

INSTALLATION AND OPERATION MANUAL

TRIDENT MARINE L.P. GAS SYSTEMS

12/24VDC MARINE L.P. GAS CONTROL/DETECTION SYSTEMS MARINE UL LISTED

1300-7760

12/24VDC Control Panel & Detector • 10' Quick Connect Wire Cable

1300-7761

12VDC Control Panel & Detector • 10' Quick Connect Wire Cable • 12VDC Solenoid (3/8" Ports)

SYSTEM TURNS GAS ON & OFF AT SOLENOID FROM INSIDE GALLEY & AUTOMATICALLY ACTIVATES AUDIO/VISUAL ALARMS & SHUTS OFF GAS FLOW IF GAS FUME IS DETECTED

Thank you for purchasing Trident Marine's state of the art MARINE UL Listed L.P. Gas Control & Detection System. Designed to protect you and your family this system will detect and alert you of potentially hazardous situations. It automatically turns off the Solenoid at the Propane Tank(s) to stop further L.P. Gas leakage. With Trident Marine's Control Panel you can have up to 3 Detectors to monitor any 3 areas you desire (a Detector should be located close to the L.P. Gas Appliance to accurately monitor for a gas leak). Each of the 3 Detectors have a corresponding Alarm Light on the Control Panel, so you will know by looking at the Control Panel which Detector has detected a gas fume.

* If a 24VDC System is to be used, a 24VDC Solenoid Valve is needed (Part # 1300-7708.2-24V)

What is Included in this Kit 1300-7760

1 L.P. Gas Control Panel with Mounting Plate

1 L.P. Gas Detector with Quick Connector (additional Detector(s) Part # 1300-7720)

1 10 ft. Quick Connect Wire Cable with a Quick Connect on each end (Part #1300-7721-120)

* If a longer Quick Connect Wire Cable is required, a 20 ft. is available (Part #1300-7721-240)

What is Included in this Kit 1300-7761

1 L.P. Gas Control Panel with Mounting Plate

1 L.P. Gas Detector with Quick Connector (additional Detector(s) Part # 1300-7720)

1 10 ft. Quick Connect Wire Cable with a Quick Connect on each end (Part #1300-7721-120)

1 12VDC Low Pressure Brass Solenoid Valve with 3/8" Ports (Part # 1300-7706.2)

* If a longer Quick Connect Wire Cable is required, a 20 ft. is available (Part # 1300-7721-240)

Tools needed for the installation

Drill

3/4" (19.05mm) Drill Bit (to drill hole for wiring)

Screwdriver

Four Small Flathead Screws

Adjustable Wrench (for connecting the Solenoid Valve to Regulator Assembly)

Electrical Wiring Crimp Connectors

1 Amp In-Line Fuse

Measuring Tape and Marking Pencil

INSTALLATION INSTRUCTIONS

Read Entire Instructions and Review **Pictures on page 4** Before Installation.

BEGINNING THE INSTALLATION:

1. Determine a mounting location for the Control Panel, near the main LP Gas appliance, protected from weather, splash, flames, and not where flammable gasses may accumulate. Remove the Mounting Plate on the back of the Control Panel and secure it to the wall with two Flathead Screws. Make sure the word “vertical” is at the top of the Mounting Plate. Take a pencil and trace the circle in the middle of the plate, remove Mounting Plate and drill a 3/4” hole for the wiring of the Control Panel. Re-secure the Mounting Plate to the wall. Feed wiring of the Control Panel through the Mounting Plate and after all wiring connections are made, slide the Control Panel securely on the Mounting Plate sliding from right to left to install and opposite to remove.
2. Connect Solenoid Valve inlet port to L.P. Gas Regulator 3/8” outlet with 3/8” MTP Hex Nipple. Connect 3/8” Male Flare Fitting to Solenoid outlet. Connect L.P. Gas Hose to 3/8” male flare. All fittings Wrench tight (do not over tighten). Use Thread Sealant (sparingly) or 2 wraps of Teflon tape on Male Pipe Threads, but not on Male Flare Fitting. **Solenoid Wires are interchangeable (see 4.B below).**
3. The L.P. Gas Detector(s) should be mounted near the L.P. Gas Appliance to be monitored. Drill a 3/4” hole for the Quick Connect Wire Cable. The Wire Cable should be at the bottom of the Detector when installed. Use 2 Screws to mount (do not over tighten) the Detector to wall. L.P. Gas (Propane and Butane) are heavier than air, so Detector should be mounted 8”- 10” above the Compartment Deck. *Note: The Wire Cable should be at the bottom of the Detector.
4. Refer to Photos on Page 4: **CONNECT RED WIRE LAST**
 - A. Connect the **Black** wire of the Control Panel to Negative (-).
 - B. Connect the 1 **White** wire of the Control Panel to 1 **Black** wire of the Solenoid Valve (wires are interchangeable). Repeat with the other **White** wire of the Control Panel to the other **Black** wire of the Solenoid Valve.
 - C. Connect the **Gray** 10 ft. Quick Connect Wire Cable to the Detector and the other end to the Control Panel **Gray** Quick Connector with the **Red** number 1 on it. The other **Red** numbered 2 & 3 **Gray** Quick Connectors are for additional L.P. Gas Detectors.
*DO NOT REMOVE THE JUMPER QUICK CONNECTORS IN THE **GRAY** QUICK CONNECTORS (**RED** NUMBERED 2 & 3) OF THE CONTROL PANEL UNLESS AN ADDITIONAL DETECTOR(S) ARE BEING CONNECTED.
 - D. Connect the **RED** wire of the Control Panel to an **In-Line 1 Amp Fuse** and then connect to Positive (+) 12VDC or 24VDC power source.

SYSTEM WILL GO THROUGH A WARM UP CYCLE WHEN THE POWER IS CONNECTED.

COMPLETING THE INSTALLATION

5. The Warm Up Cycle: When power is connected to the Control Panel, the GREEN “Detector On” light will flash for up to 60 seconds. After the Warm Up Cycle has finished, the GREEN “Detector On” light will remain solid (not flashing).
6. Test to see if the Control Panel turns ON the Solenoid Valve and the “Valve On” indicator light turns ON and OFF by pressing the ON and OFF Buttons on the Control Panel. Leave System ON.
7. Test the System by holding the TEST/MUTE Button down for more than 2 seconds to make sure the Alarm sounds and Alarm 1 light flashes (if you have 2 Detectors, Alarm lights 1 and 2 will flash, and all 3 Alarm lights will flash if you have 3 Detectors).
8. Prevent all wiring (and L.P.Gas Hose) from chafing by securing carefully, and protecting with appropriate Conduit covering and or Straight-Thru Fitting(s).
9. Test complete System in accordance with ABYC Standard A-1 (9) Para. 1,5,4, (4) as follows: Test for System Leakage each time the cylinder supply valve is opened for an appliance use. Close all appliance valves. Open solenoid valve if installed. Open, then close cylinder supply valve. Observe pressure gauge at the regulating device and see that it remains constant for not less than three minutes before an appliance is used. If any leakage is evident by a pressure drop, check system with a leak detection fluid or detergent solution, which does not contain ammonia, and repair before operating system. SEE PAGE 4 FOR FURTHER INFORMATION ON ABYC STANDARD. NEVER USE FLAMES TO TEST FOR LEAKS.

OPERATING AND TESTING INSTRUCTIONS:

When power is first connected to the Detector it goes through a Warm Up Cycle that lasts 30-60 seconds. The green “Detector On” light will flash indicating the Warm Up Cycle. The Detector and System can be tested by using an UNLIT Butane Lighter to feed gas to the Detector’s Sensor, in the center of the Detector Unit. The Detector can also be tested by holding down the TEST/MUTE button on the Control Panel. The Alarm should sound. The System should be tested periodically. The red light on the Detector(s) should be on to signify it is operational.

During normal operation, the Control Panel opens “ON” and closes “OFF” a Solenoid Valve which supplies L.P. Gas to a Thermal Appliance. The green “DETECTOR ON” light indicates the System is “ON”. When the Detector Alarm sounds, a signal is sent to the Control Panel and activates the “ALARM” mode of the Control Panel. The ALARM mode turns the corresponding Control Panel red alarm light “ON” and if the Solenoid Valve was open “ON”, it is automatically closed “OFF”. Once the Control Panel is in ALARM mode the Solenoid Valve will remain closed “OFF” until the ON Button is pressed. This alerts the Operator of a possible hazardous situation and prevents operation until the gas fumes have dissipated.

During ALARM mode you can MUTE the Alarm by holding down the TEST/MUTE button on the Control Panel for 2 seconds. This will Mute the Alarm for 1 minute, if the fumes are still present after this time, the Alarm will sound again.

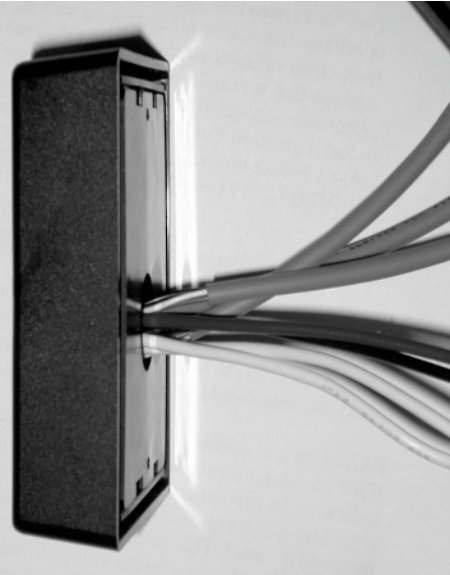
In accordance with ABYC Standard A-1 (9):

Keep cylinder valve(s) and solenoid valve(s) closed when the boat is unattended. Close them immediately in any emergency. When on board, cylinder valve(s) or solenoid valve(s) shall be closed when appliances are not in use. Keep empty cylinder valve(s) tightly closed.

Close appliance valves before opening solenoid valve with switch. Test for system leakage each time a cylinder valve is opened for use, and after any events, which may have affected the system, such as grounding, fire or collision. If any leakage is evident, locate and correct it before operating the system. Protect regulator and components from weather and mechanical damage (preferably in a LP Gas Locker – see ABYC STD. A-1 (9) Para. 1, 12, 2).

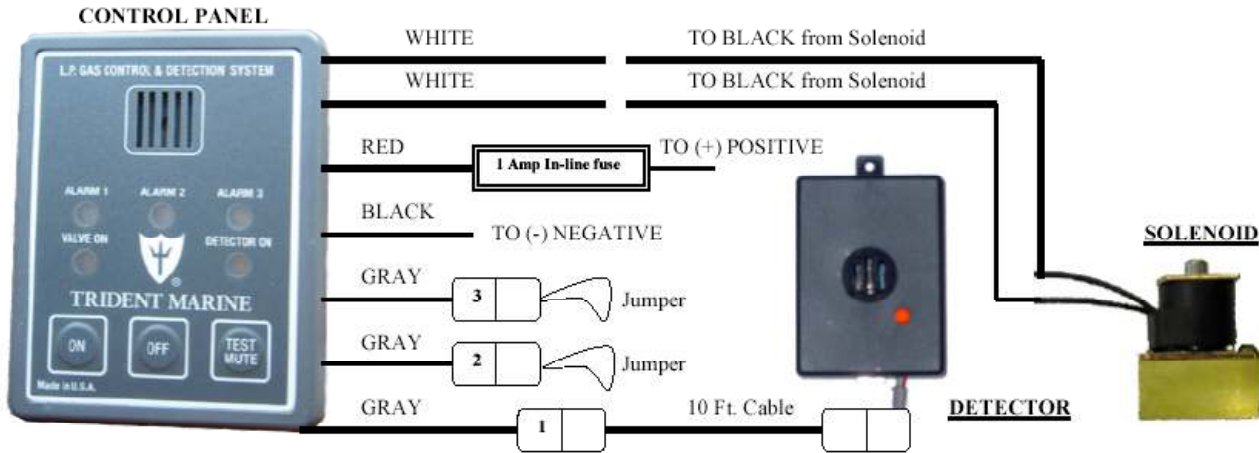


Mount with “Vertical” at the top.
2 Flathead Screws.
Drill a 3/4” hole for the wiring.
To mount Control Panel place on Mounting Plate & slide to the left.



Gray Quick Connect Wire Cables with Quick Connectors are for Detector(s) (Red numbered 1,2,3) **Do Not** remove Quick Connect Jumpers (Red 2 & 3) unless adding Detector(s)

Red wire to 12/24VDC Positive (+) **Connect last**
Black wire to Negative (-)
White wires each connect to **Black** wire of Solenoid Valve



Additional Product information

Add on Detector	Part # 1300-7720
10 Ft. Cable	Part # 1300-7721-120
20 Ft. Cable	Part # 1300-7721-240
24VDC Solenoid	Part # 1300-7708.2-24V

Specifications

Voltage.....	12 VDC and 24 VDC
Control Panel Current Draw.....	21 MA
Panel Draw when on.....	24 MA
Detector.....	75 MA
Solenoid.....	790 MA when open
Alarm.....	8% - 10% LEL (lower explosive limit)
Horn.....	95 Db @ 3 feet (91.44 cm)