WATTS TS-OSY IS-Tamper Switch Installation Guide

IS-TamperSwitch

Installation Instructions

TS-OSY

Tamper Switch
Series C200, C300, LFC300
2½”10″
Series 2000SS, 3000SS
2½”12″

Integrated tamper switch on OSY gate valve with switch rod in valve stem groove

! WARNING
Read this Manual BEFORE using this equipment.
Failure to read and follow all safety and use information can result in death, serious personal injury, property damage, or damage to the equipment.
Keep this Manual for future reference.

! CAUTION
Before wiring supervisory switches in fire protection systems, refer to the following standards:
NFPA 13: Standard for the Installation of Sprinkler Systems
NFPA 25: Inspection, Testing, Maintenance of Water-based Fire Protection Systems
NFPA 70: National Electrical Code
NFPA 72: National Fire Alarm Code
CSA C22.1 NO.1 Canadian Electrical Code, Part 1, Safety Standard for Electrical Installations Section 32
CAN/ULC-S524, Standard for Installation of Fire Alarm Systems

! WARNING

- Metallic conduit required by NEC for proper grounding conduit joint must be sealed with a conductive sealant.
- Install switch in accordance with National Electrical Code and/ or local ordinances.
- Wiring methods shall be in accordance with CSA C22.1, Canadian Electrical Code, Part 1, Safety Standard for Electrical Installations, Section 32 and CAN/ULC-S524, Standard for Installation of Fire Alarm Systems Assure All Devices Are Properly Grounded.

Approvals

Tamper switches integrated on the OSY-TS model of a valve assembly add protection against fire.

The tamper switch assembly consists of two SPDT switches. The switch assembly is designed to send a signal when the valve is closed or when the cover is removed. When the valve is fully open, the switch is in the neutral position. Closing the valve causes the switch rod to come out of the valve stem groove, activating the signal.

Removing the cover causes loss of contact with the switch rod, activating the signal.

NOTICE
Wire the tamper switch to a fire alarm control panel in accordance with the schematic diagram on page 2. Verify that the switch is operating as intended before commissioning the product. Proper operation must be assured. If adjustment is required to comply with NFPA standards and local ordinances, follow the field installation procedure, starting at step 7. Follow all steps of the field instructions when replacing or rotating the switch.

Tools Requirement
For field installation and rotation of the switch:
9/16″ socket with extension
9/16″ open end wrench
13/4″ open end wrench

Wiring Notes

- Connection to power limited circuitry is required.
- The auxiliary switch is for supplemental use only and shall not be used for fire alarm signaling applications.
- Switches are checked at the factory. Checking the switches after field installation is strongly advised. Check continuity with the valve fully open. The switches activate within two (2) turns from open.

Field Service of Installed Switch

Field repair by anyone other than authorized (factory) personnel is not recommended. Consult factory before attempting any repairs. Tamper resistant tools are required. Limited internal parts are available.

All replacement parts must be obtained from the manufacturer to assure proper operation of the valve and to maintain agency approval of the device.

Field Installation of Switch

1. Close the valve.
2. Remove the wheel nut with an appropriate-sized open end wrench.
3. Remove the handwheel.
4. Screw the switch unit into the tapped hole until the bushing is flush with the inside of the yoke.
5. Tighten the nut against the yoke with an open end wrench to 50 ft-lb minimum.
6. Reinstall the handwheel.
7. Open the valve until the switch rod is halfway into the groove.
8. Remove the security plug.
9. Using a 9/16″ socket with extension, loosen the adjustment nut until it depresses the switch tab; counteract rotation of the rod with a 9/16″ open end wrench. Listen for two clicks.
   At this point there should be continuity through the brown and yellow leads. The brown with orange stripe and yellow with orange stripe leads must have continuity as well.
10. Open the valve fully, so the rod is seated in the groove.

At this point the blue to yellow leads and blue/orange to yellow/orange leads must have continuity. If both switches are not in unison, further adjustments must be made.

NOTICE
The switch must meet this specific installation so that closing 20% of the valve or making a maximum of four (4) revolutions causes the switch to change status. Verify this after setting the limits.

TS-OSY

Field Rotation of Switch

1. Loosen the nut against the yoke with a 1¾" open-end wrench.
2. Rotate the switch to the desired position and tighten the nut.
3. Perform steps 7 to 10 in the preceding procedure to assure the switch operates properly.

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References

- Watts Canada | Plumbing, Heating and Water Quality Solutions
- Watts | Plumbing, Heating and Water Quality Solutions