

## Thank You

Thanks for purchasing a Series FS-400 or FS-410 Float Switch from us! We appreciate your business and your trust. Please take a moment to familiarize yourself with the product and this manual before installation. If you have any questions, at any time, don't hesitate to call us at 435-753-7300. You can also find a full list of our product manuals at:

[apgsensors.com/resources/product-resources/user-manuals](https://apgsensors.com/resources/product-resources/user-manuals)

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### 1 Description

Series FS-400 Stainless Steel Vertical Float Switches and Series FS-410 Miniature Stainless Steel Vertical Float Switches are durable float switches with a wide range of uses. Both are compact, feature all stainless steel wetted materials, and have user-reversible switch orientation. All FS-400 & FS-410 switches are made in the USA.

FS-400 & FS-410 switches should be installed in an area—indoors or outdoors—which meets the following conditions:

- Ambient temperature between -40°F and 368°F (-40°C to 187°C); up to 500°F (260°C) for HT.
- Process pressure 200 psi (13.8 bar) or less (FS-400-S); 500 psi (34.5 bar) or less (FS-400-HT); or 300 psi (20.7 bar) or less (FS-410).
- Relative humidity up to 100%.
- Altitude up to 2,000 meters (6560 feet).
- No chemicals corrosive to stainless steel (such as NH<sub>3</sub>, SO<sub>2</sub>, Cl<sub>2</sub>, etc.).

### 2 How to Read Your Label

Each label comes with a full model number, a part number, and a serial number. The model number for the Series FS-400 or FS-410 Float Switch will look something like this:

Sample: FS-400-HT-M1-M1-0.6-P0-48

The model number correlates with all the configurable options and tells you exactly what you have. Compare the model number to the options on the datasheet to identify your exact configuration. You can also call us with the model, part, or the serial number and we can help you.

### 3 Warranty

This product is covered by APG's warranty to be free from defects in material and workmanship under normal use and service of the product for 24 months. For a full explanation of our Warranty, please visit:

[apgsensors.com/resources/warranty-certifications/warranty-returns](https://apgsensors.com/resources/warranty-certifications/warranty-returns)

Contact Technical Support to receive a Return Material Authorization before shipping your product back.

### 4 Installation Instructions

Installing your vertical float switch is easy if you follow a few simple steps:

- Hold the switch beneath where it will mount, and feed the wires up through the mount.
- Insert the threads into the mount and begin to turn by hand.
- Use an appropriately sized wrench on the hex nut to completely tighten the threads.
- Connect the switch wires to your control system.
- Equipment must be grounded through final installation.
- Adequate overcurrent protection must be provided at the supply.

## FS-400 & FS-410

### Vertical Stainless Steel Float Switch

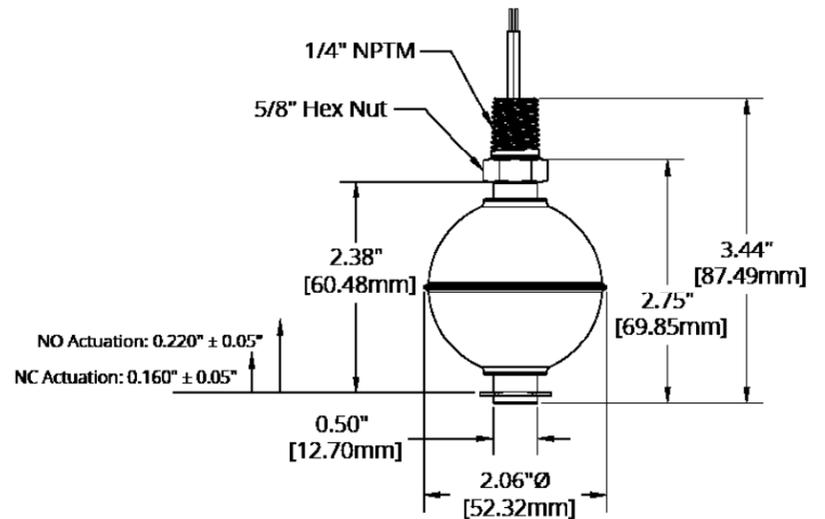
#### INSTALLATION GUIDE



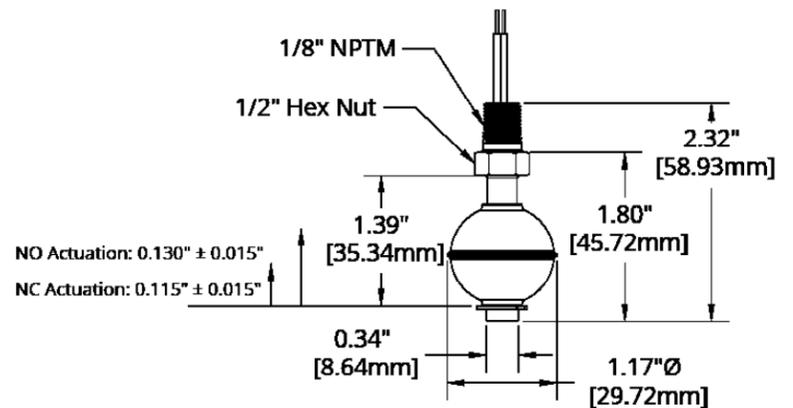
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### 5 Dimensions



FS-400 DIMENSIONS



FS-410 DIMENSIONS

### 6 Reversing Switch Operation (NO/NC)

All Series FS-400 and FS-410 Float Switches ship from the factory oriented for NO operation. To change the switch to NC:

1. Remove the e-clip at the bottom of the float stem.
2. Remove the float, and turn it over.
3. Replace the re-oriented float.
4. Replace the e-clip.

## 7 General Care & Notes

Your float switch is very low maintenance and will need little care, as long as it was installed correctly. However, in general, you should:

- Keep the float arm and support arm generally clean.
- Avoid applications for which the switch was not designed, such as contact with compatible.
- Inspect the threads whenever you remove the switch from duty or change its location.

See datasheets (FS-400, Doc #9005500; FS-410, Doc #9005501) for the following specifications:

- Specific gravity
- Actuation angle and hysteresis
- Electrical power rating, voltage ranges with frequencies and currents
- Full hazardous location ratings statements

## 8 Repair Information

If your float switch needs repair, contact us via email, phone, or online chat on our website. We will issue you an RMA number with instructions.

- Phone: (435) 753-7300
- Email: [sales@apgsensors.com](mailto:sales@apgsensors.com)
- Online chat at [apgsensors.com](https://www.apgsensors.com)

## 9 Removal Instructions

Removing your float switch from service must be done with care. It's easy to damage your switch if you are not careful to follow these guidelines:

- Make sure the liquid is well below the level of the switch. Follow any and all procedures for safely isolating any media contained inside the line or vessel.
- Disconnect wires to switch.
- Loosen the switch with an appropriately sized wrench.
- Twist switch until completely free of threads.
- Pull wires out through mounting.
- Store your switch in a dry place, at a temperature between -40°F and 180°F.