

# SENSOR FLOAT® Control Switch

Mercury-activated, narrow-angle float switch designed to activate pump control panels and alarms.

This narrow-angle sensing device is used to accurately monitor liquid levels in sewage and non-potable water applications. The Sensor Float® control switch is not sensitive to rotation and is suitable for use with intrinsically safe circuits. Contact SJE-Rhombus regarding specific intrinsically safe applications.

## Normally Open Model (high level)

The control switch turns on (closes) when the float tips slightly **above** horizontal signaling a high level, and turns off (opens) when the float drops slightly below horizontal.

## Normally Closed Model (low level)

The control switch turns on (closes) when the float drops slightly **below** horizontal signaling a low level, and turns off (opens) when the float tips slightly above horizontal.



## FEATURES

- Suitable for use with intrinsically safe circuits.
- Not sensitive to rotation.
- Control differential of .5 inches (1 cm) above or below horizontal.
- UL Listed for use in non-potable water and sewage.
- CSA Certified.
- Three-year limited warranty.



## SPECIFICATIONS

**CABLE:** flexible 18 gauge, 2 conductor (UL,CSA) SJOW, water-resistant (CPE) jacket

**FLOAT:** 3.38 inch diameter x 4.55 inch long (8.58 cm x 11.56 cm), high-impact, corrosion resistant, PVC housing for use in sewage and non-potable water up to 140°F (60°C)

**MAXIMUM WATER DEPTH:** 30 feet (9 meters), 13 psi

**MERCURY TILT SWITCH:** single pole, single throw, mercury-to-mercury contacts, hermetically sealed in a steel capsule and epoxy sealed in the float housing

**ELECTRICAL:** 5 amp, 120/230 VAC, 50/60 Hz

## OPTIONS

**This switch is available:**

- for normally open (high level) applications or normally closed (low level) applications.
- in standard cable lengths of 10, 15, 20, or 30 feet and 3, 5, 6, or 10 meters.
- with three mounting options that allow for flexibility in installation:

**Mounting Clamp:** for applications where the switch can be attached to a discharge pipe or similar mounting device.

**Internally Weighted:** for applications where the switch can be suspended from above.

**Externally Weighted:** for applications where the switch can be suspended from above.

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**NOTE:** Suitable for use with intrinsically safe circuits

Contact SJE-Rhombus regarding specific intrinsically safe applications.

## OTHER INFORMATION

### **NORMALLY OPEN (HIGH LEVEL) OPERATION**

The control switch closes (turns on) when the float tips slightly **above** horizontal signaling a high level, and opens (turns off) when the float drops slightly **below** normal.

### **NORMALLY CLOSED (LOW LEVEL) OPERATION**

The control switch closes (turns on) when the float drops slightly **below** horizontal signaling a low level, and opens (turns off) when the float tips slightly **above** horizontal.

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# ACCESSORIES

Cable Weight, Hub Assembly, Float Bracket, Cable Connectors, Cord Seal, Cable Clamp Assembly, Pressure Transducers, Anchor, Chain, and Vertical Reed Switch.

## CABLE WEIGHT

Provides an accurate pivot point for suspended float switches.

- Gripper teeth on clip and weight channel securely lock float cable into place
- Cable Weight can be adjusted without the use of tools



U.S. Patent 5,306,885

**HOUSING:** 1 pound, 12 ounce (0.8 kgs.), 2.8 inch diameter x 3.3 inch long (7.1 cm diameter x 8.4 cm), impact resistant, non-corrosive, PVC housing for use in liquids up to 140°F (60°C)

**CLIP:** injection molded acetal plastic

**WIRE/CABLE ACCOMMODATED:** SJOW, SJTW, 18/2, 18/3, 16/2, 16/3, 14/2 and 14/3

Part Number	Description
1002230	Cable Weight

## HUB ASSEMBLY

Provides liquid-tight conduit attachment location.

- Available in 1, 1.5 and 2 inch sizes.
- UL Listed and CSA Certified terminal adapter



**TERMINAL ADAPTER (HUB):** PVC

**GASKET:** neoprene

**LOCK NUT:** metal

Part Number	Description
1009305	1 inch Hub Assembly
1008848	1.5 inch Hub Assembly
1008849	2 inch Hub Assembly

## FLOAT BRACKET

Provides convenient installation of float switches.

- Six Float Bracket supports 1-6 floats
- Four Float Bracket supports 1-4 floats
- Can be directly mounted to wall or used with wall mounting device
- Provides convenient location to stow excess float cord
- Supplied with UL Recognized cord strain relief connectors



**METAL COMPONENTS:** all metal components are made of 300 series stainless steel

**STRAIN RELIEF CONNECTORS:** which accommodate 18/2, 18/3, 16/2, 16/3 SJOW and SJTW cords

Part Number	Description
1009432	4 Float Bracket With Mounting Device
1009433	4 Float Bracket Without Mounting Device
1009434	6 Float Bracket With Mounting Device
1009435	6 Float Bracket Without Mounting Device
1009436	Float Bracket Mounting Device

## CABLE CONNECTORS

Provides strain relief and a liquid-tight seal.

- UL Listed and CSA Certified



## ROUND CABLE SPECIFICATIONS

**MATERIAL:** polyimide flame-resisting, self-extinguishing plastic

**ORING:** neoprene plastic

**HOLE REQUIREMENT:** NPT threaded OR clearance holes (jam nut included)



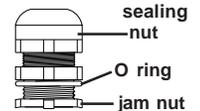
### RCC-8

**NPT Hub:** .5 inch (1.27 cm)

**Maximum Diameter:** .480 inch (1.22 cm)

**Minimum Diameter:** .270 inch (.68 cm)

**Wire/Cable (AWG) Accommodated:** 18/2, 18/3, 18/4, 16/2, 16/3, 16/4, 14/2, and 14/3



### RCC-12

**NPT Hub:** .75 inch (1.90 cm)

**Maximum Diameter:** .709 inch (1.80 cm)

**Minimum Diameter:** .545 inch (1.38 cm)

**Wire/Cable (AWG) Accommodated:** 14/2, 14/3, 14/4, 12/2, 12/3, 12/4, 10/2, and 10/3

### RCC-16

**NPT Hub:** 1.0 inch (2.54 cm)

**Maximum Diameter:** .98 inch (2.49 cm)

**Minimum Diameter:** .71 inch (1.80 cm)

**Wire/Cable (AWG) Accommodated:** Round cable with outside diameter within range identified above.

Part Number	Description
1002574	1/2 inch Round Cable Connector (RCC-8)
1002575	3/4 inch Round Cable Connector (RCC-12)
1009868	1 inch Round Cable Connector (RCC-16)

## FLAT UF CABLE SPECIFICATIONS

**MATERIAL:** weather-stabilized thermo plastic

**ORING:** neoprene plastic

**HOLE REQUIREMENT:** NPT threaded OR clearance holes (jam nut included)

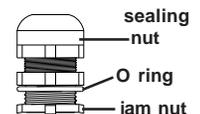


### UFCC-8

**NPT Hub:** .50 inch (1.27 cm)

**Maximum:** .26 x .56 inch slot

**Wire/Cable (AWG) Accommodated:** 14/2, 12/2, 10/2



### UFCC-12

**NPT Hub:** .75 inch (1.90 cm)

**Maximum:** .26 x .60 inch slot

**Wire/Cable (AWG) Accommodated:** 14/3, 12/3

Part Number	Description
1002576	1/2 inch Flat UF Cable Connector (UFCC-8)
1002577	3/4 inch Flat UF Cable Connector (UFCC-12)

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# ACCESSORIES

Cable Weight, Hub Assembly, Float Bracket, Cable Connectors, Cord Seal, Cable Clamp Assembly, Pressure Transducers, Anchor, Chain, and Vertical Reed Switch.

## CORD SEAL

Provides strain relief and a liquid-tight seal.

- Seals 1-3 cables in 2" terminal adapters
- 2 PVC plugs included (for unused cable positions)
- Ground wire

SEAL: neoprene

WASHERS: stainless steel

NUT AND BOLT: stainless steel

WIRE/CABLE ACCOMMODATED: SJOW, SJTW, 18/2, 18/3, 16/2, 16/3, 14/2 and 14/3



Part Number	Description
1008517	Cord Seal

## CABLE CLAMP ASSEMBLY

Provides cable anchor point and strain relief. Secures cable in vertical direction.

- For use with 18/16 gauge, 14 gauge, & 12 gauge cable
- Mounting clamp: ABS Nylon blend
- Hose clamp: highly corrosion resistant stainless steel



Part Number	Description
1008569	18 & 16 Gauge Cable Clamp Assembly
1008574	14 Gauge Cable Clamp Assembly
1008575	12 Gauge Cable Clamp Assembly

## ANCHOR

- 10 lb. weight
- Yellow, vinyl coated, mushroom style



Part Number	Description
1018687	10 lb. Mushroom Anchor

## CHAIN

- 1/8" thickness
- 316 grade stainless steel
- Available in one foot increments



Part Number	Description
1018823	1/8 inch Chain

## MODEL 700 TRANSDUCER

Provides reliable liquid level measurement and control for well monitoring, pump control, lift stations, level control, ground water/surface water monitoring applications.

- Construction: welded 316 stainless steel
- Open faced nose cap
- Excitation voltage: 9-30 VDC
- Analog output: 4-20mA
- 0-10 PSI
- 40' molded polyurethane 4 conductor vented cable with vent filter to prevent moisture in cable tube
- Static accuracy: +/- .01
- Zero offset: +/- 0.20mA

\*\*Call Factory for quote.\*\*



## MODEL 710 TRANSDUCER

Provides reliable liquid level measurement and control for well monitoring, pump control, lift stations, level control, ground water/surface water monitoring applications.

- Construction: welded 316 stainless steel
- Open faced nose cap
- Excitation voltage: 9-30 VDC
- Analog output: 4-20mA
- 0-10 PSI
- 40' molded polyurethane 4 conductor vented cable with vent filter to prevent moisture in cable tube
- Static accuracy: +/- .05
- Zero offset: +/- 0.20mA

\*\*Call Factory for quote.\*\*



## VERTICAL REED SWITCH

- Control differential: .375 inch (1 cm)
- Maximum angle from vertical: 5°
- Electrical: 250 mAmps, 12-25 VAC, 50/60 Hz  
500 mAmps, 6-12 VDC, 50/60 Hz
- Housing and Float: 1.60 inch diameter x 6.7 inch long (4.06 cm X 17.01 cm), high impact, corrosion resistant PVC for use in sewage and non-potable water up to 120°F (50°C)



Part Number	Description
1011027	10ft VRS 120V Bulk
1016561	15ft VRS 120V Bulk

## ETM WITH 120V PIGGY-BACK PLUG

Plugs into switched outlet or piggy-back switch of plugger control panel. Unit must be placed inside an enclosure.

- 120 VAC
- Screws and mounting adhesive included.



Patent Pending

Part Number	Description
1022846	ETM w/120V piggy-back plug