INSTALLATION INSTRUCTIONS

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

IMPORTANT NOTICES

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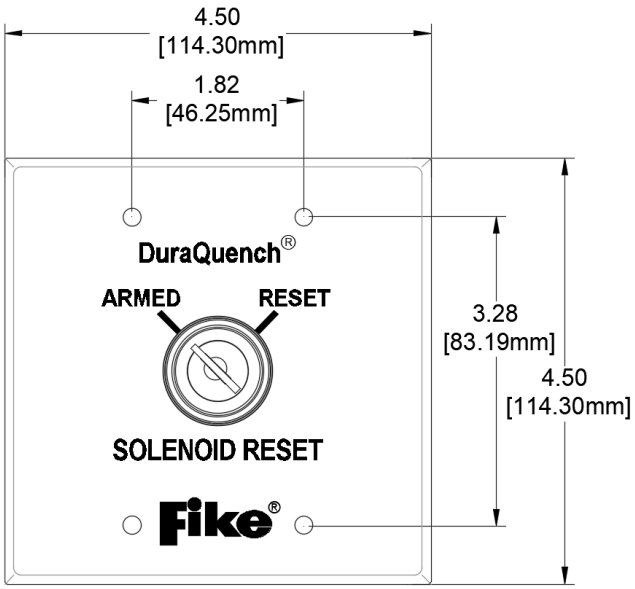
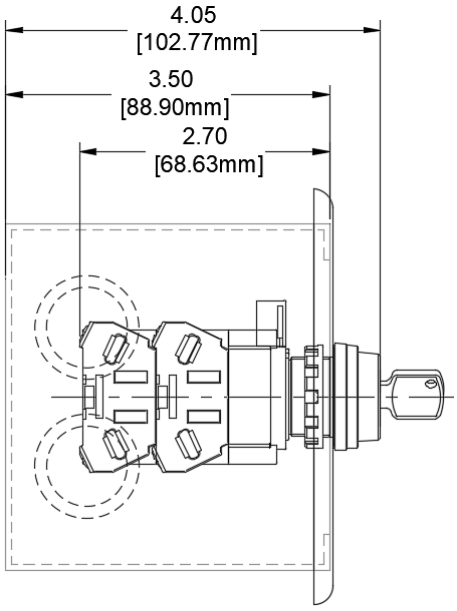
SPECIFICATIONS

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



Front View



Side View

REPLACEMENT PARTS

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

[1] Included in the 10-3051 Solenoid Reset Switch.

[2] Included in the 10-3058 Switch Sub-Assembly.

[3] 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.

1. Remove the switch components (faceplate and switch) from the shipping package.
2. Remove the protective plastic film from the faceplate.
3. Remove the locking lever cap from the locking lever.
4. Pull up the locking lever and turn it to the left to remove the operator from the mounting adaptor.
5. Remove the locking ring from the operator
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.
7. Reinstall the locking ring onto the operator from the back side of the faceplate.
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.
9. Install the mounting adapter onto the operator, ensuring that the IDEC marking on the adaptor is facing the same direction as the TOP marking on the operator.
10. Turn the locking lever to the right (locked position) to secure the mounting adaptor to the operator.
11. Reinstall the locking lever cap onto the locking lever.

The switch is now ready to be installed.

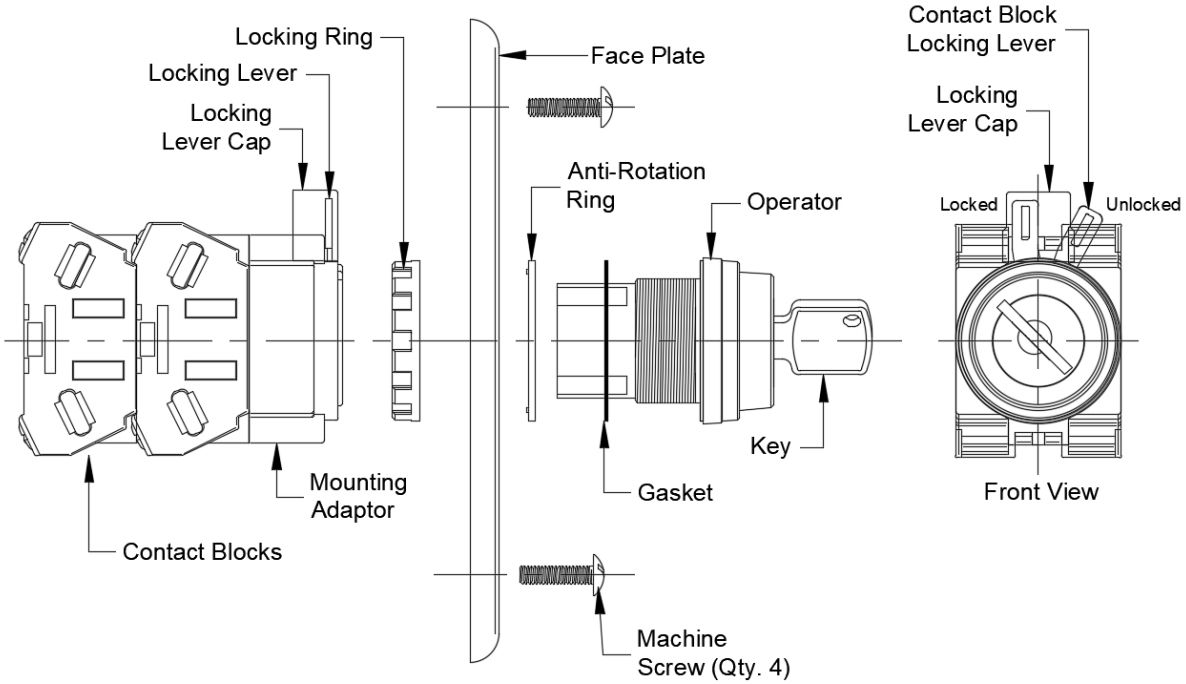


Figure 1: Switch Assembly

INSTALLATION

The Solenoid Reset switch is installed into the releasing circuit between the associated control panel or releasing module and the impulse 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 Model C valve.

Installation and Testing Steps:

1. Disconnect releasing circuit(s) from the host control panel or releasing module.
2. Disconnect the coil operator from the Impulse Solenoid valve.

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 Model C valve.

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

TESTING

1. Close the isolation valve downstream from the DuraQuench Model C valve to prevent water from flowing into the hazard area during testing.
2. 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.

3. Verify that the controller powers down.
4. Initiate a release condition on the associated control panel.
5. Verify that the impulse solenoid pilot valve is activated by visually observing water flowing from the valve's drain outlet.
6. Clear the release event and reset the releasing control panel to return it to normal operation. Otherwise, the impulse solenoid will reactivate upon the return of the switch to the Armed position.
7. Insert the key into the Solenoid Reset switch and momentarily turn the key to the RESET position.
8. Verify that the impulse solenoid pilot 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 Model C valve, it can be used to visually verify the opening and closing of the Model C valve during testing.

9. 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.

10. 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 P/N 06-791-2 for Fire Pump Controller power down and power up procedures.

11. Verify that the Fire Pump controller powers up with no issues.
12. Open the isolation valve closed in step 1.
13. 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 impulse 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 activ*ate* 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 impulse pilot valve and allow the Model C 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 impulse solenoid will reactivated upon the return of the switch to the armed position.

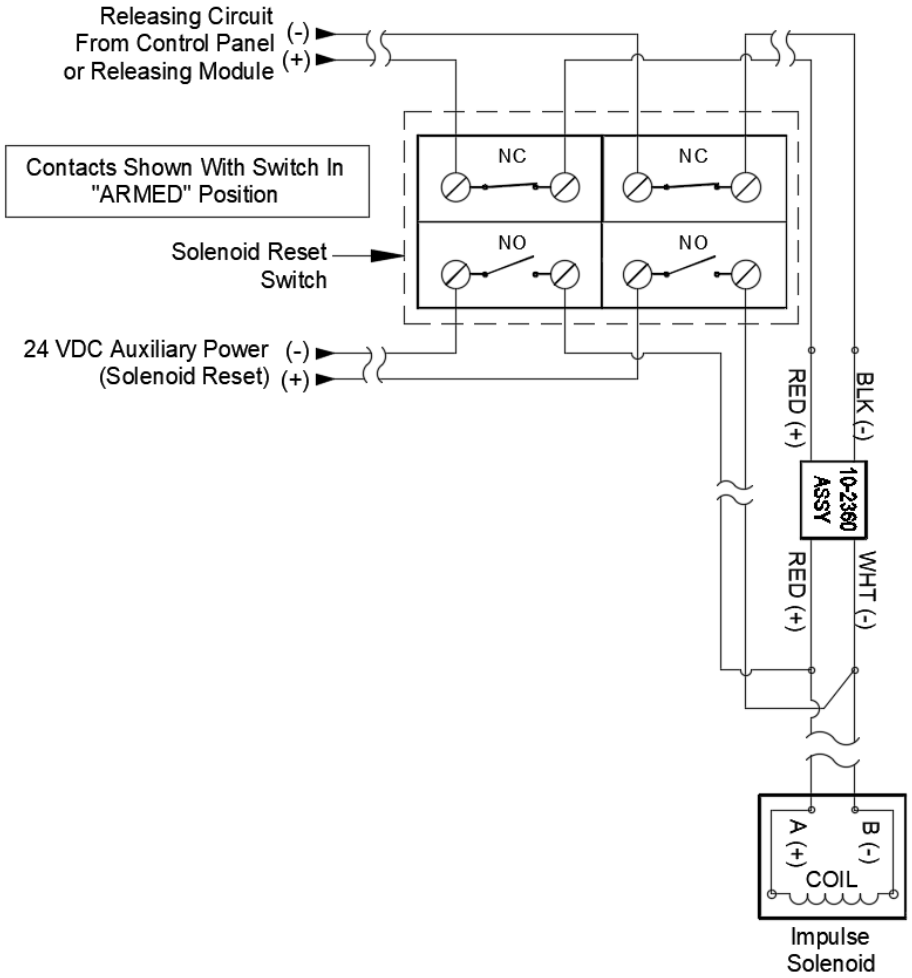


Figure 2: Solenoid Reset Switch Wiring Diagram