OSY2 and OSY2A

Outside Screw and Yoke (OS&Y) Supervisory Switches

NOTIFIER® by Honeywell

Conventional Initiating Devices

General

System Sensor's OSY2 and OSY2A supervisory switches monitor the open position of an Outside Screw and Yoke (OS&Y) type gate valve.

Robust construction. The OSY2(A) consists of a rugged housing, intended for indoor and outdoor use. When installed with the actuator in the vertical position, the OSY2(A) is NEMA 3R rated per UL.

Application flexibility. The OSY2(A) features a user-friendly mounting bracket and adjustable shaft to permit mounting to most OS&Y valves, ranging in size from 1" to 12" (2.54 to 30.48 cm). Its right-angle design and wide bracket span provides maximum clearance for valve components, accommodating troublesome valves. Removing OSY2(A)'s gate valve bracket allows the unit to monitor side-bracket-style pressure reducing valves.

Simplified operation. Installation is made easier with the OSY2(A)'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 OSY2(A)'s adjustable-length actuator, which eliminates the need for cutting the shaft.

Reliable performance. The OSY2(A) 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.

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 (3.31 mm²) 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.

Specifications

Contact ratings: two sets of SPDT (Form-C). 10.0 A @ 125/250 VAC, 2.5 A @ 6/12/24 VDC.

Dimensions: ***overall switch:*** 5.75" H x 3.5" W x 3.25" D (14.6 cm x 8.9 cm x 8.2 cm). ***Bracket span dimensions:*** 2.25" H x 6.75" W x 1.0" D (5.7 cm x 17.1 cm x 8.2 cm). ***Maximum stem extension:*** 2.625" (6.7 cm).

Mounting: ***Acceptable OSY2(A) mounting positions:*** actuator vertical (pointing DOWN), or actuator horizontal. ***The following mounting position is NOT acceptable:*** actuator vertical (pointing UP).

Conduit entrances: one single side open for 1/2" conduit.

Operating temperature range: 32°F to 120°F (0°C to 49°C).



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NOTE: *The OSY2(A) will operate from –40°F to 120°F (–40°C to 49°C); however, UL does not test control valve supervisory switches below 32°F (0°C).*

Enclosure rating: UL indoor/outdoor; NEMA 3R when mounted with the actuator vertical.

Cover tamper switch: standard with ULC model OSY2A; optional for UL model, P/N 546-7000.

Shipping weight: 2.8 lbs. (1.3 kg).

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.

U.S. Patent Nos.: 5,478,038; 5,213,205

Engineering Specifications

Model shall be model number OSY2(A) supervisory switch as manufactured by System Sensor. OSY2(A) 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 10.0 A @ 125/250 VAC and 2.5 A @ 24 VDC. The cover shall contain tamper-resistant screws for which a security wrench will be provided with each switch. OSY2(A) shall be Underwriters Laboratories listed for indoor or outdoor use. The OSY2(A) shall be Factory Mutual, CSFM, and MEA approved.

Agency Listings and Approvals

The listings and approvals below apply to the OSY2 or OSY2A supervisory switches. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL** Listed: file S739.
- **ULC** Listed: file S739 *(model OSY2A)*.
- **CSFM** approved: file 7770-1653:118.
- **FM** approved.
- **MEA** approved: file 167-93-E.

Product Line Information

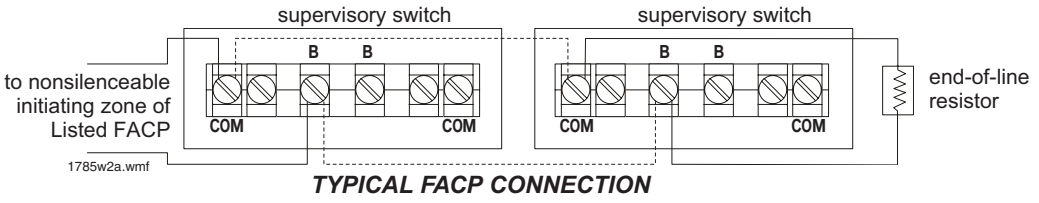
OSY2: Outside Screw and Yoke (OS&Y) supervisory switch.

OSY2A: ULC model, Outside Screw and Yoke (OS&Y) supervisory switch.

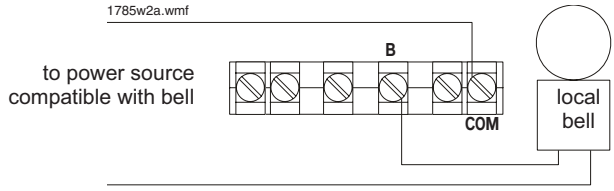
546-7000: Cover tamper switch kit.

WFDW: Replacement tamper proof wrench for cover.

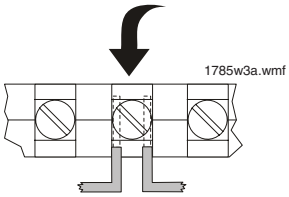
Wiring Diagrams



TYPICAL FACP CONNECTION



TYPICAL LOCAL BELL CONNECTION



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

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