

# INSTALLATION INSTRUCTIONS OWNER'S MANUAL

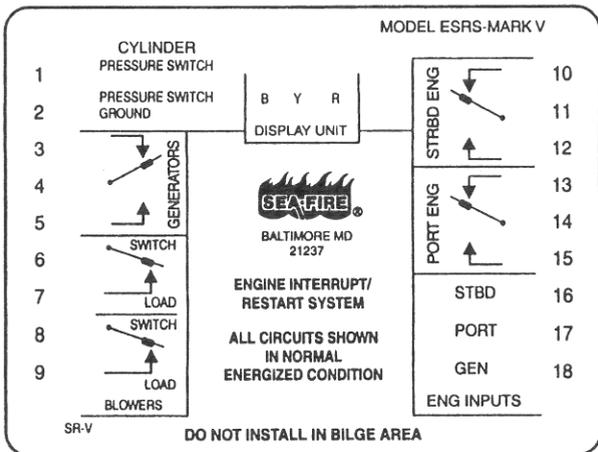
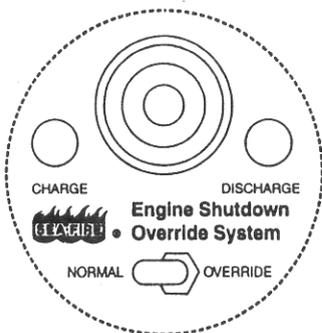
**THIS MANUAL IS AN INTEGRAL PART OF THE SYSTEM AND AS SUCH,  
THE SYSTEM MUST BE INSTALLED AND MAINTAINED ACCORDINGLY.**

## ESRS-MARK V SR

### FEATURES

- Fully automatic equipment shutdown system with manual override capabilities.
- Visual and audible indication of fire extinguishing system discharge.
- Compact construction. Display unit house's status lights, override switch and audible alarm device.
- Separate compact Control Unit with factory installed connector. Optional extender cables are available for mounting more than 30 inches (762 mm) apart.
- One or more Display Units may be connected to the Control Unit.

**"ISO 8846 - MARINE"**



**ENGINE INTERRUPT/ RESTART SYSTEM  
for use with**

**AUTOMATIC  
FIRE EXTINGUISHER**

**WARNING:** THIS SEA-FIRE ENGINE INTERRUPT / RESTART SYSTEM HAS BEEN DESIGNED AND TESTED FOR USE WITH SEA-FIRE AUTOMATIC FIRE EXTINGUISHERS ONLY. INSTALLATION MUST BE ACCOMPLISHED BY OR UNDER THE SUPERVISION OF A QUALIFIED MARINE ELECTRICIAN WHO IS FAMILIAR WITH AMERICAN BOAT & YACHT COUNCIL (ABYC) AND OTHER RECOGNIZED AND ACCEPTED MARINE STANDARDS AND PRACTICES.

**CAUTION:** DO NOT INSTALL THIS DEVICE IN ENGINE OR FUEL STORAGE COMPARTMENTS.

READ THIS MANUAL THOROUGHLY AND COMPLY WITH ALL INSTRUCTIONS, WARNINGS, AND CAUTIONS PRIOR TO INSTALLATION.

**RETAIN THIS MANUAL FOR REFERENCE**

PN: 123-123 Rev. 3/03

## OPERATION

Should fire or extreme overheating cause the SEA-FIRE automatic fire extinguishing system to discharge, it may become necessary to shutdown the engine(s), blowers, and generator.

Equipment shutdown will insure that the extinguishing agent in its proper concentration will remain in the enclosed compartment and not be ingested or fueled by the running equipment.

The Engine Interrupt/Restart System, when properly installed, has provisions for simultaneous equipment shutdown upon extinguisher discharge. This is accomplished by use of an in-cylinder pressure switch, which is standard equipment on all SEA-FIRE automatic fire extinguishers.

Immediately upon system discharge the pressure switch will deactivate the control unit. This in turn will open or close (depending on application) the control contacts thereby disrupting the primary circuit on gasoline engine(s) or electrically controlled fuel solenoid valves and air dampers on diesel(s).

### DISPLAY UNIT INDICATOR LIGHT STATUS

<u>SYSTEM STATUS</u>	<u>AUDIBLE SOUNDER</u>	<u>GREEN LED</u>	<u>RED LED</u>
NORMAL POWER "ON"	OFF	ON	OFF
ALARM (DISCHARGE)	ON	OFF	ON
OVERRIDE MODE	OFF	OFF	OFF

The control unit is designed to allow for a second (optional) Display unit to be installed at a remote location such as a fly bridge.

**CAUTION: IN THE EVENT OF AN ALARM INDICATION, SHUTOFF ALL ELECTRICAL POWER INCLUDING ENGINE(S), BLOWERS, GENERATOR AND ALL ACCESSORIES CONTROLS. DETERMINE CAUSE OF ALARM AND CORRECT PRIOR TO RE-ENERGIZING ANY EQUIPMENT OR PLACING THE TOGGLE SWITCH IN THE OVERRIDE MODE AT THE DISPLAY UNIT.**

## INSTALLATION

Select an accessible location at the helm station instrument panel for installation of the Display Unit. Cut a 2-1/16" hole through the instrument panel, insert Display Unit through hole and secure with bracket and hardware supplied with the unit.

Install the Control Unit in a convenient location accessible to ignition wiring. Mount with screws or bolts of appropriate length.

NOTE: A mounting separation of over 30 inches (760 mm) between the Display Unit and the Control Unit will require an optional harness extender cable. These extender cables are available in two sizes 10 ft. (3 m) and 30 ft. (9 m).

Prior to proceeding with the electrical connections, ensure that the fire extinguisher cylinder has been properly installed in the compartment to be protected in accordance with the installation instructions supplied with the extinguisher.

## ELECTRICAL CONNECTIONS

As a minimum, use No. 16 AWG (SAE J3788 & J1128) copper wire conforming to the American Boating & Yacht Council (ABYC) standards for marine use on all wiring applications.

Connections to the Control Unit and the SEA-FIRE extinguisher should be made with insulated crimp connectors. Refer to the wiring diagram in Fig. No. 1 when making connections to this unit.

1. Connect the Display Unit to the Control Unit by attaching the two factory wired insulated harness plugs.
2. Connect the extinguisher pressure switch to the control unit terminals as labeled. Use a two wire hookup, **do not rely on a common ground return.**
3. Connect a wire from the ground bus (negative battery) to the Control Unit terminal marked for this purpose.

## GASOLINE ENGINE SHUTDOWN

Gasoline engine(s) may be shutdown by interruption of the primary ignition power from the key switch to the ignition coil. This can be accomplished by the use of the common and normally closed contacts shown on the unit and wiring diagram.

NOTE: Gasoline engines will sometimes stall due to agent ingestion although the normal/override switch is in the override position.

## DIESEL ENGINE SHUTDOWN

There are several methods that are used for diesel engine shutdown:

1. Fuel solenoid valves that are energized to open on start up, and de-energized to shutdown so as to create fuel starvation. The swinger and normally closed set of contacts would be used to achieve this condition.
2. Fuel solenoid valves that are open when de-energized and energized closed to shutdown through fuel starvation. The swinger and normally open set of contacts will achieve this condition.

When using method No.2, it is recommended by some fuel solenoid manufacturers to limit the shutdown activation (energized) time applied to the fuel solenoid. In this type of application SEA-FIRE recommends the use of their VT model, which includes a 20 second disconnect timer on the engine(s) shutdown circuits.

In the event your engine(s) have been designed to shutdown by mechanical air or mechanical fuel starvation, we recommend contacting the engine or boat manufacturer for advice as to converting these to an electrical shutdown system.

## INSTALLATION CHECK

Complete all electrical connections as described under the electrical connections section and the wiring diagram. Check that all connections are correctly wired and secured.

1. Place the Display Unit Switch in the NORMAL position and apply power to the system. The green charge indicator light will glow. Activate all engine(s) and equipment connected to the Control Unit and check for normal operation.
2. Unplug the wire harness at the extinguisher pressure switch. This immediately extinguishes the green CHARGE indicator light and causes the red DISCHARGE to glow with a simultaneous warning from the alarm sounder.
3. All engines and associated equipment connected through the Control Unit will shutdown and cease to operate.
4. Position the NORMAL/OVERRIDE switch on the display unit to the OVERRIDE position. This will extinguish the indicator light(s) and silence the alarm.
5. Restart the engine(s) and check associated equipment for proper operation.
6. RECONNECT the plug previously disconnected at the pressure switch.
7. Return Normal/Override switch to normal position.

This concludes the installation and electrical component test.

NOTE: When connecting more than one extinguishing cylinder to a Control Unit, all pressure switches must be wired in series, and grounded at the last pressure switch only. Installation check must include a test at each individual pressure switch. Refer to Fig. No. 2 of the wiring diagram.

The discharge alarm is an enhancement to the SEA-FIRE fire suppression system. It will provide visual and audible warning of system discharge. It is not intended as a replacement for the regular required maintenance as listed in the suppression system owner's manual.

## SPECIFICATIONS

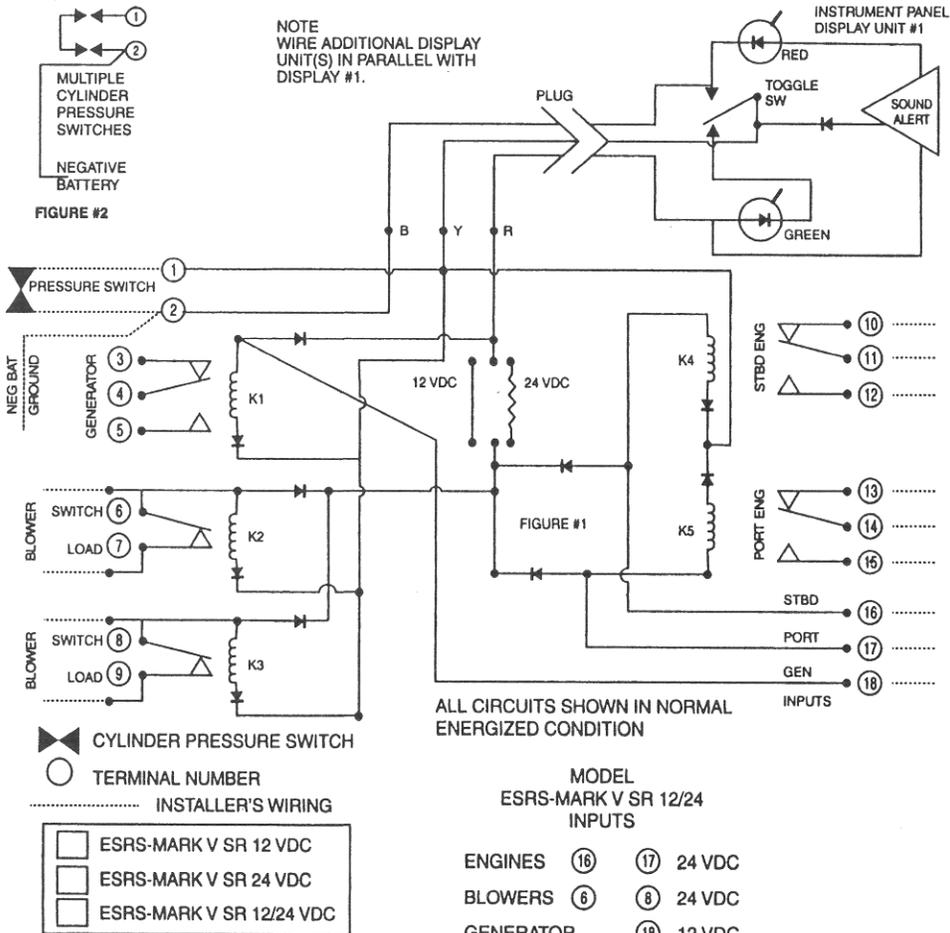
DISPLAY UNIT: Face Diameter: 2.4 in. (60 mm), Body Diameter: 2.062 in. (52 mm)

Wire Harness and Connector: 15 in. (381 mm)

CONTROL UNIT: Plastic Housing, Harness & Connector: 16 in. (457 mm)

<u>Model</u>	<u>Circuits</u>	<u>Contact Rating</u>	<u>Dimensions</u>
ESRS V SR	3 Form C 2 Form A	20A 10A (NO/NC)	7.25x4.5x3 in. (184x114x76mm)

Note: All measurements are nominal



**NOTE:**

When connecting more than one extinguishing cylinder to a control unit, all pressure switches must be connected in series, and grounded at the last pressure switch only. Final Installation check must include the test at each pressure switch individually. Refer to Figure 2 of the wiring diagram.

**ONE YEAR LIMITED WARRANTY**

We Warranty to the original retail purchaser of the Sea-Fire Engine Interrupt/Restart System for a period of one (1) year after retail purchase against defective material and faulty workmanship. Any engine interrupt system found to be defective during the warranty period will be replaced or repaired free of charge upon the prepaid return of the defective system.

This warranty provides specific legal rights and you may have other rights which vary from state to state.



## SEA-FIRE EXTINGUISHING MARINE PRODUCTS

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