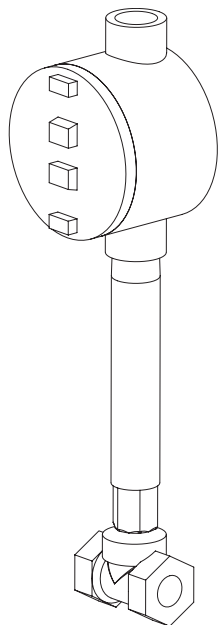
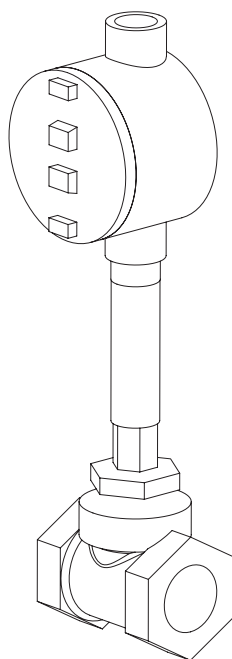


# Installation

## Flow Switch System, Class 1, Division 1, Groups B, C and D Explosion-Proof (DPDT switch, 5-amp. contacts)



Flow Switch with 1/2" tee



Flow Switch with 1 1/4" tee

**Flow Switch with 1/2" tee for eye and eye/face wash units**

S19-319B2 (brass)

S19-319S2 (stainless steel)

**Flow Switch with 1 1/4" tee for combination units (with eye or eye/face washes) and showers**

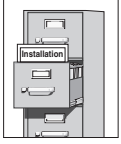
S19-319B4 (brass)

S19-319S4 (stainless steel)

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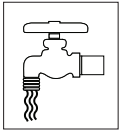
## ⚠ IMPORTANT ⚠



Read this installation manual completely to ensure proper installation, then file it with the owner or maintenance department. Compliance and conformity to drain requirements and other local codes and ordinances is the responsibility of the installer.



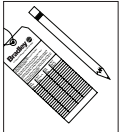
Separate parts from packaging and make sure all parts are accounted for before discarding any packaging material. If any parts are missing, do not begin installation until you obtain the missing parts.



Flush the water supply lines before beginning installation and after installation is complete. Test the unit for leaks and adequate water flow. Main water supply to the emergency fixture should be "ON" at all times. Provisions shall be made to prevent unauthorized shutoff.



The ANSI Z358.1 standard requires an uninterrupted supply of flushing fluid at a minimum 30 PSI (0.21 MPa) flowing pressure. Flushing fluid should be tepid per ANSI Z358.1.



The inspection and testing results of this equipment should be recorded weekly to verify proper operation. This equipment should be inspected annually to ensure compliance with ANSI Z358.1.



Workers who may come in contact with potentially hazardous materials should be trained regarding the placement and proper operation of emergency equipment per ANSI Z358.1.



For questions regarding the operation or installation of this product, visit [www.bradleycorp.com](http://www.bradleycorp.com) or call 1-800-BRADLEY.

Product warranties and parts information may also be found under "Products" on our web site at [www.bradleycorp.com](http://www.bradleycorp.com).

### Supplies Required:

- Teflon tape or pipe sealant
- Black, white and green AWG 14 wire to connect alarm to electric power supply

## Installation

### Step 1: Install the flow switch in the water supply line

1. Choose a location for mounting the flow switch in a horizontal run of the water supply line. The inlet and outlet ports of the flow switch must be a minimum of six inches from any tees or elbows in the water supply line.

*NOTE: If the water supply line will be exposed to temperatures at or below freezing, the inlet supply must be freeze-protected six inches above the flow switch tee (freeze protection by others).*

2. Mount the flow switch assembly in the water supply line.
  - The switch body must be in the vertical position with the water pipe in the horizontal position.
  - The water flow must be in the direction marked by the arrow on the flow switch body.
  - Use teflon tape or pipe sealant (supplied by installer) on all water pipe connections.

*NOTE: The flow switch is designed to work properly for both the eyewash and eye/face wash. Flow switch contacts will remain in the changed state as long as the water flow the unit is providing is 2.0 gpm or greater.*

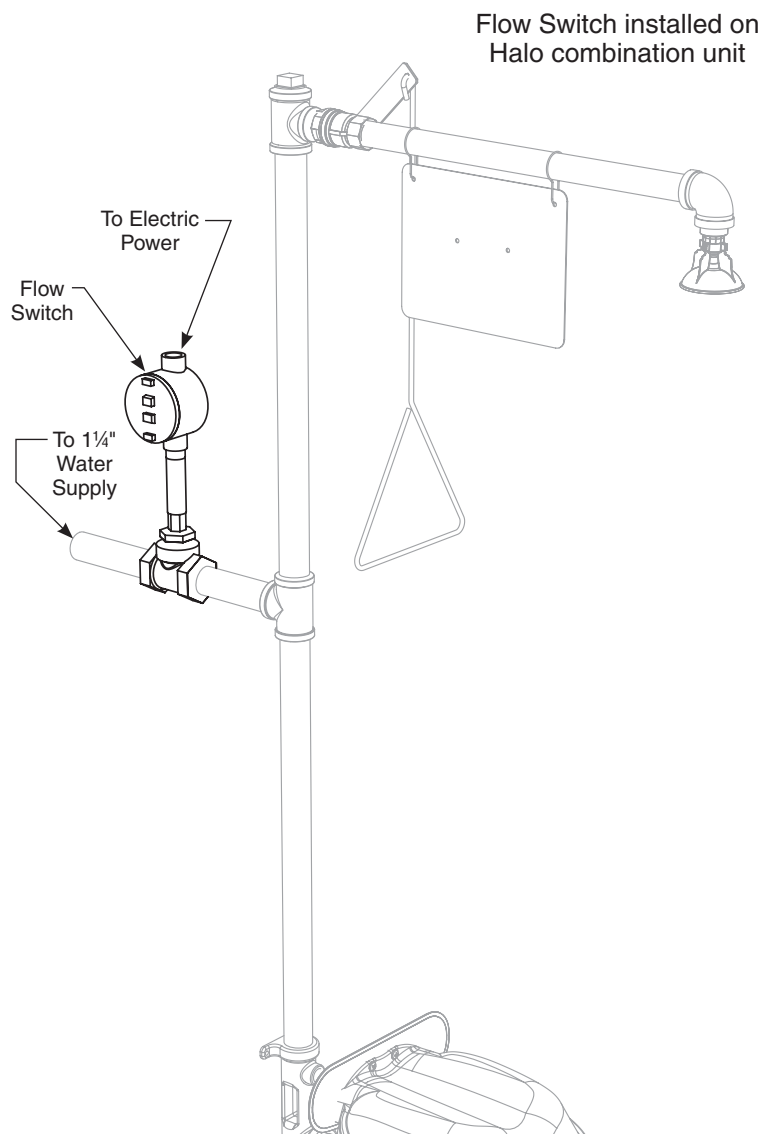
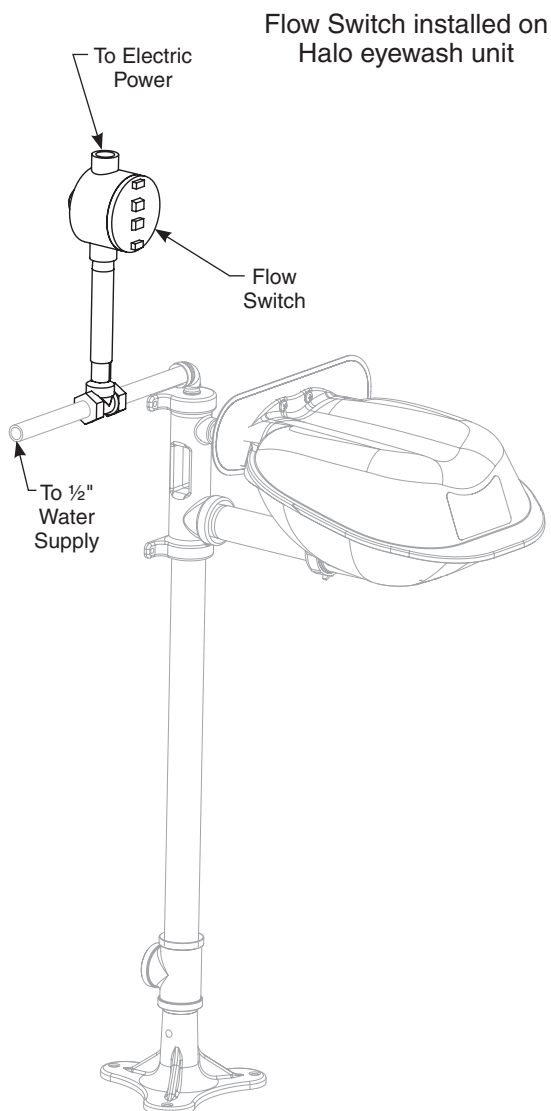
### Step 2: Connect alarm to flow switch

1. Connect the flow switch contacts to the customer-supplied device, ensuring that the load supplied does not exceed the 5-amp contact rating of the flow switch.

*NOTE: The cable and junction box seal(s) are provided by the installer.*

*NOTE: To prevent water condensation from dripping onto the flow switch, make sure the cable is not taut.*

*NOTE: Refer to the instruction manual supplied with the conduit connector (supplied by the installer) for assembly information.*



## Test The Alarm System

*NOTE: Testing the alarm for the first time using the drench shower may expose the flow switch to an unnecessary water hammer since the downstream piping may be empty of water. The flow switch is designed to withstand such a water hammer, but using the smaller eyewash flow is recommended (if the unit is supplied with one).*

1. Apply power by way of the customer-supplied device with the unit's water flow turned off. The flow switch contacts should not change state (closed contacts remain closed and open contacts remain open).
2. Fully activate the eyewash and/or shower valve(s). The closed contacts in the flow switch will open and the open contacts will close. The contacts should remain in this changed state until the water is turned off.

## Troubleshooting

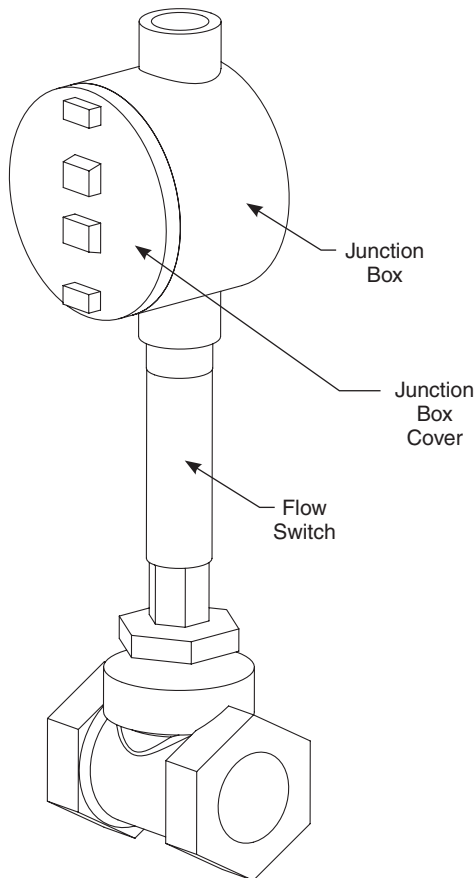
1. If the contacts in the flow switch do not change state when water flows:
  - Check to make sure the direction of water flow corresponds to the arrow on the flow switch body.
  - Check to make sure the water flow is sufficient. A flow of 2.5 gpm (for 1¼" tee) and 2.0 gpm (for ½" tee) is required.
  - Check all customer-supplied electrical connections and wiring.

## Alarm system maintenance

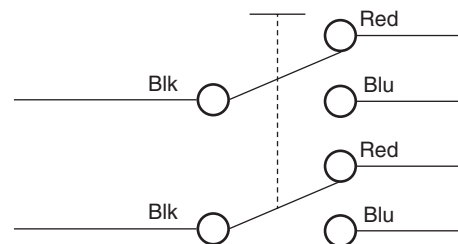
The Bradley Alarm System is designed to be virtually maintenance free. An occasional damp cloth wiping of the clear dust cover is all that is needed to ensure maximum visual attention-getting ability.

## Alternate Contact Sensing Option

If additional contact access is required to a second remote sensing point, remove the pipe plug from the back of the junction box. Connect the extra black wire (common to both switch arrangements) and the blue wire (normally open switch arrangement) or red wire (normally closed switch arrangement) to your application per local electrical codes. The switch is rated at 5 amps. Your connection should be water tight.



Flow Switch Wiring Diagram



DPDT flow switch changes state with flow (closed contacts will open and the open contacts will close)