

Liquid Level Switches LS200 Series

Designed for harsh gas compressor scrubber applications, the LS200 Series Liquid Level Switches feature a robust design that trips on rising liquid level only. With both electric and pneumatic models available, the instruments screw directly into the vessel or can be mounted via an external float chamber. The nickelplated body provides enhanced corrosion protection while the 304 stainless steel float operates in 0.55 specific gravity and heavier fluids. Additional features include:

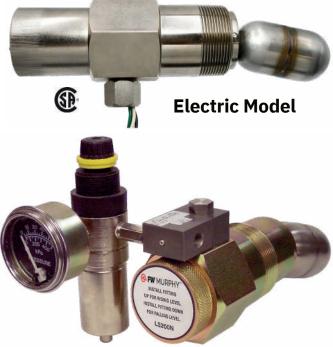
• Rated for 2000 psi (13.8 MPa) [138 bar] working pressure

• Listed for cCSAus Class I, Div 1, Grps C & D locations

Canadian registered

• Stainless steel models available for corrosive atmospheres

The LS200 Series replaces the FW Murphy Series L1200 Liquid Level Switches. The MSLS (Scrubber Level System) replaces the LS200 high-level shut-down switch with the MLS-020 magnetic level switch.



Pneumatic Model

Models

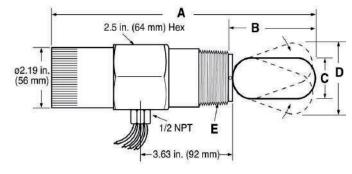
LS200 Liquid Level Switches with 2 in. NPT mounting are float activated to operate an electrical SPDT snapswitch (optional DPDT on some models) for alarm or shutdown of an engine or electric motor. The LS200 connects directly into the vessel wall and can be used with an FW Murphy weld collar or FW Murphy external float chamber.

LS200NDVOR is a float-activated, pneumatic-vent level device used to operate DVU Series dump valves or similar devices. It provides a 2 in. NPT mounting with a pneumatic output for interfacing with pneumatic devices such as the FW Murphy pneumatic dump valve or 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 or filter regulator. Please note: pneumatic media devices require clean, dry, instrument-quality air or gas.

Dimensions

LS200, L1100



| | LS200 | L1100* | |
|---|------------------|-------------------|--|
| Α | 10.16 in (258 | 11 in. (279 mm) | |
| В | mm) 3.44 in. (87 | 3.50 in. (189 mm) | |
| С | mm) 1.75 in. (44 | 1.56 in. (40 mm) | |
| D | mm) 2.80 in. (71 | 3.4 in. (71 mm) | |
| E | mm) | 1-1/2 NPT | |

the L1100 has been diacontrans in the table for reference purposes only.

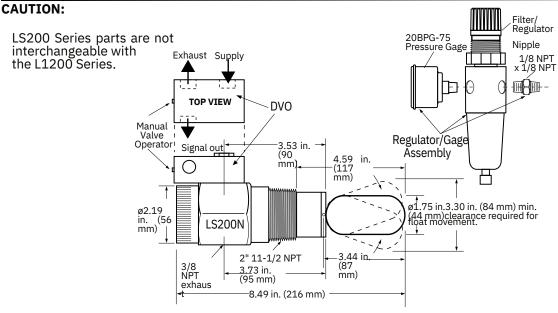
Application Data

| | | 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 |

| Minimum Clearance with Full Thread Engagement | | | | |
|---|--------------------------|-----------------|-----------------------------|-----------------|
| | Insertion Depth (inches) | | Vertical Clearance (inches) | |
| Product | Std. | w/ 1" Extension | Std. | w/ 1" Extension |
| LS200 | 4.6 | 5.6 | 2.8 | 3.15 |
| LS200N | 5.43 | 6.4 | 3.3 | 3.9 |
| L1200 | 4.65 | 5.7 | 3.9 | 4.55 |
| L1200N | 5.6 | 6.7 | 5.3 | 6.9 |
| L1100 | 4.4 | 5.4 | 3.4 | 4.05 |

Models L1200, L1200N and L1100 are discontinued and remain in the table for reference purposes only.

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



Accessories

Refer to LS200 installation and operation manual for additional information. **External Float Chamber** Operating Pressure: 2000 psi (13.8 MPa) [138 bar] Operating Temperature: 400° F (204° C) **Weld Collar** Operating Pressure: 2000 psi (13.8 MPa) [138 bar] Operating Temperature: 400° F (204° C) **Float Shaft Extension** LS200 Series: 1 in.

| LS200 Minimum Allowable Specific Gravity | | | |
|--|------------------------------------|-------------------|---------------------|
| Model | Float Extension Length (inches) | Pressure (psi) | Specific Gravity |
| LS200 | 0 | 2000 | 0.55 |
| 19200 | 1 | 2000 | 0.7 |
| LS200NDVO | 0 | 2000 | 0.63 |
| | 1 | | 0.73 |

All Models

Listed for cCSAus Class 1, Div 1, Grps C & D Locations Canadian Registration Numbers (issued by ABSA): LS200: 0F01476.2 L1200, L1200N and L1100 Series: 0F01476.0 Body: Nickel-plated; optional 316 stainless steel Float: 304 stainless steel Pressure Rating: 2000psig (13.8 MPa) [138 bar]

LS200

O-ring: Viton Process Connection: 2" NPT Temperature Rating: -20° to 300°F (-29° to 149°C) Electrical: SPDT std. Wiring: 18 AWG x 36 in. (1.0 mm2 x 916 mm)

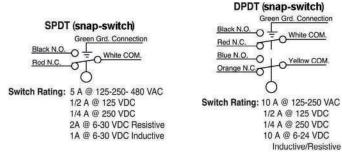
LS200NDVOR

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 bar] range Maximum Input Pressure: 300 psig (2.07 MPa) [20.7 bar]

LS200NDVO

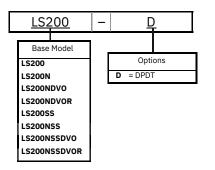
Process Connection: 2" NPT DVO Valve: 3-way N.C. w/manual operator, all connections 1/8" NPT LS200N Process Connection: 2" NPT Vent Valve: 2-way N.C. w/ 1/16 in. (2 mm) orifice and Viton seat; Inlet: 1/8" NPT; Outlet: 3/8" NPT

Electrical



How to Order

Options listed below. All configurations may not be available. Call your sales representative or FW Murphy for more information.



| Approximate Shipping Weight and Dimensions | | | |
|--|---------------|--------------------------|--|
| Model Wei | ght Dimension | | |
| LS200 | 6 lb. 12 oz. | 13-1/2 x 4-1/2 x 3-1/2 | |
| LS200SS | 6 lb. 13 oz. | in. 13-1/2 x 4-1/2 x 3- | |
| LS200N | 5 lb. 1 oz. | 1/2 in. 13-1/2 x 4-1/2 x | |
| LS200NDVO | 5 lb. 15 oz. | 3-1/2 in. 13-1/2 x 4-1/2 | |
| LS200NDVOR | 6 lb. 8 oz. | x 3-1/2 in. 13-1/2 x 4- | |
| | | 1/2 X 3-1/2 ID. | |

| Part Number | Description | Notes |
|-------------|------------------------------|---------------------------------|
| 15700799 | External Float Chamber | |
| 15050375 | Weld Collar | Shipping Weight: 6 lb. (2.7 kg) |
| 15000478 | 1 in. Float Shaft Extension | LS200 Series |
| 15010216 | Dump Valve Operator Assembly | DVO, new style |

Note: Refer to the Installation and Operation manual 00-02-0671 for replacement parts at fwmurphy.com.



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