



# Propane Fume Detection System With Solenoid Valve Control

## Single Channel Systems

P-1BS-R (Black, Round, Solenoid Control)

P-1CS-R (Chrome, Round, Solenoid Control)

## Dual Channel System

P-2BS-R (Black, Square, Solenoid Control)

## 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.

General Information	3
Specifications	3
Operation of Xintex Propane Fume Detector(s)	4
Installation	6
Installing the Display Unit (P1BR-S01-D/P1CR-S01-D & P2BS-S01D)	6
Installing the Solenoid Valve (SV-1) for LPG Applications	6
Routing Sensor Cable(s) (FS-X01 CABLE XX')	6
Installing Propane Fume Sensor(s) (FS-T01)	7
Electrical Connections (P1BR-S01-D/P1CR-S01-D & P2BS-S01D)	7
Testing the System Operation	7
Testing the Propane Fume Sensors	8
Maintenance	8
In the Event of an Alarm	8
Repairing Xintex Propane Detection Components	8
Returning Xintex Propane Detection Components	8
1 Year Limited Warranty	9

## General Information

### WARNING

PROPANE FUME DETECTORS ARE MEANT TO SERVE AS A SUPPLEMENTAL WARNING SYSTEM. IT IS NOT MEANT TO REPLACE STANDARD SAFETY PRACTICES WHICH SHOULD BE CARRIED OUT AROUND EXPLOSIVE GASES.

The P-1BS-R, P-1CS-R, and P-2BS-R Propane Fume Detectors are an effective means to monitor propane fumes in a compartment or leaking fuel systems. In addition, these units have the ability to control the flow of CNG/LPG to your appliances. The system uses a sensor, located in a place of interest, and a central display unit that notifies you of the state of the system.

## Specification

### System Specifications (P-1BS-R/P-1CS-R)

Operating Voltage: 9-30 VDC

Nominal Current Draw: 55mA @ 12 VDC

Maximum Current Draw: 725mA @ 9 VDC

Operating Temperature: -40°F (-40°C) to 185°F (85°C)

Alarm Horn: ≈ 68dB

### System Specifications (P-2BS-R)

Operating Voltage: 9-30 VDC

Nominal Current Draw: 95mA @ 12 VDC

Maximum Current Draw: 780mA @ 9 VDC

Operating Temperature: -40°F (-40°C) to 185°F (85°C)

Alarm Horn: ≈ 68dB

## Operation of Xintex Propane Fume Detector(s)

There are 3 LEDs located on the Display Unit for each channel on the system, as well as an LED for the Solenoid Valve status. The Green LED, located at the top, indicates that the system is operational. The Yellow LED, located in the center, indicates that there is a Fault in the system. This is to notify the user to check the connections and wire runs of the sensors. There may be a break in the wiring or a disconnected sensor on that channel. The Red LED, located at the bottom, indicates a fume buildup of 20% of the LEL (Lower Explosive Limit) which is considered an alarm. The alarm horn will sound when the Red LED is illuminated. The alarm horn will actuate, Solenoid Valve will close, and the Solenoid Valve status LED will deactivate when the Red LED is illuminated. Whenever the Solenoid Valve status LED is illuminated, the Solenoid Valve is open.

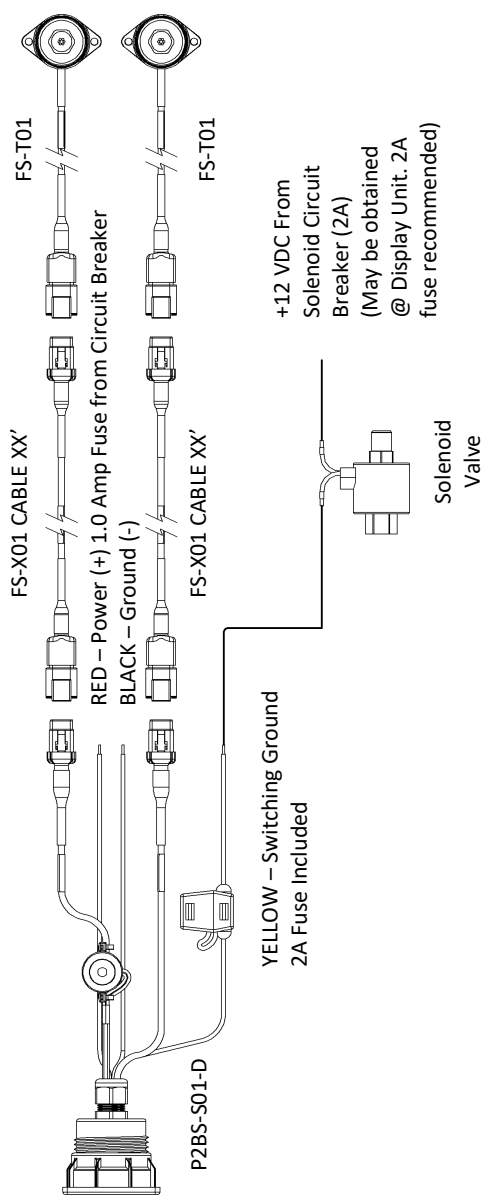
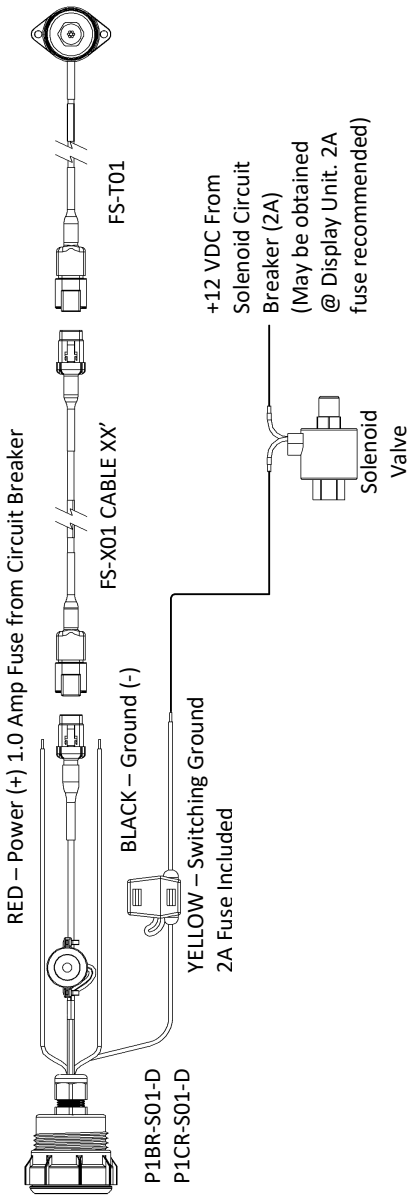


P1BR-S01-D  
P1CR-S01-D



P2BS-S01-D

The alarm status will continue as long as the fume level remains at an elevated level. The alarm horn may be silenced by pressing the "Check/Reset" button. The alarm will reactivate after 30 seconds as long as the Detector remains in alarm status. The problem should never be considered corrected as long as the Red LED is illuminated.



## Installation

### Installing the Display Unit (P1BR-S01-D/P1CR-S01-D & P2BS-S01D)

The Display Unit 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 P1BR-S01-D/P1CR-S01-D Display Unit.  
Drill a 2-1/8" hole to accommodate the P2BS-S01-D Display Unit.

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

#### **NOTE**

DO NOT MAKE ELECTRICAL CONNECTIONS AT THIS TIME. THEY WILL BE ADDRESSED IN A LATER SECTION.

### Installing the Solenoid Valve (SV-1) for LPG Applications

The Solenoid Valve should be mounted on the tank side of the LPG regulator, as close to the tank as practical. The tank itself should be mounted outside the cabin or crew quarters to avoid the possibility of gas accumulation due to a leak.

#### **NOTE**

TIGHTEN TO 12-13 FT/LBS. DO NOT OVER-TIGHTEN.

#### **NOTE**

ALL PIPING MUST BE CHECKED FOR LEAKS. USE SOAPY WATER SOLUTION ON ALL JOINTS. NEVER USE A FLAME TO CHECK FOR LEAKS.

### Routing Sensor Cable(s) (FS-X01 CABLE XX')

A 20 FT Sensor Cable is provided for each Propane Fume Sensor. The Sensor Cables should be routed starting at the Display Unit, then to the pre-determined location of the Propane Fume Sensor. Connect to the Display Unit using the attached quick-disconnect connectors. Take care not to pinch, break, or cut the Sensor Cable or put too much stress on the connectors while routing the cable. Secure the Sensor Cable with the appropriate hardware for the application.

#### **NOTE**

DO NOT CUT EXTENSION CABLE FOR ANY PURPOSE. DOING SO VOIDS THE PRODUCTS WARRANTY. LONGER CABLES ARE AVAILABLE FROM 20 FT TO 100 FT.

## Installation Continued

### Installing Propane Fume Sensor(s) (FS-T01)

The Propane Fume Sensor should be located by the propane powered appliance, near the floor. Avoid areas where damage may take place due to cleaning, mopping, kicking, or other physical damage. Harsh chemicals should not be used to clean sensors.

Use the appropriate #8 mounting hardware to mount the Propane Fume Sensor in the desired location. The rubber gasket should be installed between the sensor and the mounting surface.

Connect to the Extension Cable using the attached quick-disconnect connectors.

### Electrical Connections (P1BR-S01-D/P1CR-S01-D & P2BS-S01-D)

The Display Unit operates on 9-30 VDC. A Red and a Black 16 GA wire are provided for connecting to the power source. Connect the Red wire to Power (+) with an inline 1.0 Amp fuse. Connect the Black wire to Ground (-).

A 2A fused Yellow 16 GA wire is provided for connecting the Display Unit to the Solenoid Valve. Connect the Yellow wire to the Solenoid Valve. Connect the +12/24 VDC to the Solenoid Valve.

#### **NOTE**

UNITS MANUFACTURED PRIOR TO JANRUARY 01, 2018 DO NOT INCLUDE THE 2A FUSE. A DEDICATED 2A FUSE OR BREAKER SHOULD BE USED TO POWER THE SOLENOID VALVE.

#### **NOTE**

IMPROPER CONNECTIONS WILL DAMAGE THE DISPLAY UNIT AND WILL VOID WARRANTY.

## Testing the System Operation

The Propane Fume Detectors can be tested by pressing the "Check/Reset" button on the face of the Display Unit. The Display Unit will cycle through the LEDs and the alarm horn will activate while the LEDs cycle.

Unplug the Propane Fume Sensor from each channel of the Detection System one at a time. The Yellow "Fault" LED should illuminate. If the Yellow LED does not illuminate, remove Display Unit and return direct to manufacturer following the instructions at the back of this manual.

To test the Solenoid Control function, check that the flame of your appliance extinguishes when the Solenoid Control function is turned OFF.

## Testing the Propane Fume Sensors

### **WARNING**

**DO NOT USE A PROPANE SOAKED RAG OR A PARTIALLY FULL CONTAINER OF PROPANE TO TEST A SENSOR. THE RAW PROPANE COULD IGNITE, RESULTING IN SERIOUS INJURY.**

Test the Sensors by holding a Butane lighter to the sensor. Within a few seconds, the Red "Danger" LED should illuminate and the alarm horn will sound. Remove the lighter from the Sensor and mute the alarm horn. After approximately one minute, the Red LED will shut off.

## Maintenance

The system should be tested periodically in the fashion described in the previous sections. Due to the harsh environmental conditions in marine applications, it is recommended to replace the Propane Fume Sensors every 3-4 years.

## In the Event of an Alarm

Immediately have all passengers and crew exit the passenger compartment and vessel if possible.

Ventilate the space being monitored.

Carefully check all fuel lines and other potential sources of propane fume leaks. If leaks are identified, shut off fuel supply and make any necessary repairs.

## Repairing Xintex Propane Fume Detection Components

Xintex Propane Fume Detection Components are not field serviceable. Components must be returned to the factory for any repairs.

## Returning Xintex Propane Detection Components

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](mailto:fireboy@fireboy-xintex.com) for a RMA. 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.



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 LLC 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 LLC 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 LLC and (c) the serial number has not been removed, defaced or otherwise changed, and (d) examination discloses, in the judgment of Fireboy-Xintex LLC, 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 LLC.

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 LLC any other liability in connection with the sale of its products; Fireboy-Xintex LLC 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 state to state.

[www.fireboy-xintex.com](http://www.fireboy-xintex.com)

Fireboy-Xintex LLC  
O-379 Lake Michigan Dr. NW  
Grand Rapids, MI 49534  
[fireboy@fireboy-xintex.com](mailto:fireboy@fireboy-xintex.com)  
Phone (616) 735 9380

Fireboy-Xintex UK Operations Limited  
10 Holton Road, Holton Heath Trading Park  
Poole Dorset BH16 6LT UK  
[fireboyeu@fireboy-xintex.com](mailto:fireboyeu@fireboy-xintex.com)  
Phone 44 (0) 845 9462