



## L62GB BASO® Safety Shutoff Device

### Installation

**IMPORTANT:** Only qualified personnel should install or service BASO® Gas Products. These instructions are a guide for such personnel. Carefully follow all instructions in this document and all instructions for the appliance.



**WARNING: Risk of Explosion or Fire.**

Shut off the gas supply at the main manual shutoff valve before installing or servicing the L62GB. Failure to shut off the gas supply can result in the release of gas during installation or servicing, which can lead to an explosion or fire, and may result in severe personal injury or death.



**CAUTION: Risk of Electric Shock.**

Disconnect power supply before making electrical connections to avoid electric shock.

**IMPORTANT:** Make all gas installations in accordance with applicable local, national, and regional regulations.

To install the L62GB.

1. Turn off power to the appliance.
2. Turn off gas at the main manual shutoff valve adjacent to the appliance.
3. Remove the L62GB cover by loosening the screw on the front of the device (not the brass hex nut).

**IMPORTANT:** Do not loosen or tighten the brass hex nut that fastens the brass terminal bushing to the plastic switch housing. The machined flats on the terminal bushing must be parallel to the flats on the switch housing. If not, the switch power unit may distort and cause the safety switch to fail.

4. Mount the L62GB in any convenient position using the mounting holes in the back of the case.
5. Push the circuit wires through the conduit opening on the side of the device, strip the ends of the wires just enough to put the bare wire under the terminal screws, and attach them to the two wire terminals.



**WARNING: Risk of Explosion or Fire.**

Do not attach both wires to one terminal on the L62GB. Doing so bypasses and eliminates all safety features provided by the L62GB, can lead to an explosion or fire, and may result in severe personal injury or death.



**WARNING: Risk of Explosion or Fire.**

Verify that this device is wired in series electrically with thermostats and other appliance operating controls. Wiring the device in parallel with such controls will defeat the safety features of this device and may result in severe personal injury or death.

6. Replace the cover. **Do not loosen the brass hex nut.**
7. Connect the pilot burner orifice fitting to the pilot outlet on the L62GB with 1/4 in. outside diameter tubing, and connect the pilot gas inlet with the gas manifold upstream from the automatic valve.

**Note:** The pilot line connection is bidirectional as indicated by the arrows pointing in either direction. This provides the option of connecting the pilot gas inlet and outlet in either position.

Attach the thermocouple securely to the pilot burner, and screw the terminal end to the BASO® power unit terminal on the L62GB. Make sure that this connection is clean. Tighten the thermocouple lead nut finger tight plus a maximum of 1/8 turn. **Do not overtighten.**

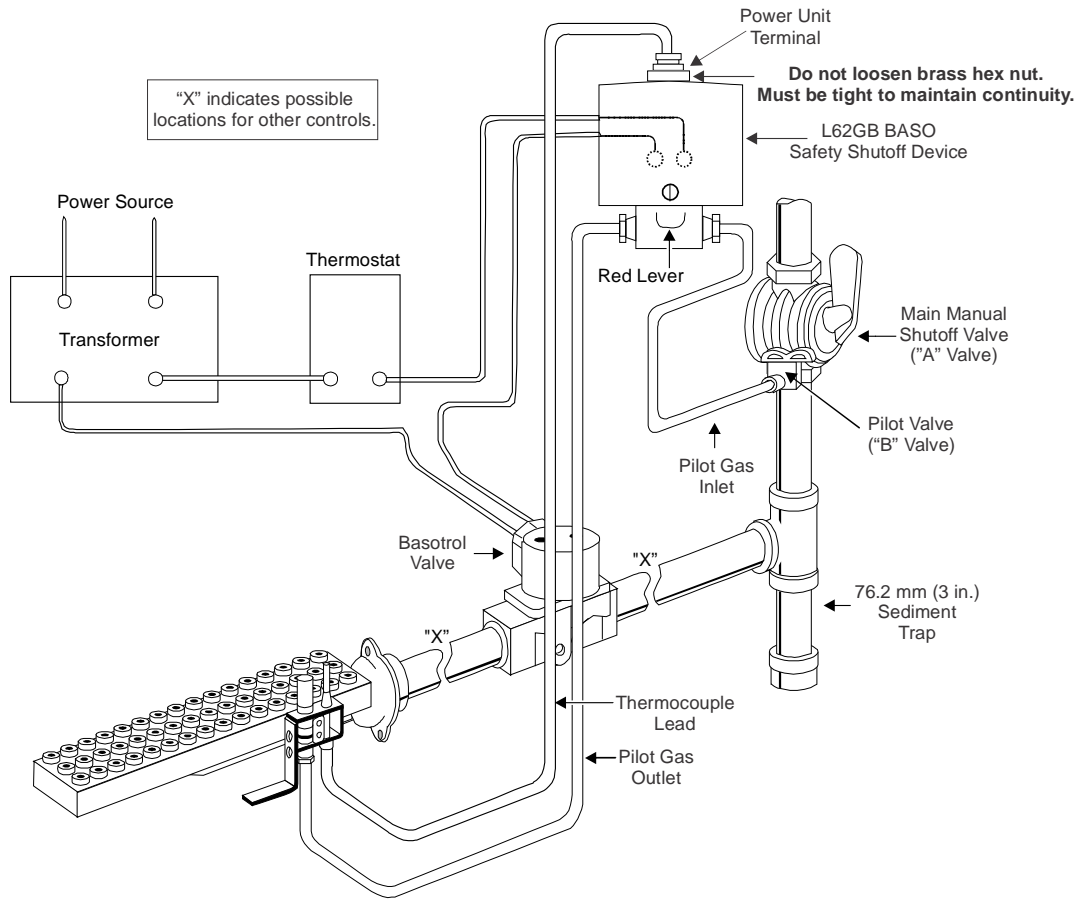


Figure 1: Typical L62GB Installation

## Setup and Adjustments

### Checkout



#### **WARNING: Risk of Explosion or Fire.**

Follow this or an equivalent checkout procedure after installation. Before leaving the installation, verify that the L62GB functions properly and that the system has no gas leaks. Gas leaks can lead to an explosion or fire, and may result in severe personal injury or death.



#### **WARNING: Risk of Explosion or Fire.**

Verify that there are no gas leaks by testing with appropriate equipment. Never use a match or lighter to test for the presence of gas. Failure to test properly can lead to an explosion or fire and may result in severe personal injury or death.

Make sure all components are functioning properly by performing the following test:

1. Test all joints and connections for leaks with a soap solution.
2. Set the thermostat to the lowest setting.
3. Close the main manual shutoff valve (**A** valve) and the pilot valve (**B** valve [see Figure 1]) and wait at least 5 minutes for unburned gas to escape from the appliance.
4. Reopen the **B** valve, push down the red lever and light the pilot burner. Continue to hold down the red lever for approximately 30 seconds.
5. Open the **A** valve. The main burner ignites from the pilot burner when the thermostat calls for heat.
6. Disconnect the thermocouple from the L62GB. The main valve should close immediately. If it does not close, check for wiring errors. Reconnect

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the thermocouple to the L62GB when it is operating correctly.

Low	High
100	300

7. Make sure the brass hex nut is tight for good continuity. **Do not over tighten.**
8. Check the millivoltage output of the thermocouple and milliamperage dropout range at the BASO power unit terminal to see that they meet the values in Table 1 and Table 2. Step-by-step procedures for these checks are included with the Y99AB BASO Test Kit.
9. Relight the pilot.
10. Observe at least three complete operating cycles to make sure that all components are functioning correctly.
11. Reset the thermostat to a normal temperature setting before leaving the installation.

**Note:** BASO recommends only BASO thermocouples that come from the original equipment manufacturer to provide optimum performance for your safety shutoff device.

## Repairs and Replacement

Field repairs **must not** be made to the L62GB safety shutoff device. If the thermocouple meets the output listed in Table 1 and the valve does not function, replace the entire device. Any attempt to repair this assembly voids the manufacturer's warranty. For a replacement safety shutoff device, contact the nearest BASO Gas Products distributor.

Check the millivoltage output of the thermocouple and milliamperage dropout range at the BASO power unit terminal to see that they meet the values in Table 1 and Table 2. If the readings do not meet these values, replace the thermocouple and/or the safety shutoff device.

**Table 1: Thermocouple Output**

Thermocouple		mV Range	
Lead Type	Turn Down	Normal	Not Less Than
K15	4 mV	20-28	15
K16	4 mV	25-35	17
K17	4 mV	30-40	25
K19	4 mV	25-35	17

Note: In high temperature locations, use K15 or K16 Series

**Table 2: L62GB Dropout Range**

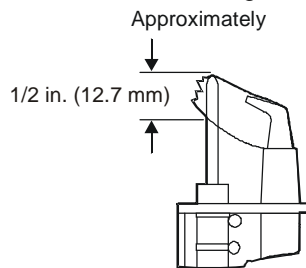
mA Range of Power Unit Assembly
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## Pilot Servicing

If pilot flame problems occur, check the following:

- If the pilot flame burns yellow, it may be due to dirt or lint covering the lower portion of the pilot burner. Remove dirt and lint using a soft brush or a vacuum cleaner.
- A flame approximately 0.5 in. (12.7 mm) high must surround the thermocouple tip (see Figure 2).
- Because this is an electrical connection, the thermocouple lead connection to the BASO power unit must be clean and free of grease.



**Figure 2: Flame Position**

## Replacement Procedure



### **WARNING: Risk of Explosion or Fire.**

Shut off the gas supply at the main manual shutoff valve before installing or servicing the L62GB. Failure to shut off the gas supply can result in the release of gas during installation or servicing, which can lead to an explosion or fire, and may result in severe personal injury or death.



### **CAUTION: Risk of Electrical Shock.**

Disconnect power supply before making electrical connections to avoid electrical shock.



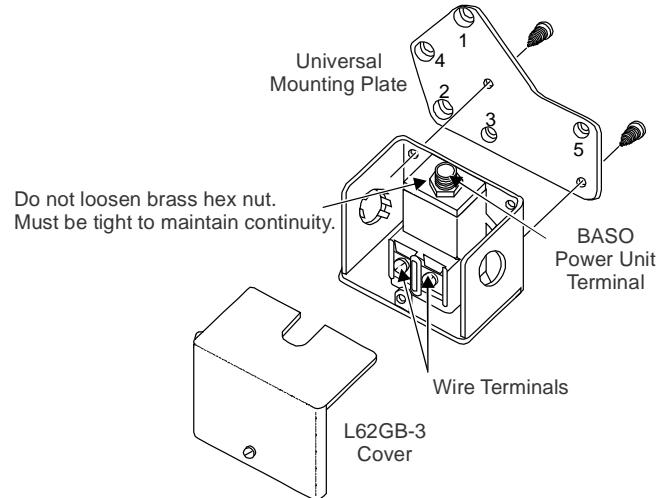
**WARNING: Risk of Explosion, Fire, or Electric Shock.** Label all wires before they are disconnected when replacing the L62GB. Wiring errors can cause improper or dangerous operation and may result in an electric shock, fire, or explosion leading to severe personal injury or death.

When necessary, replace the safety shutoff device as follows:

1. Turn off power to the appliance.
2. Close the main manual shutoff valve and the pilot valve.
3. Disconnect the thermocouple lead from the safety shutoff device.
4. Remove the cover from the old safety shutoff device (not the brass hex nut).
5. Disconnect and label the wires from the two wire terminals and remove the device from the appliance.
6. Remove the new L62GB cover by loosening the screw on the front of the device (not the brass hex nut).

**Note:** The L62GB may be mounted in any position by the mounting holes in the back of the case or by using the universal mounting plate supplied with the device.

7. Attach the universal mounting plate to the device when required (see Figure 3). Secure the mounting plate to the switch case with the sheet metal screws provided. The mounting plate is not required for exact replacements.



**Figure 3: L62GB-3 Mounting**

8. Mount the L62GB-3 using the holes in the universal mounting plate that match the mounting holes for the device being replaced (see Table 3).

**Table 3: Mounting Guide**

Switch Being Replaced	Use Holes Numbered
PENN® (BASO) L62EA	1, 2, 3
PENN (BASO) L62GB-1	Plate Not Required
Honeywell® C591A	4, 5
ITT/General A100G653	4, 5
Note: Remove the L62GB cover for access to Holes 3 and 5.	

9. Refer to Steps 5 through 8 in the *Installation* section to complete the installation.
10. Perform the *Checkout* procedure before leaving the installation.

## Technical Specifications

<b>Product</b>	L62GB BASO Safety Shutoff Device		
<b>100% Shutoff</b>	Yes		
<b>Conduit Opening</b>	2 (1 plugged)		
<b>Switch Contacts Electrical Specifications</b>	24/25 VAC	125 VAC	250 VAC
	*	8 A	4 A
<b>Ambient Temperature Range</b>	-40 to 175°F (-40 to 79°C)		
<b>Reset</b>	Manual		
<b>Switch Action</b>	SPST		
<b>Type of Gas</b>	Natural, Liquefied Petroleum (LP), manufactured, mixed, or LP gas-air mixtures		
<b>Rated Inlet Pressure</b>	0.5 psi (35 mbar)		
<b>Packaging</b>	Bulk pack supplied to original equipment manufacturer (individual pack optional). L62GB-3 supplied as individual pack only.		
<b>Bulk Pack Quantity</b>	30		
<b>Weight</b>	32 lb (14.5 kg)		
<b>Agency Listings</b>	CSA Certificate Number 229521-1656085		
<b>Specification Standards</b>	ANSI Standard Z21.20 CAN1-6.4		

\* Switch can be used on 24/25 VAC installation.

*Performance specifications are nominal and conform to acceptable industry standards. All agency certification of BASO products is performed under dry and controlled indoor environmental conditions. Use of BASO products beyond these conditions is not recommended and may void the warranty. Product must be protected if exposed to water (dripping, spraying, rain, etc.) or other harsh environments. The original equipment manufacturer or end user is responsible for the correct application of BASO products. Consult BASO Gas Products LLC for questionable applications. BASO Gas Products LLC shall not be liable for damages or product malfunctions resulting from misapplication or misuse of its products.*

Refer to the L61, L62 Series BASO Safety Shutoff Device Product Bulletin (BASO-PB-L61/L62) for necessary information on operating and performance specifications of this product.



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