

LS200 Series Liquid Level Switches

Electric Switch



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).

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.



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.

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

NOTE: The Murphy Series 1200 Liquid Level Switches have been replaced with the improved, more robust design of the Murphy LS200 Series Liquid Level Switches. The MSLS (Scrubber Level System) replaces the LS200 high-level shutdown switch with the MLS-020 magnetic level switch.



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, 6", 15000503 (LS200 Series only)

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

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

Product Dimensions

LS200

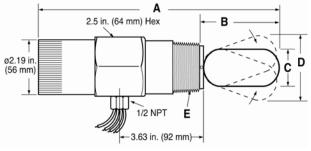


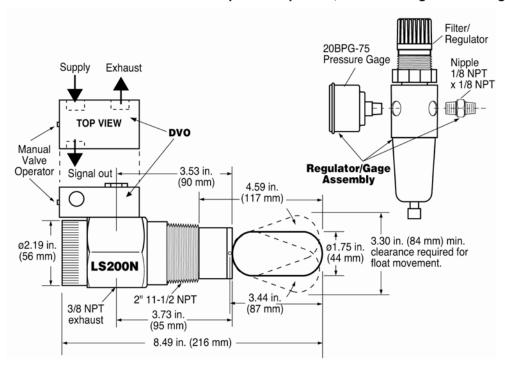
	Table 2			
	LS200			
Α	10.16 in. (258 mm)			
В	3.44 in. (87 mm)			
С	1.75 in. (44 mm)			
D	2.80 in. (71 mm)			
Ε	2 NPT			

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			

Models L 1200, L 1200N, and L 1100 are discontinued and remain in the table for reference purposes only.

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 H₂S 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 mm2 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

barl 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 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

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)

Green Grd. Connection

Black N.O.

Red N.C.

White COM.

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)

Green Grd. Connection

Black N.O.

Red N.C.

Blue N.C.

Orange N.C.

Yellow COM.

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

Inductive/Resistive

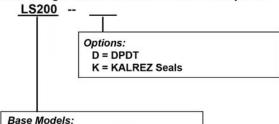
How to Order your Level Switch

Build a complete model number using the diagram below. NOTE: Refer to 00-02-0671 for replacement parts.

See SLS literature to build complete system for

Scrubber Level Control. (04005)

Canadian Registration Number OF1476.2 issued by ABSA



LS200

LS200 LS200N LS200NDVO LS200NDVOR LS200SS LS200NSS LS200NSSDVO LS200NSSDVOR

ENOVATION CONTROLS CORPORATE HEADQUARTERS 5311 S 122ND EAST AVENUE TULSA, OK 74146

ENOVATION CONTROLS - SAN ANTONIO OFFICE 5757 FARINON DRIVE SAN ANTONIO, TX 78249

ENOVATION CONTROLS – HOUSTON OFFICE 105 RANDON DYER RD ROSENBERG, TX 77471

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