



National Fire Equipment Ltd.

OSY2A Supervisory Switch

System Sensor's OSY2A is used to monitor the open position of an Outside Screw and Yoke (OS&Y) type gate valve.



Features

- NEMA 3R rated enclosure
- User-friendly mounting bracket fits newer valve yokes
- Single side conduit entry does not require right angle fittings
- Adjustable length actuator eliminates the need for cutting the shaft
- Accommodates up to 12 AWG wire
- Three position switch monitors vandal and valve close signals
- Two SPDT contacts are enclosed in a durable terminal block for added strength
- 100% synchronization activates both alarm panel and local bell simultaneously

Robust Construction. The OSY2A consists of a rugged housing, intended for indoor and outdoor use. When installed with the actuator in the vertical position, the OSY2A is NEMA 3R rated.

Application Flexibility. The OSY2A features a user-friendly mounting bracket and adjustable shaft to permit mounting to most OS&Y valves, ranging in size from 1" to 12". Its right angle design and wide bracket span provides maximum clearance for valve components, to accommodate troublesome valves. Removing the OSY2A's gate valve bracket allows the unit to monitor side-bracket style pressure reducing valves.

Simplified Operation. Installation is made easier with the OSY2A's single side conduit entrance. By providing a direct conduit pathway to the electrical source, right angle fittings are not required. Installation is further simplified by the OSY2A's adjustable length actuator, which eliminates the need for cutting the shaft.

Reliable Performance. The OSY2A is equipped with tamper resistant cover screws to prevent unauthorized entry. Inside, two sets of SPDT (Form C) synchronized switches are enclosed in a durable terminal block to assure reliable performance.

Agency Listings



National Fire
Equipment Ltd.

TORONTO: (905) 761-6355
Toll Free: (800) 267-8508

OTTAWA: (613) 723-6071

VANCOUVER: (604) 420-1131
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CALGARY: (403) 236-5661

MONCTON: (506) 859-7277
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OSY2A Specifications

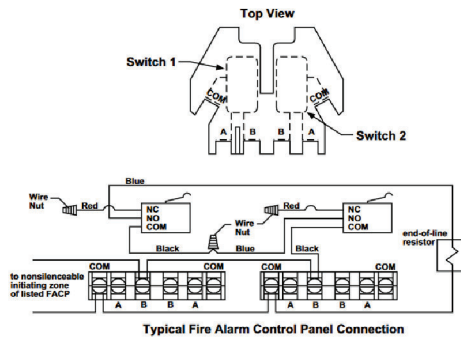
Architectural/Engineering Specifications

Model shall be model number OSY2A supervisory switch as manufactured by System Sensor. OSY2A shall be installed on each valve as designated on the drawings and/or as specified herein. Switches shall be mounted so as not to interfere with the normal operation of the valve and shall be adjusted to operate within two revolutions of the valve control or when the stem has moved no more than one-fifth of the distance from its normal position. The mechanism shall be contained in a weatherproof die cast metal housing, which shall provide a side entrance for 1/2" conduit and incorporate the necessary facilities for attachment to the valve. A grounding provision is provided. The switch assembly shall include two switches each with a rated capacity of 10Amp @ 125/250VAC and 2.5 Amp @ 24VDC. The cover shall contain tamper-resistant screws for which a security wrench will be provided with each switch. The OSY2A shall be Underwriters Laboratories of Canada listed for indoor or outdoor use. The OSY2A shall be Factory Mutual approved.

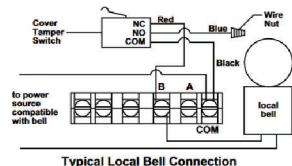
Physical/Operating Specifications

| | | | |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Overall Switch Dimensions | 5 3/4" H x 3 1/2" W x 3 1/4" D (14.6cm x 8.9cm x 8.2cm) | Contact Ratings | Two sets of SPDT (Form C) 10.0 A @ 125/250VAC; 2.5 @ 6/12/24VDC |
| Shipping Weight | 2.8 lbs. (1.3 kg) | Enclosure Rating | UL indoor/outdoor NEMA 3R when mounted with the actuator vertical |
| Operating Temperature Range | 0°C to 49°C (32°F to 120°F) NOTE: The OSY2 will operate from -40°C to 49°C (-40°F to 120°F); however UL does not test control valve supervisory switches below 32°F (0°C). | Cover Tamper Switch | Standard with ULC model |
| Maximum Stem Extension | 2 5/8" (6.7cm) | Service Use | Automatic Sprinkler: NFPA 13 One or Two Family Dwelling: NFPA 13D Residential Occupancies up to 4 stories: NFPA 13R National Fire Alarm code: NFPA 72 |
| Bracket Span | 1 1/4" H x 6 3/4" W x 1" D (5.7cm x 17.1cm x 2.5cm) | Warranty | 3 years |
| Conduit Entrances | One single side open for 1/2" conduit | U.S. Patent Nos. | 5,478,038; 5,213,205 |

Electrical Connections for OSY2A



Typical Fire Alarm Control Panel Connection



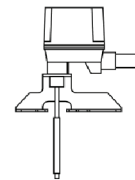
NOTE:
Local bell will activate
when cover is removed.

| Wire Code: | |
|---------------------------|-----------------------|
| Supervisory Switch: | |
| Com to B = Open Circuit | (Non Alarm Condition) |
| Com to A = Closed Circuit | |
| Cover Tamper Switch: | |
| Black / Blue: Open | (Cover Off) |
| Black / Red: Closed | |

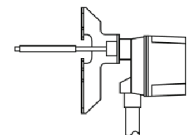
Break wire as shown for supervision of connection. DO NOT allow stripped wire leads to extend beyond switch housing. DO NOT loop wires.

OSY2A Mounting

The following are examples of acceptable mounting positions:

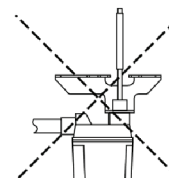


Actuator Vertical
(Down)



Actuator Horizontal

The following mounting position is not acceptable:



Actuator Vertical
(Pointing Up)

Ordering Information

| Part No. | Description |
|-------------|-------------------------------------------------------------|
| 7051005 | Outside Screw and Yoke valve supervisory switch |
| Accessories | |
| OSYRK | Replacement hardware kit (wrenches, screw pack and J-hooks) |
| 546-7000 | Cover tamper switch kit |
| S07-66-XX | Tamper screws for cover |



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