

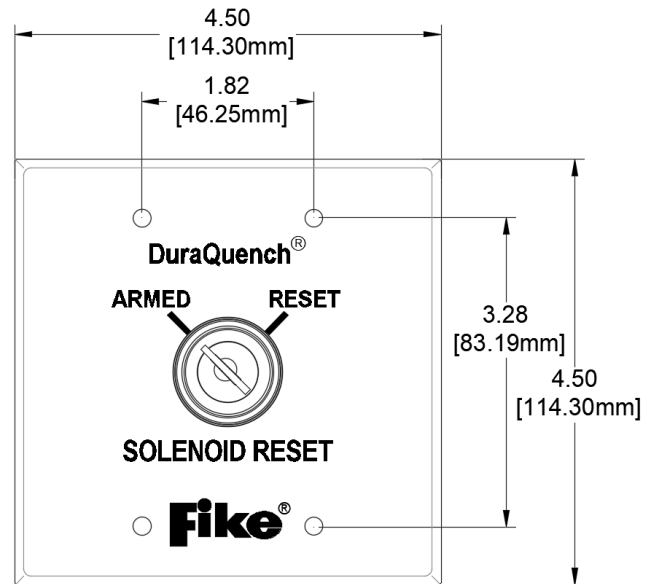
## DURAQUENCH® SOLENOID RESET SWITCH, P/N 10-3051

### IMPORTANT NOTICES

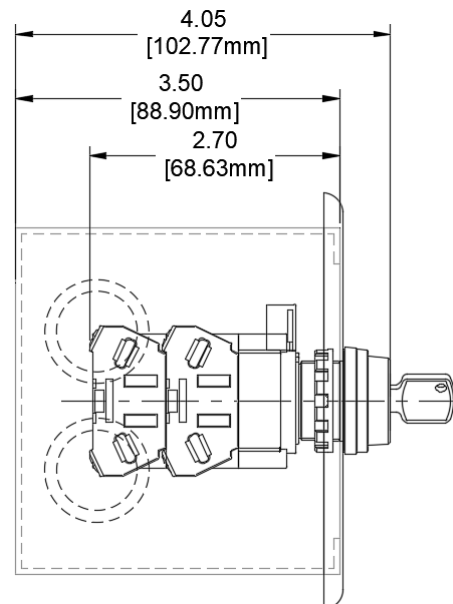
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### SPECIFICATIONS

<b>OPERATING TEMPERATURE</b>	0°C – 49°C (32°F – 120°F)
<b>OPERATING HUMIDITY</b>	93% Relative Humidity, non-condensing
<b>WEIGHT</b>	0.35 lb. (158 g)
<b>INSTALLATION</b>	Indoor use only
<b>MOUNTING</b>	2-gang x 3.5" deep masonry box (RACO 696)
<b>CONTACT RATING</b>	30VDC @ 5A
<b>WIRE SIZE</b>	1 x 22 AWG min. 2 x 14 AWG or 1 x 12 AWG max.
<b>FACEPLATE</b>	0.031 thick stainless steel with etched black text



Front View



Side View

## REPLACEMENT PARTS

Part Number	Description
<b>10-3051</b>	Solenoid Reset Switch
<b>10-3058<sup>1</sup></b>	Switch Sub-Assembly
<b>10-3057<sup>1</sup></b>	Switch Face Plate
<b>02-16374<sup>2</sup></b>	Switch Operator
<b>02-16365<sup>2</sup></b>	Normally Open Contact Block
<b>02-16366<sup>2</sup></b>	Normally Closed Contact Block
<b>02-2316<sup>2</sup></b>	Mounting Screws (qty. 4)
<b>02-13170<sup>2</sup></b>	#0 Key
<b>02-4780<sup>2</sup></b>	Contact Block Adapter
<b>02-16401<sup>2</sup></b>	Anti-Rotation Ring
<b>02-16402<sup>2</sup></b>	Locking Lever Cap
<b>02-12318</b>	Locking Ring Wrench
<b>02-16369<sup>3</sup></b>	30mm to 22mm Trim Ring
<b>02-17420</b>	2-Gang Masonry Box, 3.5" deep (RACO 696)

<sup>1</sup> Included in the 10-3051 Solenoid Reset Switch.

<sup>2</sup> Included in the 10-3058 Switch Sub-Assembly.

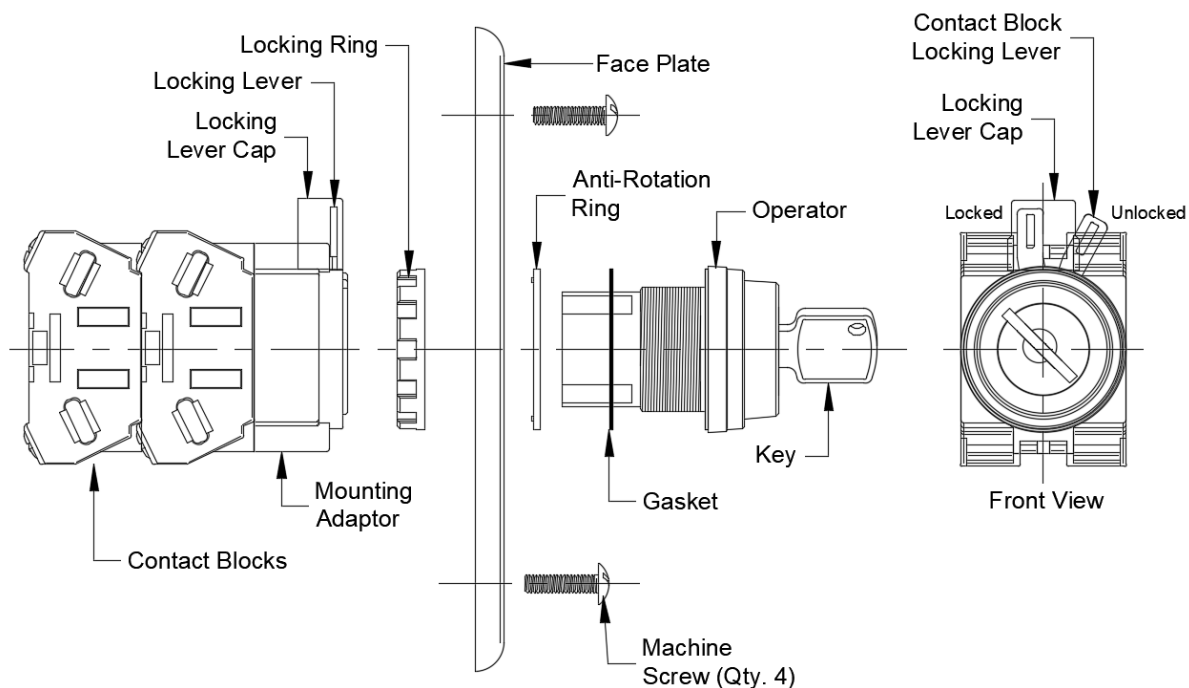
<sup>3</sup> Allows 22mm switch to be mounted to 30mm face plate.

## SWITCH ASSEMBLY

The switch is shipped unassembled and must be assembled in the field. Refer to Figure 1 and the following instructions for switch assembly.

- Step 1. Remove the switch components (faceplate and switch) from the shipping package.
- Step 2. Remove the protective plastic film from the faceplate.
- Step 3. Remove the locking lever cap from the locking lever.
- Step 4. Pull up the locking lever and turn it to the left to remove the operator from the mounting adaptor.
- Step 5. Remove the locking ring from the operator
- Step 6. Insert the operator into the switch faceplate from the front, ensuring that the TOP marking on the operator and the triangle mark on the anti-rotation ring align with the anti-rotation notch provided in the faceplate.
- Step 7. Reinstall the locking ring onto the operator from the back side of the faceplate.
- Step 8. Tighten the locking ring with pliers or locking ring wrench (P/N 02-12318) to a maximum torque of 2N-m (20.4 Kgf cm). Do not excessively tighten the locking ring.
- Step 9. Install the mounting adaptor onto the operator, ensuring that the IDEC marking on the adaptor is facing the same direction as the TOP marking on the operator.
- Step 10. Turn the locking lever to the right (locked position) to secure the mounting adaptor to the operator.
- Step 11. Reinstall the locking lever cap onto the locking lever.

The switch is now ready to be installed.



**Figure 1: Switch Assembly**

## INSTALLATION

The Solenoid Reset switch is installed into the releasing circuit between the associated control panel or releasing module and the valve solenoid itself. Locate the switch in an accessible location near the DuraQuench pump skid.

Adhere to the following steps to properly install and test the operation of the switch. Failure to follow these steps could result in improper operation or accidental activation of the DuraQuench deluge valve.

### Installation and Testing Steps:

- Step 1. Disconnect releasing circuit(s) from the host control panel or releasing module.

#### **WARNING**

Failure to disconnect the releasing circuit(s) and disarm the releasing device(s) before installation of the switch may result in accidental activation of the DuraQuench deluge valve.

- Step 2. Select an appropriate location for mounting switch and secure the electrical box to the wall with suitable anchors.
- Step 3. Route conduit and field wiring (i.e., releasing and auxiliary power circuits) into the electrical box.
- Step 4. Connect the Solenoid Protection Assembly (P/N 10-2360) to the solenoid coil, as shown in Figure 2.
- Step 5. Use a multi-meter to test the wiring for ground fault or short-circuit conditions before proceeding.
- Step 1. Connect field wiring to appropriate switch contact blocks as shown in Figure 2, observing correct polarity.
- Step 6. Reconnect releasing circuit and auxiliary power circuit to the host control panel and/or releasing module.
- Step 7. Reconnect the actuator coil to the solenoid valve.
- Step 8. Functionally test the operation of the Solenoid Reset switch in both the ARMED and DISARMED modes.

## TESTING

- Step 2. Close the isolation valve downstream from the deluge valve to prevent water from flowing into the hazard area during testing.

- Step 3. Power down the DuraQuench Fire Pump controller by first opening the Circuit Breaker, then opening the Isolating switch on the controller's front.

#### **WARNING**

Do not open the controller door - danger of lethal electrical shock and arc flash hazard.

- Step 4. Verify that the controller powers down.
- Step 5. Initiate a release condition on the associated control panel.
- Step 6. Verify that the solenoid valve is activated by visually observing water flowing from the valve's drain outlet.
- Step 7. Clear the release event and reset the releasing control panel to return it to normal operation. Otherwise, the solenoid will reactivate upon the return of the switch to the Armed position.
- Step 8. Insert the key into the Solenoid Reset switch and momentarily turn the key to the RESET position.
- Step 9. Verify that the solenoid valve has closed by visually observing that water is no longer flowing from the valve's drain outlet.

**NOTE:** If the DuraQuench system has a drain/test valve installed in the pipe network downstream of the deluge valve, it can be used to visually verify the opening and closing of the deluge valve during testing.

- Step 10. Correct any issues found before proceeding.

#### **WARNING**

To prevent the possibility of severe injury or death due to an electrical fault, be sure the controller door(s) is closed and latched before reapplying power to the controller.

- Step 11. First, close the Isolating switch; then close the Circuit Breaker to reapply power to the DuraQuench Fire Pump controller.

**NOTE:** Refer to the Duraquench Fire Pump Controller manual for Fire Pump Controller power down and power up procedures.

- Step 12. Verify that the Fire Pump controller powers up with no issues.
- Step 13. Open the isolation valve closed in step 1.
- Step 14. Testing is now complete.

## OPERATION

### Armed

With the key switch in the ARMED (normal) position, the impulse solenoid is connected to the associated control panel's releasing circuit. In this position, the switch does not interfere with panel supervision of the releasing circuit or releasing operations.

**NOTE:** The switch's key can only be removed in the ARMED position.

### Reset

The solenoid is momentarily disconnected from the releasing circuit with the key switch in the RESET position. When the associated control panel enters the Release State, it will not activate as long as the switch is held in the RESET position.

A trouble event will be displayed on the associated control panel to indicate the open release circuit. At the same time, reverse polarity 24VDC will be applied to the solenoid actuator to close the pilot valve and allow the deluge valve to close after it has been activated.

**NOTE:** The releasing control panel must be reset and returned to normal operation prior to activating the reset switch. Otherwise, the solenoid will be reactivated upon the return of the switch to the ARMED position.

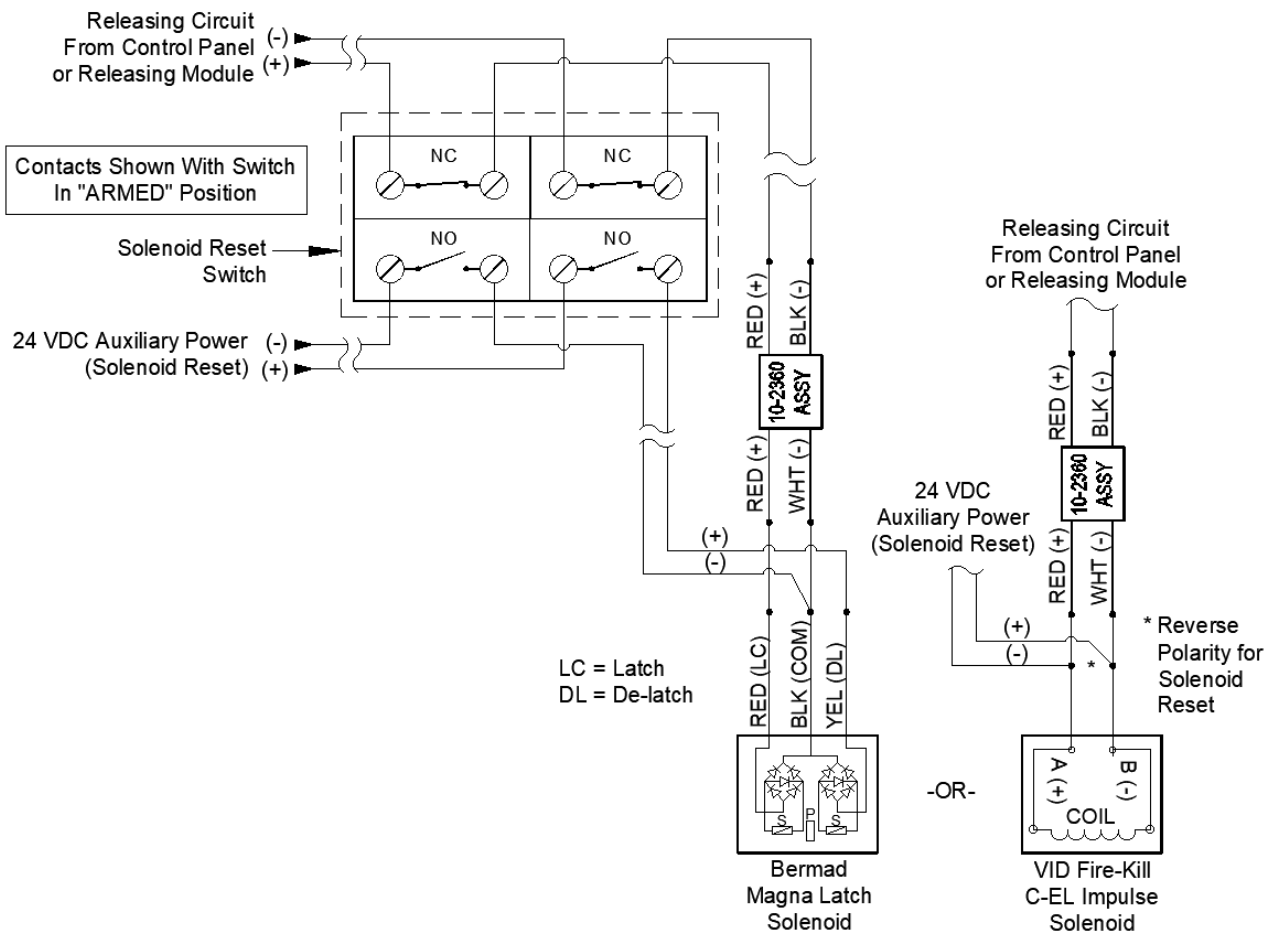


Figure 2: Solenoid Reset Switch Wiring Diagram