

# **NORRISEAL**

## **ELECTRIC LEVEL SWITCH**

### **SERIES 1002-A**

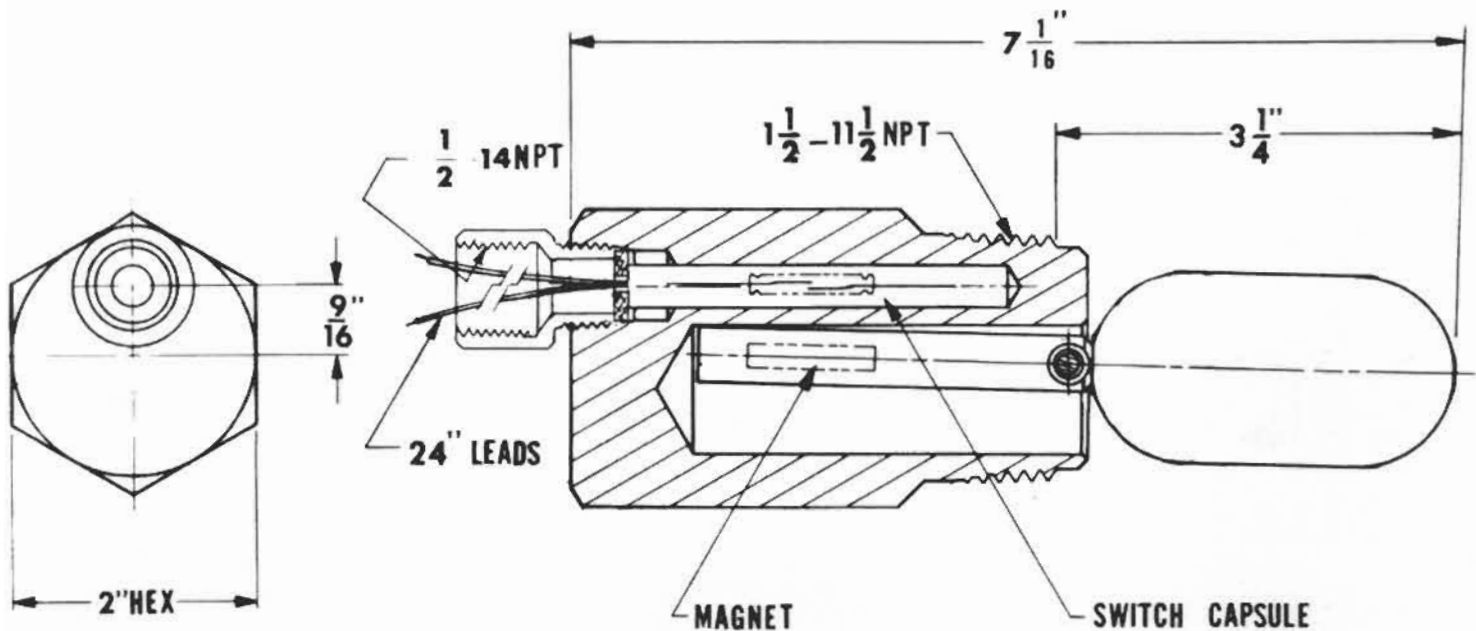
**SP** APPROVED FOR HAZARDOUS  
LOCATIONS CLASS I, GROUP C & D  
STAINLESS STEEL HEX BODY  
(316 SST)

- 3000 PSI WORKING PRESSURE
- FIELD REPLACEABLE SWITCH CAPSULE

# APPLICATION

The **NORRISEAL SERIES 1002-A** offers a reliable, float-operated, high or low liquid level sensing device. The Series 1002-A is listed by the Canadian Standards Association as certified for hazardous locations, Class I, Group C & D. It can be used to sound alarms, operate control equipment, activate panel lights, or perform any other electrical function.

The Series 1002-A will operate in liquids with a specific gravity of 0.6 or higher and pressures up to 3000 psi. The field replaceable switch capsule is rated for operation within -40 to 220° F



# OPERATION

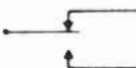
The **Norriseal Series 1002-A** utilizes a magnetic proximity reed switch to open or close an electrical circuit. The reed switch is actuated by a permanent magnet. A stainless steel arm, containing the magnet, acts as a counterbalance for the float. As the liquid level varies, the float will position the magnet closer to or farther from the reed switch capsule. The operation of the two reed switches available in the Series 1002-A are explained below.

## CIRCUITRY

Single Pole Single Throw



Single Pole Double Throw



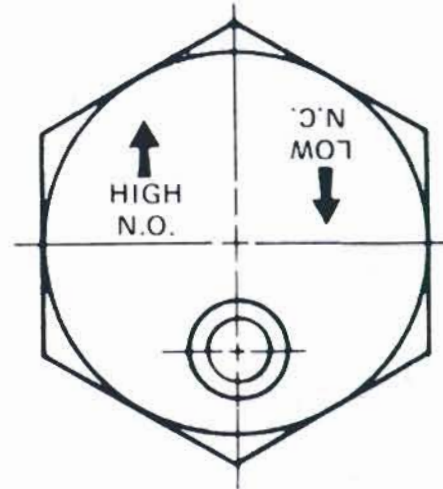
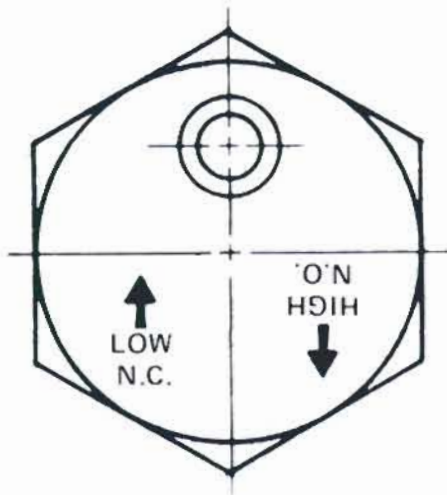
**The Single Pole—Single Throw** Reed Switch is normally open. When the magnet is positioned in close proximity with the switch capsule, the contacts close.

**The Single Pole—Double Throw** Reed Switch has three contacts. Two of the contacts are normally connected and the third contact is normally open. When the magnet is positioned in close proximity with the switch capsule, the common contact will disconnect with the normally-closed contact, and will connect with the normally-open contact.

# ORIENTATION

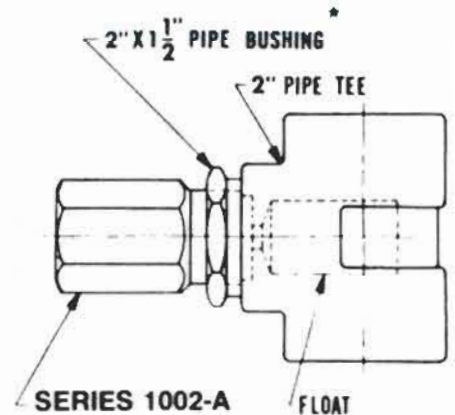
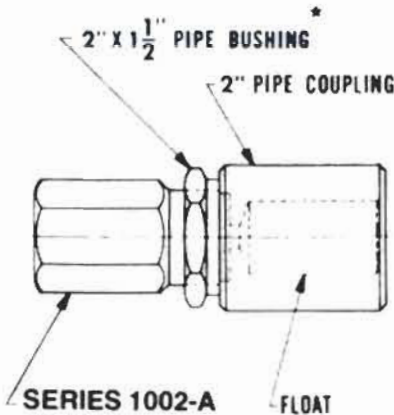
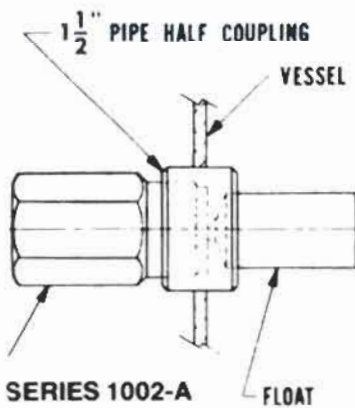
The Series 1002-A may be mounted either high or low alarm, normally closed or normally open by simply positioning the body. The hex body provides flat surfaces for easy wrenching during installation or positioning.

## POSITION NORMALLY CLOSED (LOW LEVEL ALARM)



## POSITION NORMALLY OPENED (HIGH LEVEL ALARM)

# TYPICAL INSTALLATIONS



\*MAXIMUM OVERALL LENGTH 1 1/4"

# SPECIFICATIONS

BODY	316 Stainless Steel		
FLOAT	MATERIAL	MAX. PRESSURE	MAX. TEMPERATURE
	Polypropylene 316 Stainless Steel	3000 psi 1500 psi	140°F 220°F
ELECTRICAL	MAX. VOLTS	MAX. AMP.	MAX. SWITCH LOAD (RESISTIVE)
Single Pole Single Throw	24 VDC 120 VAC	2.0 .25	30 Watts 30 V.A.
Single Pole Double Throw	24 VDC 120 VAC	1.0 .17	20 Watts 20 V.A.
SWITCH OPERATING TEMPERATURE RANGE: -40 TO 220° F			

## HOW TO ORDER

1. SPECIFY SERIES 1002-A
2. SELECT MODEL NUMBER

EXAMPLE:

**SERIES 1002-A, MODEL 316-14-SPST**

BODY MATERIAL	CODE
316 SST	316

FLOAT MATERIAL	CODE
Polypropylene	14
316 SST	40

SWITCH TYPE	CODE
Single Pole Single Throw	SPST
Single Pole Double Throw	SPDT

## Other Norriseal Products

(Write Factory for Information and Bulletin)

 <p><b>SERIES 1001-A</b> LIQUID LEVEL CONTROL (Bulletin 1-1)</p>	 <p><b>SERIES 2220</b> 2-WAY TEE BODY VALVE (Bulletin 2-2)</p>	 <p><b>SERIES 3023</b> 3-WAY VALVE (Bulletin 3-5)</p>
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