to 158°F (70°C)
Circuits: (2) 2 Amp, (3) 20 Amp

System Specifications (ELS-8510-XX)
Operating Voltage: 9-38V DC
Maximum Current Draw: 346mA @ 24V DC
Operating Temperature: 22°F (-6°C) to 158°F (70°C)
Circuits: (2) 2 Amp, (6) 20 Amp

All above Current Draws represent a single Helm Display Unit.
Add an additional 25mA when using a second Helm Display Station.

Operation of Fireboy Engine Shutdown/Override System

The Fireboy Shutdown/Override System operates by means of relays. The Shutdown Control Module is connected to the Fireboy Extinguisher by means of the Pressure Switch. When the Pressure Switch opens on the Fireboy Extinguisher, the relays on the Shutdown Control Module activate, disconnecting or connecting power to the connected systems.

The Status of the Shutdown Control/Override System is displayed on the Helm Display Unit. The Helm Display Unit has a Green and a Red LED located on the face, and a button to control Override Mode. The Green LED will be illuminated in normal operation, indicating that the Fire Extinguisher is charged. If the Extinguisher's pressure drops, then the Green LED will turn OFF and the Red LED and horn will turn ON.

Press the Override button to activate the Override Mode. The Red LED will begin flashing, indicating that you are now in Override Mode. You will now be able to restart your engines and maneuver the vessel to safety. The Shutdown Control/Override System will remain in Override Mode until it is manually deactivated by pressing the Override button while the system is powered. To notify you that you are still in Override Mode, each time the engines are restarted, both LEDs will illuminate, and the system will produce multiple beeps, then the Red LED will begin flashing. Press the Override button again to exit Override Mode.

CAUTION:

WHEN USING TWO HELM DISPLAY UNITS, IT IS BEST PRACTICE TO USE ONLY THE PRIMARY DISPLAY FOR OVERRIDE FUNCTION. WHEN ONE DISPLAY IS IN OVERRIDE MODE IT IS NOT POSSIBLE FOR THE OTHER DISPLAY TO TELL THE DIFFERENCE BETWEEN OVERRIDE AND OK BECAUSE THEY ARE WIRED IN PARALLEL. THIS RESULTS IN THE REMOTE DISPLAY SHOWING OK EVEN THOUGH THE SYSTEM IS IN OVERRIDE.

The DU-SBH-20 also has a button to control the brightness of the Green LED. Whenever the unit is first powered on, the Green LED will be at its brightest setting. Press the button to cycle through the three LED brightness settings.

DU-RBH-20
DU-RCH-20

DU-SBH-20

Installation

Installing the Engine Shutdown Control Module

The Engine Shutdown Control Module should be located near the helm where convenient access to the ignition wiring is available. Use appropriate length #8 screws and secure using all 4 mounting holes.

CAUTION:

NEVER INSTALL THE ENGINE SHUTDOWN CONTROL MODULE IN A BILGE AREA OR ENGINE ROOM.

Installing the Helm Display Unit (DU-RBH-20/DU-RCH-20/DU-SBH-20)

The Helm Display should be located at the instrument panel, so that the visible and audible indicators may be easily observed.

Drill a 2-1/16" hole to accommodate the DU-RBH-20/DU-RCH-20.
Drill a 2-1/8" hole to accommodate the DU-SBH-20.

Insert Display Unit into hole and secure with the provided threaded mounting nut.

Electrical Connections

Wiring must be made using #16 stranded copper wire conforming to ABYC Standards for Marine use, as a minimum (SAE J378B & J1128). Wiring Schematic examples are provided on page 10.

Terminals 1-3 connect the Helm Display Unit to the Engine Shutdown Control Module. Connectors are provided on each component.

Terminals 4 & 5 connect the Fireboy Fire Extinguisher to the Engine Shutdown Control Module. Connections must be made with insulated crimp terminals, hooked or closed eye type only. Open spade terminals are not recommended. Terminal 5 must also be tied to battery ground. Do not connect to engine block. In applications that require multiple extinguisher systems, the pressure switches must be wired in series to allow any extinguisher to operate the Engine Shutdown Control Module.

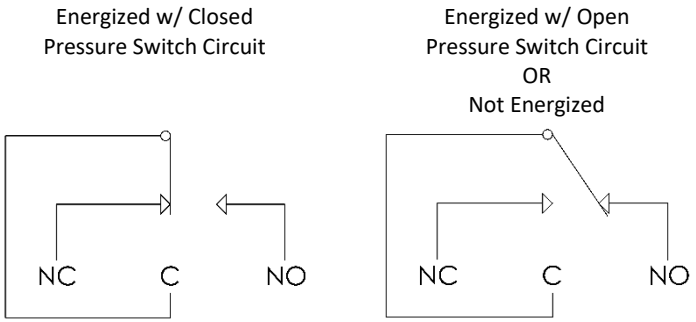
Input Terminals are provided to connect control/ignition switches to the Engine Shutdown Control Module. There are dedicated Input Terminals for each engine, Port and Starboard, and varying number of Auxiliary Input Terminals depending on the model of Engine Shutdown. The Positive Battery Terminal must be wired to each control/ignition switch and then to the corresponding Input Terminal. The Input Terminal must then have a jumper to the corresponding Common (C) Terminal of the circuit.

Each circuit has both Normally Open (NO) and Normally Closed (NC) Terminals to connect engine room systems. The current draw limitations for each circuit varies based on the model of Engine Shutdown. Refer to the manufacturer's instructions for connecting to each system to determine whether the system should be connected to the NO or NC side of the circuit.

- Gasoline engines must be shut down by interrupting the primary ignition wire from the ignition switch to the ignition coil. This can be implemented by utilizing the Common (C) and Normally Closed (NC) Terminals.
- Diesel engines must be shut down by interrupting the fuel source. Some models of fuel solenoids close when voltage is added, while other fuel solenoids close when voltage is taken away. Verify how each of your fuel solenoids operate before wiring by contacting engine/boat manufacturer.

NOTE:

THE FIREBOY ENGINE SHUTDOWN/OVERRIDE SYSTEM RELAYS CHANGE STATE WHEN ENERGIZED AND THE FIREBOY EXTINGUISHER PRESSURE SWITCH CIRCUIT IS IN THE CLOSED STATE.



NOTE:

ENGINE SHUTDOWN MODELS ARE AVAILABLE WITH A TIME DELAY FOR USE WITH FUEL SOLENOIDS ON DETROIT DESIEL ENGINES THAT CAN BE DAMAGED FROM CONSTANT VOLTAGE.

Testing the Engine Shutdown System

The Engine Shutdown System can be tested by disconnecting either wire connection at the Pressure Switch on the Fire Extinguisher. When the wire is disconnected, the engine shutdown will activate. Verify that engines shut down and that all other equipment operates as expected. The Helm Display unit will indicate that the Fire Extinguisher has discharged with a Red LED and audible horn. Test the Helm Display by turning the ignition to the ON position. Press the "Override" button, to activate the Override Mode. The Red LED will begin flashing, indicating that you are now in Override Mode. You will now be able to restart your engines. Reconnect the wire at the Pressure Switch and deactivate Override Mode.

Maintenance

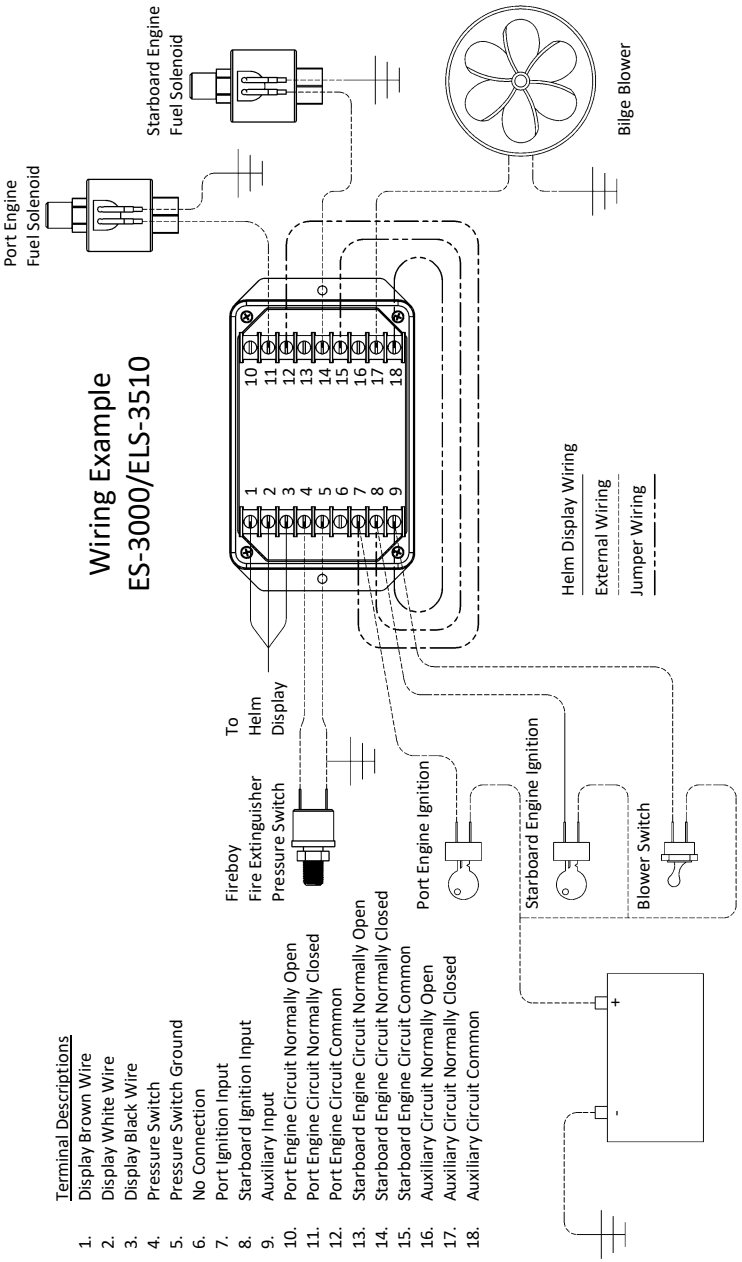
The system should be tested periodically in the fashion described in the previous section.

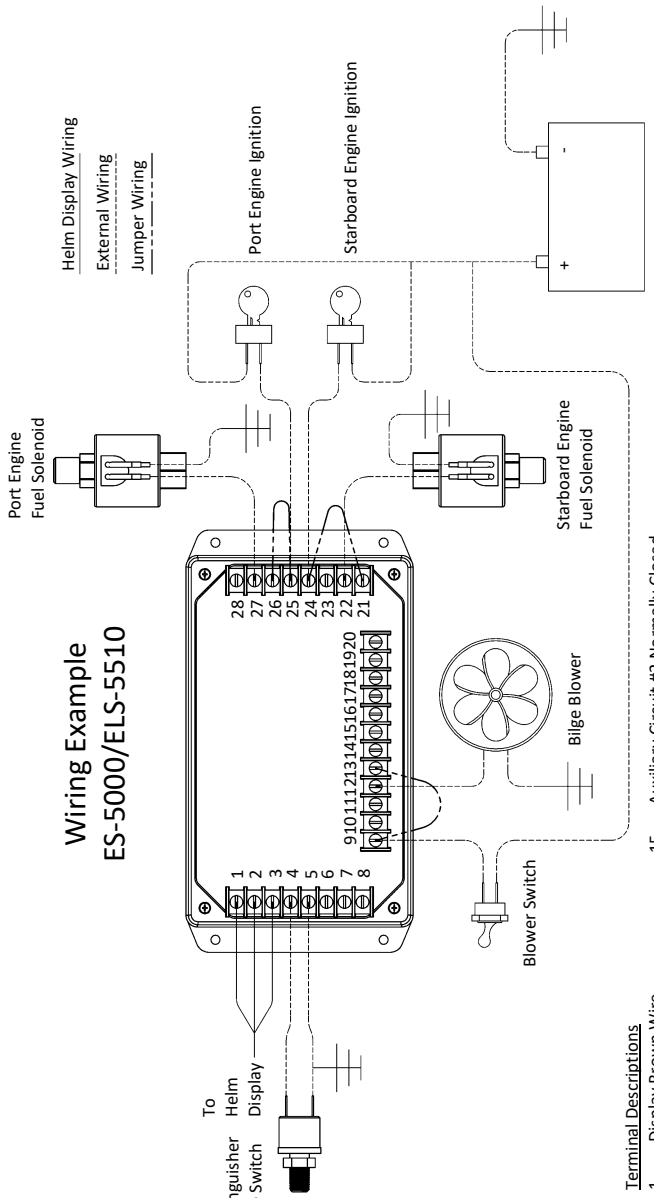
Repairing Fireboy Engine Shutdown Control Component(s)

Fireboy Engine Shutdown Controls are not field serviceable. Components must be returned to the factory for any repairs.

Returning Fireboy Engine Shutdown Control Component(s)

No product may be returned for credit or repair without a written “Returned Material Authorization” (RMA) form. Purchaser must call or email Fireboy-Xintex 616-735-9380 or fireboy@fireboy-xintex.com for an RMA. For international customers, call or email Fireboy-Xintex UK Operations Limited +44 (0) 845 389 9462 or fireboyeu@fireboy-xintex.com. If due to extenuating circumstances a product is to be returned, after approval it must be received in 100% new/resalable condition. Products stored by the buyer for more than 26 weeks may not be returned for any reason. Maintaining fresh and current inventory is the responsibility of the buyer.

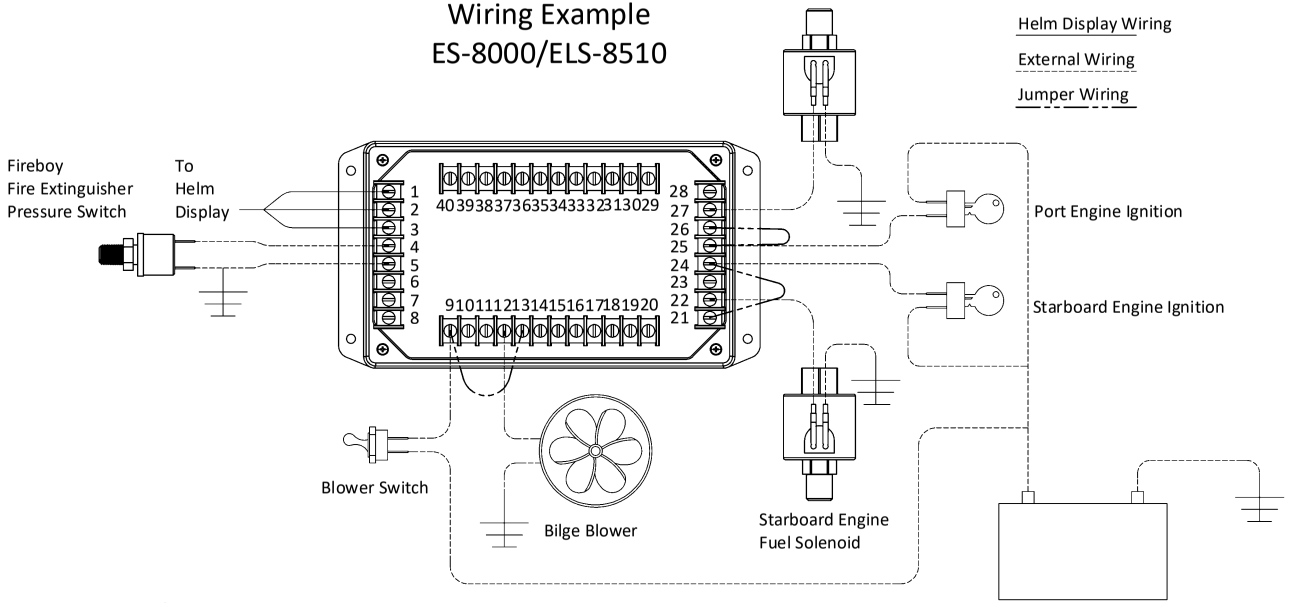

Wiring Example
ES-3000/ELS-3510
Port Engine
Fuel Solenoid
Starboard Engine
Fuel Solenoid
Bilge Blower
Helm Display Wiring
External Wiring
Jumper Wiring
To
Helm
Display
Fireboy
Fire Extinguisher
Pressure Switch
Port Engine Ignition
Starboard Engine Ignition
Blower Switch
Terminal Descriptions
1. Display Brown Wire
2. Display White Wire
3. Display Black Wire
4. Pressure Switch
5. Pressure Switch Ground
6. No Connection
7. Port Ignition Input
8. Starboard Ignition Input
9. Auxiliary Input
10. Port Engine Circuit Normally Open
11. Port Engine Circuit Normally Closed
12. Port Engine Circuit Common
13. Starboard Engine Circuit Normally Open
14. Starboard Engine Circuit Normally Closed
15. Starboard Engine Circuit Common
16. Auxiliary Circuit Normally Open
17. Auxiliary Circuit Normally Closed
18. Auxiliary Circuit Common



Terminal Descriptions

1. Display Brown Wire
2. Display White Wire
3. Display Black Wire
4. Pressure Switch
5. Pressure Switch Ground
6. No Connection
7. No Connection
8. No Connection
9. Auxiliary Circuit #1 Input
10. Auxiliary Circuit #2 Input
11. Auxiliary Circuit #3 Input
12. Auxiliary Circuit #1 Normally Closed
13. Auxiliary Circuit #1 Common
14. Auxiliary Circuit #1 Normally Open
15. Auxiliary Circuit #2 Normally Closed
16. Auxiliary Circuit #2 Common
17. Auxiliary Circuit #2 Normally Open
18. Auxiliary Circuit #3 Normally Closed
19. Auxiliary Circuit #3 Common
20. Auxiliary Circuit #3 Normally Open
21. Starboard Engine Circuit Common
22. Starboard Engine Circuit Normally Closed
23. Starboard Engine Circuit Normally Open
24. Starboard Ignition Input
25. Port Ignition Input
26. Port Engine Circuit Common
27. Port Engine Circuit Normally Closed
28. Port Engine Circuit Normally Open

Wiring Example
ES-8000/ELS-8510



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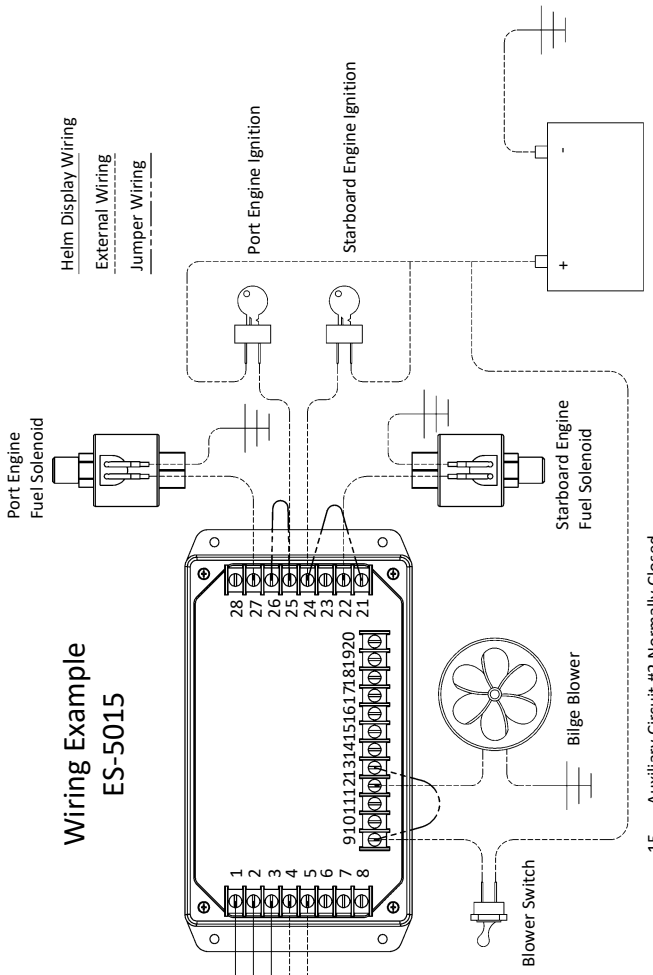
7. No Connection
8. No Connection
9. Auxiliary Circuit #1 Input
10. Auxiliary Circuit #2 Input
11. Auxiliary Circuit #3 Input
12. Auxiliary Circuit #1 Normally Closed
13. Auxiliary Circuit #1 Common
14. Auxiliary Circuit #1 Normally Open
15. Auxiliary Circuit #2 Normally Closed
16. Auxiliary Circuit #2 Common
17. Auxiliary Circuit #2 Normally Open
18. Auxiliary Circuit #3 Normally Closed
19. Auxiliary Circuit #3 Common
20. Auxiliary Circuit #3 Normally Open
21. Starboard Engine Circuit Common
22. Starboard Engine Circuit Normally Closed
23. Starboard Engine Circuit Normally Open
24. Starboard Ignition Input
25. Port Ignition Input
26. Port Engine Circuit Common
27. Port Engine Circuit Normally Closed
28. Port Engine Circuit Normally Open
29. Auxiliary Circuit #4 Normally Closed
30. Auxiliary Circuit #4 Common
31. Auxiliary Circuit #4 Normally Open
32. Auxiliary Circuit #5 Normally Closed
33. Auxiliary Circuit #5 Common
34. Auxiliary Circuit #5 Normally Open
35. Auxiliary Circuit #6 Normally Closed
36. Auxiliary Circuit #6 Common
37. Auxiliary Circuit #6 Normally Open
38. Auxiliary Circuit #4 Input
39. Auxiliary Circuit #5 Input
40. Auxiliary Circuit #6 Input



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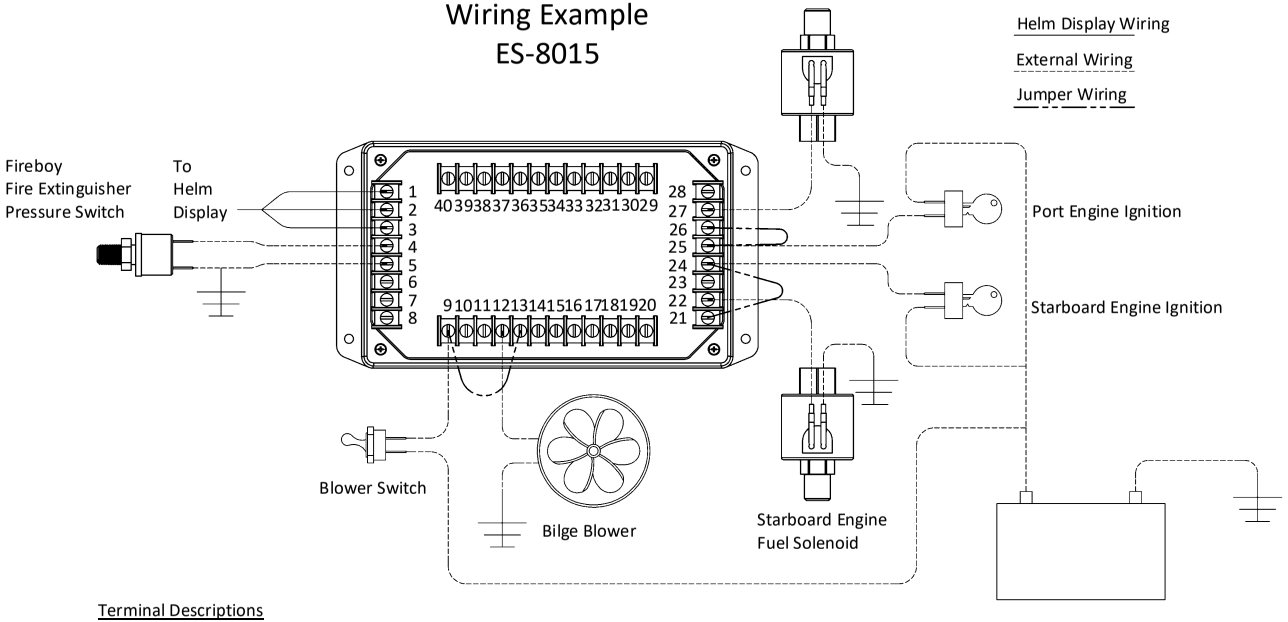
10. Auxiliary Circuit #2 Input
11. Auxiliary Circuit #3 Input
12. Auxiliary Circuit #1 Normally Closed
13. Auxiliary Circuit #1 Common
14. Auxiliary Circuit #1 Normally Open
15. Auxiliary Circuit #2 Normally Closed
16. Auxiliary Circuit #2 Common
17. Auxiliary Circuit #2 Normally Open
18. Auxiliary Circuit #3 Normally Closed
19. Auxiliary Circuit #3 Common
20. Auxiliary Circuit #3 Normally Open
21. Starboard Engine Circuit Common
22. Starboard Engine Circuit Normally Open
23. Starboard Engine Circuit Normally Closed
24. Starboard Ignition Input
25. Port Ignition Input
26. Port Engine Circuit Common
27. Port Engine Circuit Normally Open
28. Port Engine Circuit Normally Closed

Wiring Example
ES-8015



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9. Auxiliary Circuit #1 Input
10. Auxiliary Circuit #2 Input
11. Auxiliary Circuit #3 Input
12. Auxiliary Circuit #1 Normally Closed
13. Auxiliary Circuit #1 Common
14. Auxiliary Circuit #1 Normally Open
15. Auxiliary Circuit #2 Normally Closed
16. Auxiliary Circuit #2 Common
17. Auxiliary Circuit #2 Normally Open
18. Auxiliary Circuit #3 Normally Closed
19. Auxiliary Circuit #3 Common
20. Auxiliary Circuit #3 Normally Open
21. Starboard Engine Circuit Common
22. Starboard Engine Circuit Normally Open
23. Starboard Engine Circuit Normally Closed
24. Starboard Ignition Input
25. Port Ignition Input
26. Port Engine Circuit Common
27. Port Engine Circuit Normally Open
28. Port Engine Circuit Normally Closed
29. Auxiliary Circuit #4 Normally Closed
30. Auxiliary Circuit #4 Common
31. Auxiliary Circuit #4 Normally Open
32. Auxiliary Circuit #5 Normally Closed
33. Auxiliary Circuit #5 Common
34. Auxiliary Circuit #5 Normally Open
35. Auxiliary Circuit #6 Normally Closed
36. Auxiliary Circuit #6 Common
37. Auxiliary Circuit #6 Normally Open
38. Auxiliary Circuit #4 Input
39. Auxiliary Circuit #5 Input
40. Auxiliary Circuit #6 Input

1 Year Limited Warranty

This Warranty is in lieu of all other expressed or implied Warranties

Seller warrants title, materials, and workmanship on equipment, except components manufactured by others for which the Seller assigns, as permitted, the original manufacturer's warranty. Seller's warranty shall be for a period of (1) one year from the date of sale to the ORIGINAL CONSUMER PURCHASER, during which non-conforming equipment returned to the Seller at Buyer's expense and risk, be repaired or replaced at the Seller's option. Fireboy-Xintex will repair or replace products found to be defective in materials or workmanship within the period set forth above, provided that: (a) the product has not been subjected to abuse, contamination, neglect, accident, incorrect wiring not our own, improper installation or servicing, or used in violation of instructions furnished by Fireboy-Xintex and (b) as to any prior defects in materials or workmanship covered by this warranty, the product has not been repaired or altered by anyone except Fireboy-Xintex and (c) the serial number has not been removed, defaced or otherwise changed, and (d) examination discloses, in the judgment of Fireboy-Xintex, does not assume the costs of removal and/or installation of the product or any other incidental costs of removal and/or installation of the product or any other incidental costs which may arise as a result of any defect in material or workmanship, and (e) upon discovery of defect, Buyer shall immediately cease use of and notify Fireboy-Xintex.

Any warranty implied by law, including warranties of merchantability or fitness, is in effect only for the duration of the expressed warranties set forth above, no person is authorized to give any other warranty, or to assume for Fireboy-Xintex any other liability in connection with the sale of its products; Fireboy-Xintex shall not be liable for the loss of use, revenue, or profit or for any injury, or for any other consequential or incidental damages, buyer is not relying on seller's judgment regarding his or her particular requirements, and has had an opportunity to inspect the product to his or her satisfaction.

This warranty gives you specific legal rights, and you may also have other rights, which vary, from location to location.

Contact information is listed below. For US customers, contact Fireboy-Xintex. For international customers, contact Fireboy-Xintex UK Operations Limited.

www.fireboy.com

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