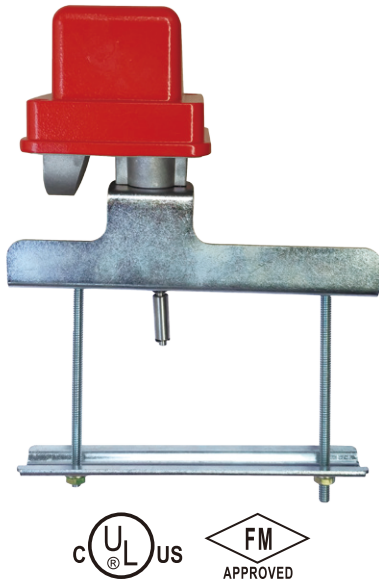


## Supervisory Switch for OS&Y Gate Valve



### Product Review

The MXHQ supervisory switch serves to monitor the open position of the OS&Y gate valve, with two available sizes, one for OS&Y gate valve size 2"~16"(DN50~DN400) and one for OS&Y gate valve size 18"~24"(DN450~DN600).

While the OS&Y gate valve is opening, the groove on the stem rises accordingly. When it rises to the position of the trip rod, the trip rod falls into the groove, trigger off the tamper switch and deliver out signal.

### Product Feature

- Double micro switch design  
Double micro switch design reduces the risk of false signal delivery caused by tamper switch malfunction. Meanwhile, multi-signal transmission can meet different requirement of more customers.
- Adjustable screw design  
With accurate adjustment supported by the adjustable screw, the two tamper switches can be triggered synchronously. It is convenient to do micro-adjustment after installation on the OS&Y gate valve.
- IP Grade: IP65  
Dust proof and water proof, good guarantee for the inner structure safety.

### Specification & Standard

Design Standard	UL 346/ULC-S548, FM 3135
Size Range	DN50-DN600 2"-24"(DN50-DN600)
Temperature Range	-10 ~ 80°C
Contact Rating	15 Amps at 125/250VAC
Standard	STANDARD FOR INSTALLATION OF SPRINKLER SYSTEM NFPA-13
	ONE-AND TWO-FAMILY DWELLINGS AND MANUFACTURED HOMES INSTALLATION OF SPRINKLER SYSTEMS NFPA-13D
	STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEM IN LOW-RISE RESIDENTIAL OCCUPANCIES NFPA-13R
	NATIONAL FIRE ALARM CODE NFPA-72

### Design & Dimensions

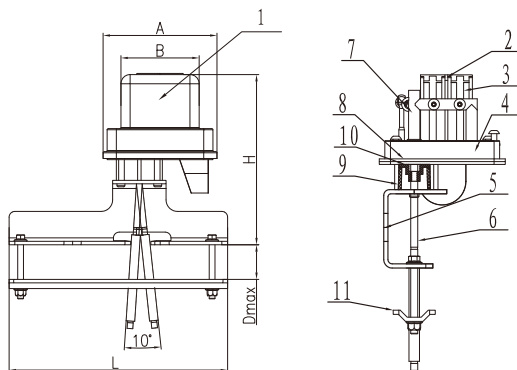


Fig. 1 Structure

### Material Specifications

Part No.	Part	Standard Material
1	Cover	Die-Cast Aluminium
2	Tamper Switch Bracket	Carbon Steel Q235
3	Tamper Switch	
4	Base	Die-Cast Aluminium
5	Clamp Plate	Carbon Steel Q235
6	Trip Rod	SS304
7	Axial Rod	Nylon
8	Gasket	CR Foam Cotton
9	Pressing Sleeve	PTFE
10	O-Ring	EPDM
11	Fixing Bracket	Carbon Steel Q235

### Dimensions

Size		Dimensions(mm)				
Inch	mm	A	B	H	L	Dmax
2-16"	50-400	99	68	148	200	105
18-24"	450-600	99	68	148	360	135

## Installation & Application

### 1. Preparation Before Installation

- 1.1 Please read the instructions carefully before installation, any damage caused by improper installation will not be liable for the manufacturer.
- 1.2 Before installation, check the nominal diameter, temperature range and medium, do not install if the technical parameter of the supervisory switch cannot meet the requirement of the field.

### 2. Installation

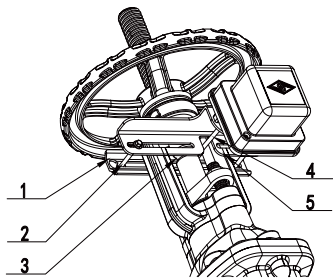


Fig. 2

1. Clamp Plate 2. Carriage Rod 3. Groove of Stem 4. Trip Rod 5. Fixing Bracket

- 2.1 Operate OS&Y gate valve to the fully open position, set the trip rod across the yoke as far as possible from the valve gland to make sure that it shall be sitting against the unthreaded part of the valve stem.
- 2.2 Install the supervisory switch together with the carriage rod and fixing bracket.
- 2.3 Loosen the locking screw (see Fig. 3), adjust the length of the trip rod, make sure it sits at the right position where the trip rod should be exceeding the valve stem but not touching the mounting plate. Tighten the locking screw and fix the trip rod.

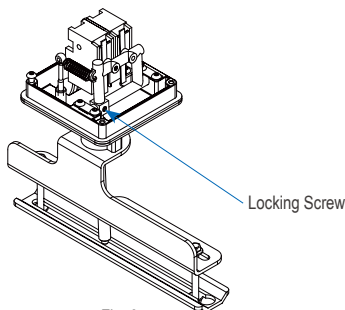


Fig. 3

- Note 1: In case the trip rod is too long, loosen the locking screw to remove the trip rod. Cut off the notched section(1 inch) (see Fig. 4), and install the trip rod again by repeating step 2.3.

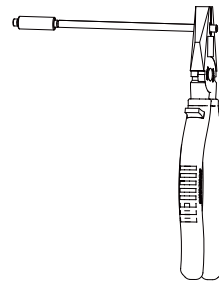


Fig. 4

- Note 2: If there's a pre-machined groove on the stem to mounting the supervisory switch, proceed with step 2.6 directly. If there is no pre-machined groove on the stem, proceed with step 2.4 and 2.5.

- 2.4 Mark the valve stem at the center of the trip rod.
- 2.5 Remove the supervisory device and then file a 1/8" deep groove centered on the mark on the valve stem with a 3/8" diameter straight file. Round and smooth the edges of the groove to prevent damage to the valve packing and to make sure that the trip rod can move easily in and out of the groove with the operation of the valve.
- Install the supervisory switch with the trip rod centered in groove.
- 2.6 Loosen 2 screws and slide the supervisory switch on the bracket. Adjustment is correct when switches are triggered with the trip rod seated in the valve stem groove and the switches are not triggered when the trip rod moves out of the groove.
- 2.7 Tighten the screws and all mounting devices. Make sure that the trip rod moves in and out of the groove easily, and within one turn when the valve is operated from the fully open position towards to closing position the switches can be triggered.

**Attention:** Operate the valve to the fully closed position and check to make sure that the stem threads do not trigger off the switch. If the stem thread triggers off the switch, it can cause false indication of the valve position.

### 3. Wiring Instructions

- 3.1 Use a special key to disassemble the tamper proof screws.
- 3.2 Wire across the electric outlet and connect with the terminals of the supervisory switch.
- 3.3 Connect with the appropriate terminal.

#### Typical Electrical Connections

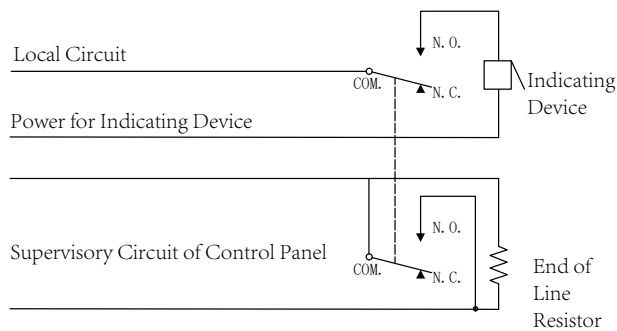


Fig. 5

#### Typical Switch Action

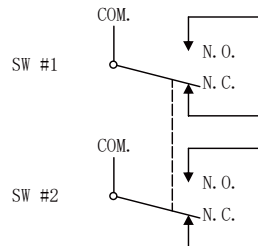


Fig. 6 Closed Position

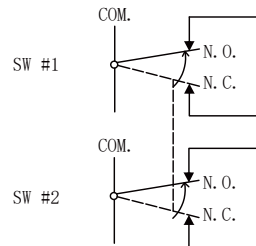


Fig. 7 Open Position

## Transportation and Storage

1. During transportation, take care to prevent violent vibration, throwing, collision, etc., and with proper protection from rain or chemical erosion.
2. When receiving the supervisory switch, check and confirm if there's damage during transportation, and put them on the ground carefully.
3. The supervisory switch should be stored in a clean, dry, well-ventilated place with non-corrosive environment.

## Trouble Shooting

1. False signal: take off the cover, adjust the trigger screw (see Fig. 9), then fix it with dry glue.
2. Tamper switch damage: Contact the sales agent for replacement of part.

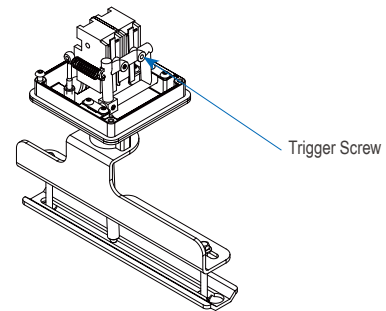


Fig. 9

## Maintenance & Service

1. Check on the signal effectiveness regularly, make sure that there is no mis-location of the device which shall result in false signal or signal failure.
2. Inspect the wire connection regularly to avoid loosening of connection.