

# Electric Solution with Explosion Proof Switch

## High/low electric liquid level switch

Norriseal has been a leader in providing quality level measurement devices to the petroleum market for over five decades. In addition to oil and gas applications, Norriseal level products serve in marine, steel, and industrial markets. This tech sheet describes the Series 1001A and the 1001XL liquid level controllers, which can be equipped with explosion-proof switches and offered as an electric solution for applications where emission controls are critical.

### Features

**Functionality:** The 1001A/1001XL with an electric switch can be combined with our electric valve solution offerings for a fully electric package. As direct acting, the switch can trigger an alarm to signal high level or tell the electric valve to open. As reverse acting, the switch can trigger an alarm to signal low level or tell the electric valve to close.

**Removable door.** The controller door can only be removed after opening 90°. This feature prevents the door from vibrating loose while in the closed position. A lever latch keeps a positive engagement between the case and the door.

**Weather-resistant sealed case.** An o-ring gasket seals internals from outside weather and allows the internal components, including the switch, to be better protected.

**Specific gravities.** The switch can operate with multiple specific gravities in interface or top-level applications.

Min SG available = 0.15

Max SG available = 1.20

*Consult factory to select the proper spring range, arm length and displacer.*

**Field-reversible action.** This adjustment determines whether rising liquid level will increase or decrease switch output.

**Right- or left-hand mount (1001A).** The controller may be changed for right-hand or left-hand mount in the field without additional parts.

**Electric controller.** This option utilizes a standard electric switch; SPDT or DPDT.

**Split displacer.** For liquid dump spans greater than the standard displacers can provide, a split displacer can give dump spans up to 70 feet in length.

**NACE.** All controllers can be configured to meet NACE MR0175-2002 specifications.



**Series 1001A  
Electric Solution**



### Applications

- Emission free separators and scrubbers
- High/Low level safety switch
- Compressor package

### Specifications

- Force-balance principle to apply force to a standard on/off micro-switch.
- Float operated.
- Max pressure rating up to 2500# ANSI.
- Max temp rating up to 158°F

ELECTRIC SWITCH FEATURES			
Electric-micro Switch Type	Proportional Band Adjustment	Switch Rating	Certifications – Hazardous Locations
SPDT (single pole double throw)	7-55%	<ul style="list-style-type: none"> <li>• 15A 125, 250 or 480 VAC</li> <li>• 1/2A, 125 VDC</li> <li>• 1/4A 250 VDC</li> </ul>	<ul style="list-style-type: none"> <li>• NEMA 1,7 &amp; 9</li> <li>• UL and CSA certified: Class I, Groups C&amp;D; Class II, Groups E,F,&amp;G</li> </ul>
DPDT (single pole double throw)	20-150%	<ul style="list-style-type: none"> <li>• 10A 125, 250 or 480 VAC</li> <li>• 1/2A, 125 VDC</li> <li>• 1/4A, 250 VDC</li> </ul>	<ul style="list-style-type: none"> <li>• NEMA 1,7 &amp; 9</li> <li>• UL and CSA certified: Class I, Groups C&amp;D; Class II, Groups E,F,&amp;G</li> </ul>

# Model code



**A**

SERIES MODEL	
Code	Series
1001A	1001A Model
1001XL	1001XL Model

**B**

END CONNECTION SIZE	
Code	Size
2	2"
3	3"
4	4"

**C**

END CONNECTION TYPE	
Code	Type
RF	Flanged Raised Face
RJ	Flange Ring Type Joint
SM	Screwed Male NPT

**D**

PRESSURE RATING			
Code	ANSI	MWP @100°F	Connection Type
02	150#	285PSI	Flanged only
07	300#	740PSI	Flanged only
14	600#	1440PSI	Flanged only
21	900#	2220PSI	Flanged only
36	1500#	3750PSI	Flanged only
60	2500#	6170 PSI	NPT or Flanged

**E**

MATERIAL: BODY/SHAFT/BLOCK		
Code	Body	Shaft/Bearing Block
-	WCC CS (A696)	316SS
N	WCC CS (A696) NACE	316SS
R	316SS NACE	316SS
S	316SS	316SS

**F**

PILOT MODE		
Code	Type	Signal
D	DPDT	(On/Off) VAC or VDC
E	SPDT	(On/Off) VAC or VDC

**G**

MOUNTING CASE	
Code	Type
B	Back Mount (XL Models Only)
L	Left Hand Mount
R	Right Hand Mount

**H**

PILOT ACTION	
Code	Behavior
D	Level rises, output signal increases
R	Level rises, output signal decreases

**I**

SEAL MATERIAL			
Code	O-Ring Material	Temp. Range*	Service
A	Buna-N	-20 to 180°F	STD Only
E	EPR	-20 to 250°F	NACE or STD
F	Viton	-20 to 400°F	NACE or STD
S	Aflas	-20 to 400°F	NACE or STD

\*Unit temperature rating subject to selection of displacer. See displacer chart.

**J**

PRESSURE GAUGES	
Code	Material
R	No Gauges (Electric Models)

**K**

SERVICE CONDITION	
Code	Type
B	Standard

**L**

CASE ENCLOSURE TYPE	
Code	Type
G	Weather-resistant Case Only
H	Weather-resistant Case and Piped Exhaust

DISPLACER CHART		
Material	Temp Range	Max Pressure
PVC	-20 to 140°F	6170 PSIG
Acrylic	-20 to 200°F	6170 PSIG
SST-2	-70 to 600°F	2000 PSIG*

\*3000PSIG Option available. Consult Factory

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Norriseal-Wellmark | 11122 W Little York Rd | Houston, TX 77041

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