

## 790 Horizontal Level Control Floatswitch

### Application

The Model 790 Floatswitch is a side-mounted liquid level control which works on positive magnetic repulsion to complete an electrical circuit to a pump, valve, alarm or other device, when the liquid level in the vessel rises (or lowers) to a predetermined point.

### Features

- Corrosion Resistant: All wetted parts are 316 Stainless Steel.
- Variety of Switch Options: SPDT, DPDT, High Amp, High Temp.
- Explosion Proof: CSA APPROVED
  - Class I, Groups C & D
  - Class II, Groups E, F & G
  - Class III, Enclosure Type 4X
- External Chamber Available: Carbon Steel with (2) 1" NPT Connections.

### Operation

A magnet is permanently welded into the float arm assembly; as the liquid in the vessel rises, moving the float up, the float arm pivots (down) repelling another magnet inside the 790 unit, causing snap action of the electrical switch. Since SPDT switches are utilized, the level switch can simply be wired to energize at either a high or low level position.

Electrical Contacts: SPDT Micro Switch, Standard.

| FUNCTION  | TEMP. | SWITCH RATING                |
|-----------|-------|------------------------------|
| Standard  | 250°F | 5 A @ 120 VAC/250 VAC/28 VDC |
| High Amp  | 180°F | 11 A @ 120 VAC/250 VAC       |
| High Temp | 400°F | 5 A @ 120 VAC                |

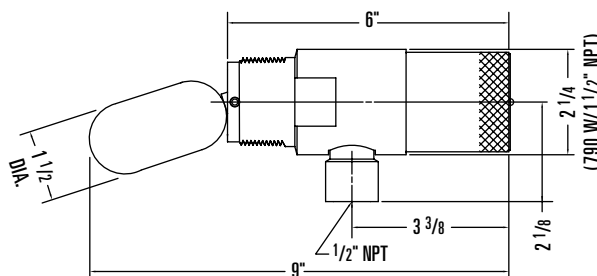
### Specifications

|                                 |                                  |
|---------------------------------|----------------------------------|
| Switch Housing                  | Explosion Proof                  |
| Temperature Limit               | 250°F (standard), 400°F (option) |
| Mechanical Rating               | 10,000,000 operations            |
| Operating Pressure:             |                                  |
| 316 Stainless Steel Float, Std. | 1500 psig                        |
| Polypropylene Float             | 5000 psig                        |
| Level Differential              | Approximately 1"                 |
| Specific Gravity                | 0.45 Min.                        |
| Electrical Connection           | 1/2" Female Pipe Thread          |

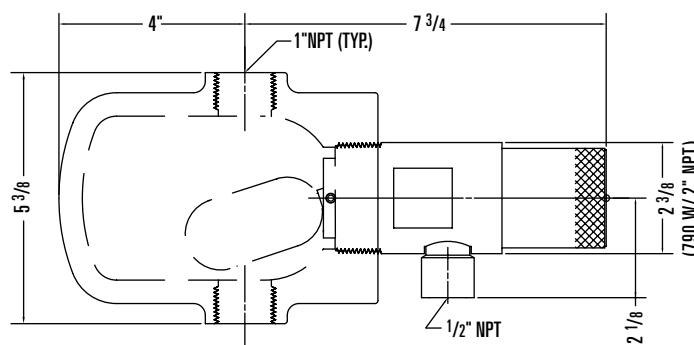


### Dimensional Data

790 Std. 1 1/2" NPT Or 2" NPT



790 With External Cage



# 790 Horizontal Level Control Floatswitch

## Determining the Model Number

Example given: Standard Model 790SF-1A Float Control with SPDT Micro Switch, 1 1/2" NPT Vessel Connecton, 316 S.S. Float, 316 S.S. Arm and Pivot for Internal Vessel Mounting with pressure up to 1500 psi.

### MODEL 790SF-1 A,X

\*For variations, change code to match requirements.

- SF • SPDT Dry Contact - STD.
- SG • DPDT Dry Contact - STD.
- SK • SPDT High Amp
- SR • SPDT High Temperature

Type of Switch

- 1 • 1 1/2" NPT
- 2 • 2" NPT

Size

Options & Additions

- c • External Chamber - Carbon Steel with (2) 1" NPT Connections
- e • External Arm (Specify Length)
- h • High Pressure - 5000 psi Polypropylene Float
- s • Stainless Steel Tag
- x • Specify Additional Options

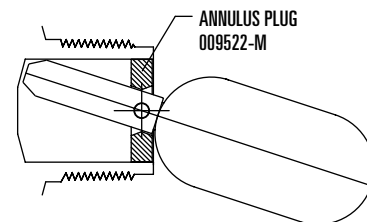
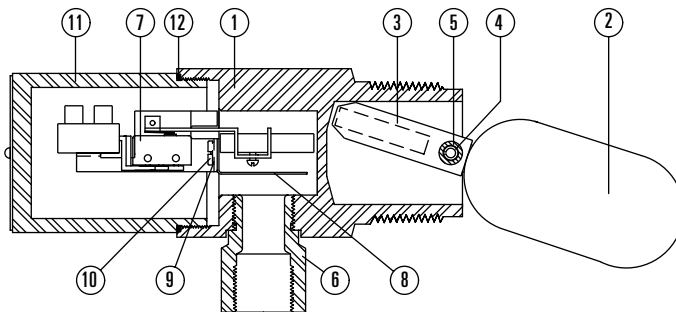
Materials

- A • 316 S.S. Process Connection with 316 S.S. Trim

## Parts List

| Item | Description                        | Qty. | Part No.   |
|------|------------------------------------|------|------------|
| 1    | BODY 1 1/2" NPT, ASTM A-276 TY.316 | 1    | 009513-M   |
|      | BODY 2" NPT, ASTM A-276 TY.316     | 1    | 009527-M   |
| 2    | FLOAT, 316 STAINLESS STEEL         | 1    | 007418-P   |
| 3    | COUNTER WEIGHT, ASTM A-276 TY.316  | 1    | 007361-W   |
| 4    | PIVOT PIN, 316 S.S.                | 1    | 007233-P   |
| 5    | SPACER, 316 S.S.                   | 2    | 007114-M   |
| 6    | ADAPTER, ASTM A-582 TY.303         | 1    | 009533-M   |
| 7    | SWITCH ASSY, SPDT                  | 1    | 009584-A   |
|      | SWITCH ASSY, DPDT                  | 1    | 009679-A   |
| 8    | SWITCH PROTECTOR, 304SS            | 1    | 009520-P   |
| 9    | LOCK WASHER, S.S.                  | 2    | 001804-P   |
| 10   | SCREW, 18-8 S.S.                   | 2    | 001504-P   |
| 11   | CAP, 303 STAINLESS STEEL           | 1    | 009514-M   |
| 12   | O-RING, BUNA-N                     | 1    | 05000-0173 |
| 13*  | SCREW, GROUND, 18-8 S.S.           | 1    | 001504-G   |
| 14*  | GROUND CUP, S.S.                   | 1    | 001800-P   |
| 15*  | GROUND WIRE (FOR DPDT SWITCH ONLY) | 1    | 000087-A   |

\*NOT SHOWN



OPTIONAL PARTS FOR 790

### WIRING DIAGRAM FOR 790 WITH FLOAT IN DOWN POSITION

- 1 BLACK ..... COMMON
- 2 BLUE ..... NORMALLY CLOSED
- 3 RED ..... NORMALLY OPEN