

## UNIVERSAL VALVE OPERATOR (UVO) KIT

### General Description

The Universal Valve Operator (UVO) Kit includes the primary components required to actuate Fike's Prolnert® inert gas cylinders from a compatible releasing panel or device. The kit's primary component is the UVO, which provides both an automatic and manual means of activating the valve it is connected to. Automatic activation of the UVO is accomplished by applying 24 VDC power from the host releasing control panel or releasing device to the UVO. This will cause the UVO's firing piston to extend and open the valve, allowing the agent to be released from the container. Manual activation of the UVO can be accomplished by striking the RED button on the UVO itself.

The kit also includes a Universal Valve Operator Supervisor (UVOS) that when installed monitors the connection of the UVO to the Prolnert valve. When the UVOS is removed, it will cause a "Supervisory event" at the releasing control panel indicating that the UVO has been disconnected from the valve, essentially disabling the suppression system.

### Compatibility Requirements

The Notifier® FCM-1-REL releasing control module has been compatibility tested for use in activating the UVO. Maximum one UVO per module. In addition, the FCM-1-REL module provides the required supervision of the releasing circuit wiring (open and ground fault conditions) from the Prolnert inert gas cylinders to the compatible releasing panel. Refer to Notifier's Device Compatibility document number 15378 for UVO compatibility.

### Before Installing

Remove the UVO from its packaging and thoroughly inspect it for signs of damage. Do not attempt to install the UVO if any sign of damage is found. Return the UVO to Fike® for repair or replacement. These installation instructions cover only the wiring of the UVO kit components to the appropriate Notifier module. Refer to Notifier documentation for the FCM-1-REL Releasing Control Module and FMM-1(A) Monitor Module for detailed installation instructions. Refer to the appropriate Fike clean agent manual for instructions on how to install and reset the UVO.

### Kit Components

| UNIVERSAL VALVE OPERATOR (UVO) KIT<br>(P/N 70-343-1) |  |
|--|--|
| Part Number  | Description                                |
| 02-14556-1   | Universal Valve Operator (UVO)             |
| 02-14627   | Universal Valve Operator Supervisor (UVOS) |
| 02-13713   | Actuation Hose                             |
| 02-2213  | Security Tie (not shown)                   |

### Specifications

| UVO (P/N 02-14556-1)  |  |
|-----------------------|--|
| Supply Voltage        | 24 VDC nominal (15.6-29.5 VDC range)   |
| Current Consumption   | Alarm = 420 mA maximum<br>Standby = Consult Notifier's FCM-1-REL documentation |
| Electrical Connection | Cable and ½" NPT for conduit connection  |
| UVO Material          | Stainless Steel (Body)<br>Brass (End Cap)                                      |
| Temperature Range     | -4° F to 120° F (-20° C to 48.9° C)  |
| Listings & Approvals  | UL / ULC Listed & FM Approved  |
| UVOS (P/N 02-14627)   |  |
| Switch                | Normally Closed (Black) / Normally Open Contacts (White) / Common (Red)        |
| Electrical Connection | 0.25" ID SST Flexible Conduit 50" (127 cm) long with 1/2" knockout connector   |
| Wire Leads            | 22 AWG, 60" (152 cm) long  |

## Wiring

Use the following instructions to connect the UVO and the UVOS to the compatible Notifier interface modules.

1. Connect the UVO wire leads to the Notifier FCM-1-REL releasing control module as shown in Figure 1. The UVO is not polarity sensitive. Refer to the installation instructions supplied with the Notifier module for correct terminal connections.

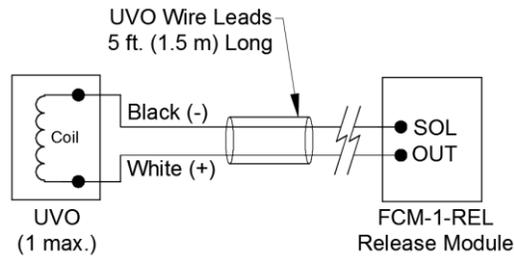


Figure 1 UVO Wiring

**Note:** All wiring must conform to applicable local codes, ordinances, and regulations.

2. Connect the UVOS wire leads to the Notifier FMM-1 monitor module as shown in Figure 2. Refer to the installation instructions supplied with the Notifier module for correct terminal connections.

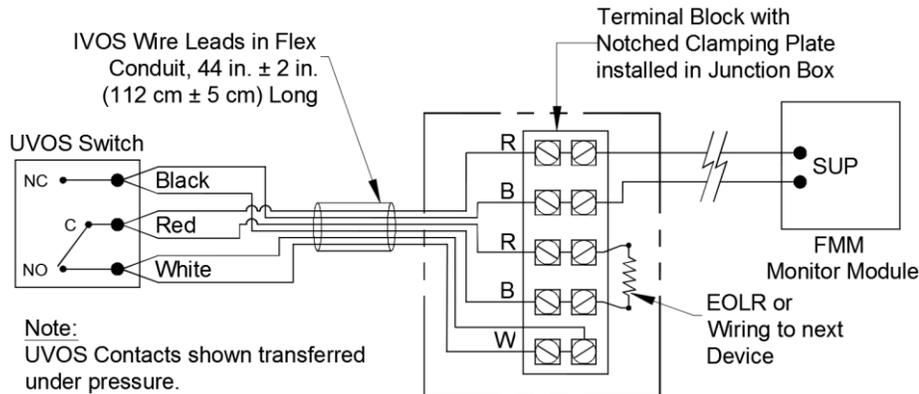


Figure 2 UVOS Wiring

**Note:** With the UVOS disconnected from the container, the UVOS switch will be active and should cause a "Supervisory" signal at the host control panel until it is attached to the container.

3. Visually verify that the UVO firing pin is in the armed (retracted) state. Reset the UVO if necessary following the instructions provided in this document.
4. With the UVO removed from the container, perform a full functional test of the system operation verifying that the UVO activates only when required. Test shall include manual activation of the UVO by pressing the RED manual release button on the UVO. Reset the UVO after each activation.

## Installation

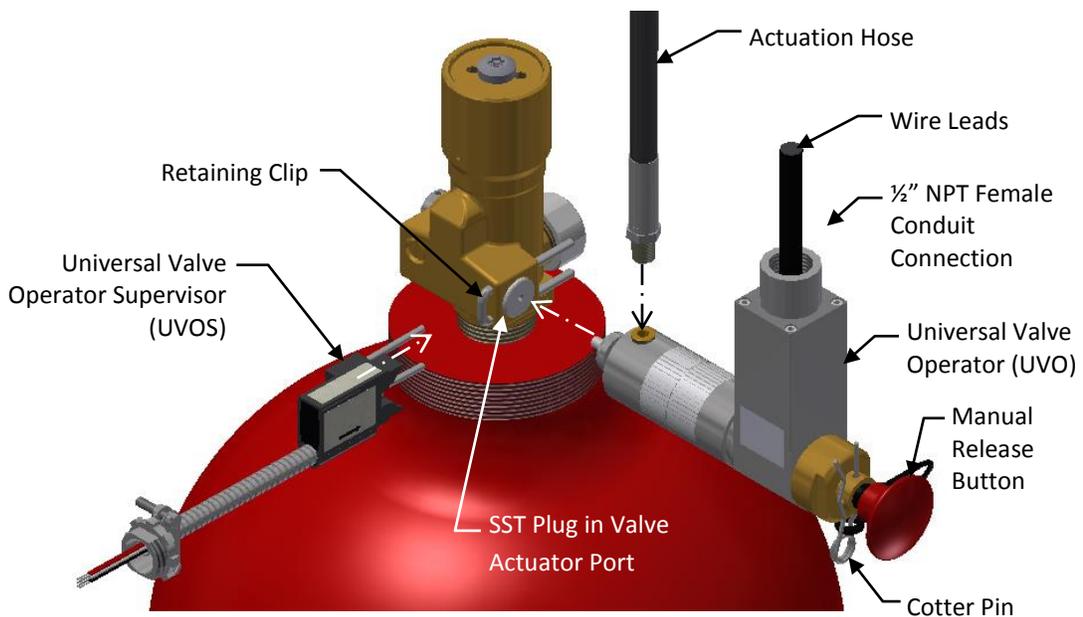
**CAUTION:** Do not connect the UVO to the suppression container until the system has been fully tested and is ready to be armed.

Refer to Figure 3 for kit component installation.

1. Install the Cotter (safety) Pin to the UVO. Cotter pin prevents accidental activation of the manual release button.
2. Remove the SST plug and retaining clip from the ProInert Valve actuator port.
3. Insert the UVO into the valve actuator port.

**CAUTION:** DO NOT attempt to install the UVO into the actuator port if the firing pin is extended. This may cause accidental activation of the ProInert valve.

4. Secure the UVO to the valve actuator port by inserting the UVOS retaining pins into the retaining clip holes in ProInert Valve actuator port.
5. Verify that the UVO and UVOS are securely attached to the container.
6. Verify that the "Supervisory" signal that was caused by the UVOS disconnection clears at the host control panel.
7. The container is "**NOW ARMED**".



**Figure 3 UVO Kit Component Installation**

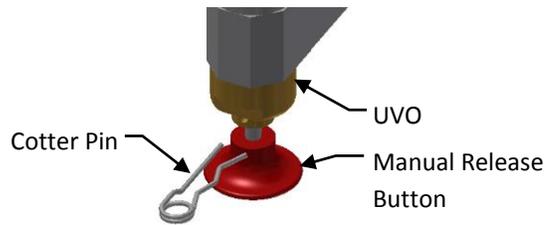
8. If working with a multi-cylinder system, remove the pipe plug from the outlet port of the UVO.
9. Apply Teflon tape or thread sealant to the male threads and install the Actuation Hose to the UVO outlet port.
10. Connect the other end of the Actuation Hose to the Pneumatic Actuator on the next cylinder.

## UVO Reset Instructions

After a system activation, the UVO must be manually reset using the Reset Tool (P/N 02-14782). Use the following instructions to reset each activated UVO.

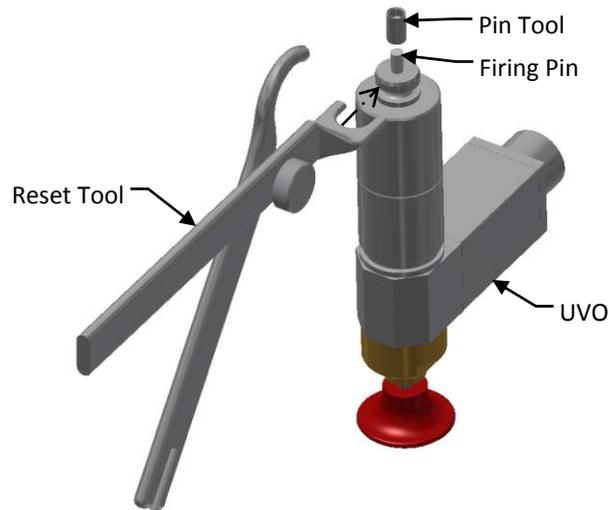
1. Remove the UVOS from the valve actuator port. Verify that a supervisory signal is received at the host control panel indicating that the UVO is disconnected.
2. Remove the UVO from the valve actuator port.

3. Remove the Cotter Pin from the UVO. See Figure 4.



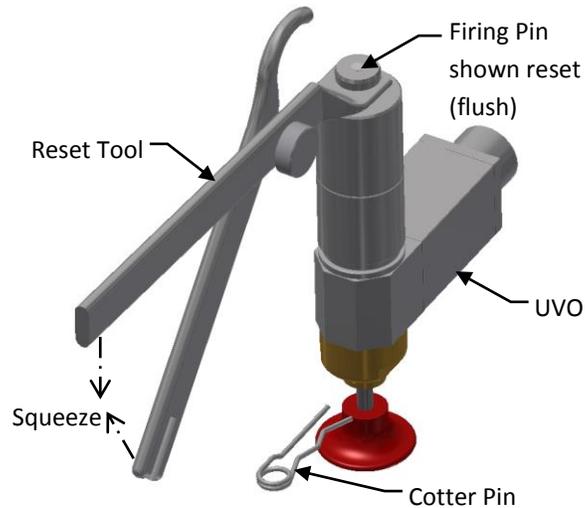
**Figure 4 Manual Release Button Reset**

4. Pull the Manual Release button until it resets. An internal click should be heard.
5. With the Reset Tool in hand, align the forked end of the tool around the grooved end of the UVO operator tip as shown in Figure 5.
6. Install the Pin Tool over the UVO firing pin as shown in Figure 5.



**Figure 5 Reset Tool Alignment**

7. Squeeze reset tool handles together until the firing pin resets (clicks into place) as shown in Figure 6. The face of the firing pin should be flush or slightly recessed with the UVO operator tip once reset.



**Figure 6 UVO Reset**

8. Reinstall the Cotter Pin into the UVO.
9. The UVO is now reset and can now be reattached to the suppression container.