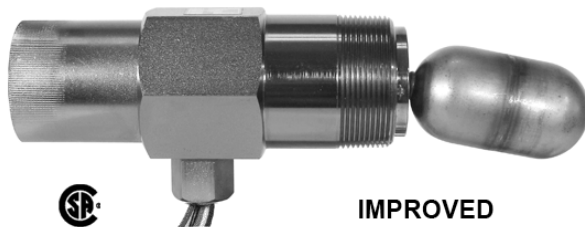


# LS200 & L1100 Series Liquid Level Switches

## Electric Switch



IMPROVED

**LS200** Liquid Level Switches with 2" NPT mounting are float activated to operate an electrical SPDT snap switch (optional DPDT on some models) for alarm or shutdown of an engine or electric motor. The LS200 connects directly into the vessel wall and can be used with a Murphy weld collar (P/N 15050375) or Murphy external float chamber (P/N 15700799). L1100 models (1-1/2" NPT) are also available.

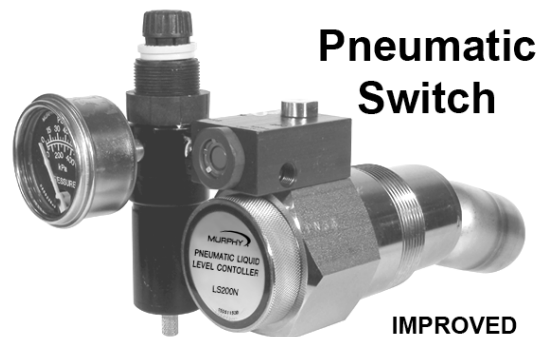
**LS200NDVOR** is a float-activated, pneumatic-vent level device used to operate dump valves or similar devices.

The LS200NDVOR provides a 2" NPT mounting with a pneumatic output for interfacing with pneumatic devices such as our Murphy pneumatic dump valve or with other pneumatic instrumentation.

**LS200NDVO** is the Dump Valve Operator (DVO) without the pressure regulator for those applications where the system provides a filter regulator for "instrument quality" air or gas as the control medium.

**LS200N** is the pneumatic level switch without the DVO and filter regulator.

**NOTE:** Pneumatic media devices require clean, dry, instrument quality air or gas. This unit is supplied with a pressure regulator, filter and Murphy 20BPG pressure gage for improved system life and trouble-free operation.



## Pneumatic Switch

IMPROVED

## Features

- Designed for harsh gas compressor scrubber applications
- 304 stainless steel float operates in 0.55 specific gravity and heavier fluids (see Table 1)
- LS200 series rated for 2000 psi (13.8 MPa) [138 bar] working pressure
- Electric and pneumatic models available
- More robust design
- All models screw directly into the vessel or can be mounted via external float chamber
- Nickel plated body to provide enhanced corrosion protection
- Listed for Class I, Div. 1, Grp. C & D locations
- Canadian Registration Number OF1476.2
- Stainless Steel models are available for corrosive atmospheres.
- Trip on rising liquid level only

## Accessories

Refer to LS200 Installation and Operations manual for additional information.

### External Float Chamber 15700799

**Operating Pressure:** 2000psi (13.8MPa)[138 bar]

**Operating Temperature:** 400°F (204°C)

### Weld Collar 15050375

**Operating Pressure:** 2000psi (13.8MPa)[138 bar]

**Operating Temperature:** 400°F (204°C)

**Shipping Weight:** 6 lb. (2.7kg)

**Float Shaft Extension, 1", 15000478 (LS200 Series only)**

**Float Shaft Extension, 1", 15000892 (L1100 Series only)**

**Float Shaft Extension, 6", (LS200 Series only)**

Table 1 LS200 Minimum Allowable Specific Gravity			
Model	Float Extension length (inch)	Pressure (psi)	Specific Gravity
LS200	0	2000	0.55
	1		0.7
	6		1
LS200NDVO	0	2000	0.63
	1		0.73
	6		1.02

**\*Note:** The min. allowable SG will decrease with a decrease in operating pressure

## Product Dimensions

LS200, L1100

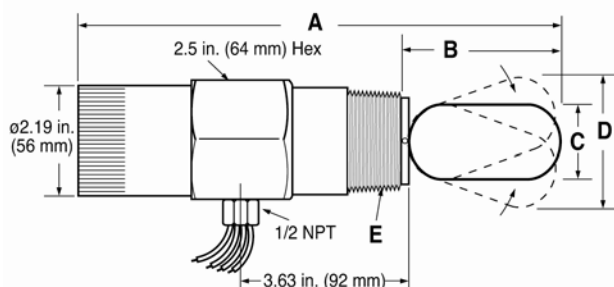


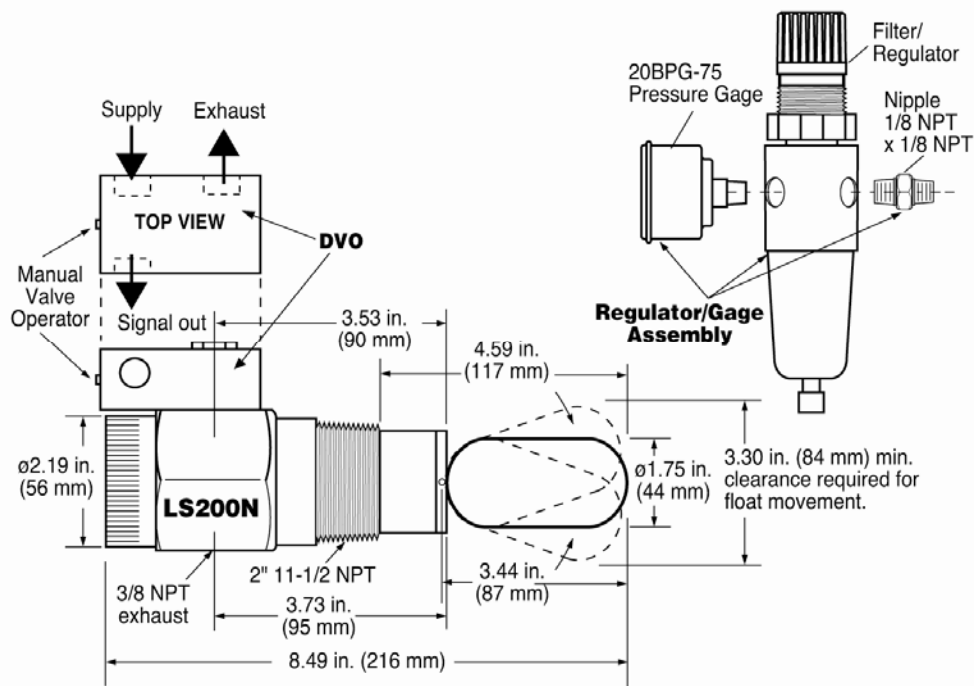
Table 2		
	LS200	L1100
A	10.16 in. (258 mm)	11 in. (279 mm)
B	3.44 in. (87 mm)	3.50 in. (189 mm)
C	1.75 in. (44 mm)	1.56 in. (40 mm)
D	2.80 in. (71 mm)	3.4 in. (71 mm)
E	2 NPT	1-1/2 NPT

## Application Data

Table 3 Pipe Data				
Nom. Size (inches)	O.D. (inches)	Schedule Number	Wall Thickness (inches)	Inside Diameter (inches)
3	3.5	40ST	0.216	3.068
3	3.5	80XS	0.3	2.9
4	4.5	40ST	0.237	4.026
4	4.5	80XS	0.337	3.826

Table 4 Minimum Clearance				
Product Name	Insertion Depth (inches)		Vertical Clearance (inches)	
	Std.	w/ 1" Extension	Std.	w/ 1" Extension
LS 200	4.6	5.6	2.8	3.15
LS 200N	5.43	6.4	3.3	3.9
L 1200	4.65	5.7	3.9	4.55
L 1200N	5.6	6.7	5.3	6.9
L 1100	4.4	5.4	3.4	4.05

### LS200N, LS200NDVO and LS200NDVOR with Dump Valve Operator, Pressure Regulator & Gage



**CAUTION:** LS200 Series parts are not interchangeable with the L1200 Series.

## Specifications

### All Models

Body: Nickel plated steel; optional 316 stainless steel (meets NACE standard MR-01-75 for direct exposure to H<sub>2</sub>S service)

Float: 304 stainless steel (see Table 1 for application data)

Pressure rating: 2000 psig (13.8 MPa) [138 bar] (LS200 models only)

O-ring: Viton

### LS200

Process connection: 2" NPT

Temperature rating: -20 to 300°F (-29 to 149°C)

Electrical: SPDT std. (see "Electrical" section for configuration/rating).

Wiring: 18 AWG x 36 in. (1.0 mm<sup>2</sup> x 916 mm)

### LS200NDVOR

Process connection: 2" NPT

DVO valve: 3 way N.C. w/manual operator, all connections 1/8" NPT (minimum 30 psig required)

Filter/pressure regulator set:

Regulator: 0 to 75 psig (0 to 517 kPa) [0 to 5.17 bar] range

Maximum input pressure: 300 psig (2.07 MPa) [20.7 bar]

### LS200NDVO

Process connection: 2" NPT

DVO valve: 3 way N.C. w/manual operator; all connections 1/8" NPT

### LS200 --

**Options:**  
D = DPDT  
K = KALREZ Seals  
400 = 400°F (204°C) Service \*\*  
SF - Stainless Steel Float (L1100 only)

#### Base Models:

<b>LS200*</b>	<b>LS200SS*</b>
<b>LS200N*</b>	<b>LS200NSS*</b>
<b>LS200NDVO*</b>	<b>LS200NSSDVO*</b>
<b>LS200NDVOR*</b>	<b>LS200NSSDVOR*</b>
<b>L1100**~</b>	
<b>L1111</b>	

### LS200 N

Process connection: 2" NPT

Vent valve: 2 way N.C. w/ 1/16in. (2mm) orifice and Viton seat; Inlet: 1/8" NPT; outlet 3/8" NPT

### L1100

Process connection: 1-1/2" NPT

Pressure rating: 1500 psig (10.3 MPa) [103.2 bar]

Float: BUOYGLAS™ operates to 0.5 specific gravity;

Optional stainless steel to operate in 0.65 specific gravity

Electrical: SPDT switch

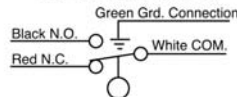
### Approximate Shipping Weights and Dimensions

All models: 6 lb. 10 oz. (3 kg);

14 x 5 x 3-1/2 in. (356 x 127 x 89 mm)

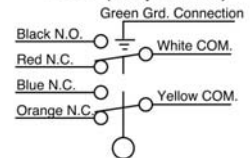
### Electrical

#### SPDT (Snap Switch)



**Switch Rating:** 5 A @ 125-250- 480 VAC  
1/2 A @ 125 VDC  
1/4 A @ 250 VDC  
2A @ 6-30 VDC Resistive  
1A @ 6-30 VDC Inductive

#### DPDT (Snap Switch)



**Switch Rating:** 10 A @ 125-250 VAC  
1/2 A @ 125 VDC  
1/4 A @ 250 VDC  
10 A @ 6-24 VDC  
Inductive/Resistive

### How to Order your Level Switch

Build a complete model number using the diagram to the left.

NOTE: Refer to LS-04006N for replacement parts.

\*Pending Canadian Registration Number OF1476.2 issued by ABSA.

\*\*Not available with DPDT snap-switch.

~Supplied with BUOYGLAS™ float.

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