ORION® INSTRUMENTS
A Magnetrol® Company

THE NEXT GENERATION OF MAGNETIC LEVEL INDICATION

ORS POINT LEVEL SWITCH

Model: ORS
(shown with optional junction box)

DESCRIPTION

The model **ORS** reed switch is available to augment the control capabilities of Orion's extensive line of magnetic level indicators. Housed in an explosion proof stainless steel enclosure, the ORS mounts to the outside of the MLI via clamps. This mounting style allows addition or repositioning of switches at any time, without disruption of the process.

Each switch is designed for optimal repeatability and reliability. The magnetic field produced by the MLI float actuates the ORS when the liquid level moves the float into the proximity of the reed switch. The switch is bi-stable, so it will not reset until the float's magnetic field passes it in the opposite direction.

ORS as a high level switch

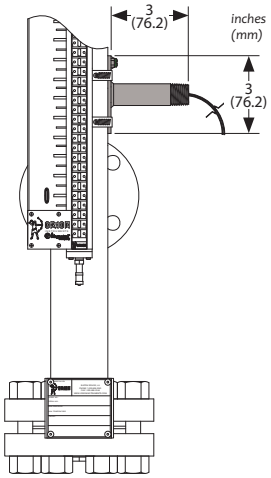
ORS as a low level switch

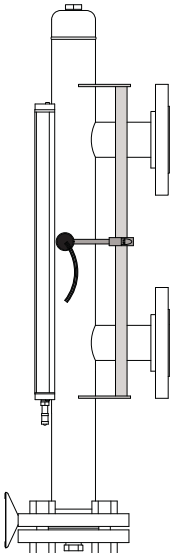
SPECIFICATIONS

Model	ORS-xxxx-001
Type	Bi-stable reed switch
Supply Voltage	150V AC/DC max
Contact Rating	1.0 amp AC/DC max
Maximum Load	25 watts AC/DC max
Deadband	±0.50" (13 mm) float travel
Temperature Range	-58° to 325° F (-50° to 163° C)
Enclosure Rating	NEMA 4X/7/9
Enclosure Material	Standard housing: 316 stainless steel with optional junction box: aluminum or stainless steel
Mounting	Clamp mount to MLI or switch mount rod (both are field adjustable)
Conduit/Cable Entry	3/4" FNPT (consult factory for alternative options) (applies only when optional junction box is provided)

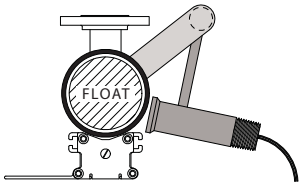
AGENCY	MODEL	CATEGORY
FM	All models	Class I, Div. 1, Groups B, C, & D Class I, Div. 2, Groups A, B, C, & D
CSA	All models	Class II, Groups E, F, & G Class III, Type 4X
CE	ORS-xAxx-xxx	ATEX II 2 G Ex d IIC T6 Ta = -40 to +70° C
IECEx	ORS-xAxx-xxx	IECEx d IIC T6 Ta = -40 to +70° C

The ORS level switch is completely field adjustable. Simply loosen the mounting clamps and position at the desired location. Ensure that the switch **always** remains in close proximity to the internal float.





A **switch mount rod** is an available alternative method for mounting the ORS to an MLI when insulation is present. The rod assembly, which is welded to the MLI chamber, allows the switch to slide along the full length. When the desired position is selected, simply tighten it in place.



MOUNTING TO ATLAS™ OR GEMINI™ MLI

With mounting clamps loosened, position ORS reed switch on the MLI body so that the centerline of the stainless steel tube which houses the switch is at the desired switch point level. The switch should be oriented so that the green ground screw is closest to the top of the MLI. Tighten the clamps so that the switch is secured to the MLI. If required, place the insulation between the MLI body and the switch before tightening the clamps.

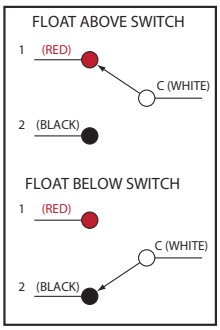
MOUNTING TO AURORA® MLI

Follow procedure for mounting to Atlas or Gemini, but ensure that the switch is positioned on the circumference of the Aurora body as close to the indicator as possible.

WIRING

The leads switch housing are color coded as follows:

White = Common
Black = Closed when float below switch
Red = Closed when float above switch



CAUTION: If equipment is used in a manner not specified by the manufacturer, protection provided by the equipment may be impaired.

ORS 1-Amp SPDT Point Level Switch

O	R	S					0	0	1
1	2	3	4	5	6	7	8	9	10

4 ENCLOSURE

1	Standard stainless body without junction box
A	Option 1 with cast aluminum junction box
S	Option 1 with stainless steel junction box

5 AGENCY APPROVAL

1	FM / CSA
A	ATEX

6 CHAMBER MOUNTING CODE

1	MLI model code digit 20 is 1, 2, or 7
2	MLI model code digit 20 is 3, 4, 5 or 6
3	MLI model code digit 20 is A, B, C, or D
4	MLI model code digit 20 is E, F, G, H, or J
5	MLI is a Top Mount design

7 MOUNTING STYLE

C	Clamp mounted on MLI (standard)
P	Clamp mounted on MLI with insulation pad
R	Attached to switch mount rod

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