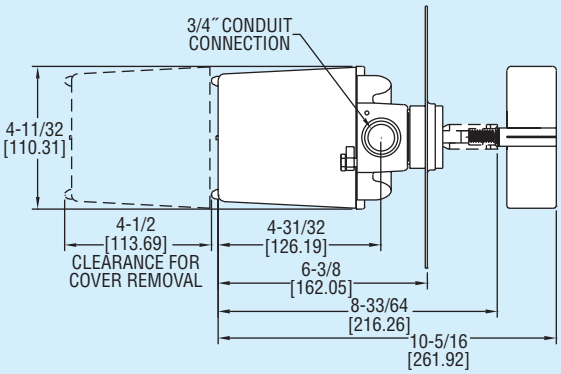
PROXIMITY®

Series PLS

Paddle Level Switch

Economical Rotary Paddle Level Control, Top or Side Mounting for Dry Bulk Materials



Side Mount

Scan here to watch product video

PDL-1. Minimum bulk density of 5 lb/ft³ (80 kg/m³).

PDL-2. Minimum bulk density of 30 lb/ft³ (481 kg/m³).

PDL-3. Minimum bulk density of 30 lb/ft³ (481 kg/m³). Fits through a 1-1/4″ coupling eliminating the need for a mounting flange.

PDL-4. Minimum bulk density of 70 lb/ft³ (1122 kg/m³). Fits through 1-1/4″ coupling eliminating the need for a mounting flange.

Incorporated in the design of the PLS is a magnetic drive that is time proven by decades of use in our Mark Series valve position indicator product line. A 1 rpm synchronous motor rotates the paddle utilizing a magnetic drive. As product builds up the paddle is impeded from moving and the resulting motor torque activates the output switches and stops the motor. A spring mechanism reactivates the motor and returns the switches to normal state when the product no longer impedes the paddle rotation. Standard construction is weatherproof with explosion-proof optional, and the unit can be side or top mounted. The PLS is designed with the industry standard 1-1/4″ male NPT connection and mounting flanges.

FEATURES

- Magnetic drive that isolates and completely seals the control head from the process and environment preventing material or dust from entering the control head
- Motor shuts-off when paddle stalls increasing motor life, preventing motor burnout, and decreasing power usage
- Slip clutch design enabled by the magnetic drive that prevents damage to motor and drive mechanism from sudden or excessive loading on the paddle.
- Status indication light on weatherproof models
- Screw cover on the enclosure for easy access with no worries about losing bolts or screws
- Modular design to allow field installation of any paddle, flanges, shaft extensions, or shaft guards

Control Assemblies	Description
PLS-W-S-1-0-0-0-0	Weatherproof construction, SPDT switch, 120 VAC power supply. Order paddles and flanges separately.
PLS-W-S-1-3-0-0-0	Weatherproof construction, SPDT switch, 120 VAC power supply, includes PDL-3 paddle.
PLS-W-S-1-2-CSH-0-0	Weatherproof construction, SPDT switch, 120 VAC power supply, includes PDL-1 paddle and FLG-CSH flange.

Paddles	Flanges	Description
PDL-1	FLG-CSH	Carbon Steel with Half Coupling
PDL-2	FLG-CSF	Carbon Steel with Full Coupling
PDL-3	FLG-SSH	316 SS with Half Coupling
PDL-4	FLG-SSF	316 SS with Full Coupling

SPECIFICATIONS

Service: Dry powder or bulk materials compatible with wetted materials.
Sensitivity: Min material density of 5 lb/ft³ (80 kg/m³), max of 200 lb/ft³ (3200 kg/m³).
Wetted Materials:
Paddles: 316 SS; Exposed shaft: 316 SS; Shaft seal: PTFE;
Mounting boss: Aluminum; Flexible coupling: 316 SS;
Mounting flanges: Carbon steel or 316 SS
Shaft extension and shaft guards: Galvanized steel or 316 SS.
Temperature Limits:
Standard construction: Process: -40 to 300°F (-40 to 148.9°C);
Ambient: -40 to 185°F (-40 to 85°C);
High temperature option: Process: -40 to 500°F (-40 to 260°C);
Ambient: -40 to 185°F (-40 to 85°C).
Pressure Limit: 30 psig (2.07 bar) max for .5 micron or larger material.
Power Requirement: Select by part number: 110 to 120 VAC, 230 VAC, 24 VAC, 48 VAC, 12 VDC, or 24 VDC.
Power Consumption: Weatherproof models: 5 watts; Explosion-proof models: 3 watts.
Enclosure: Aluminum, powder coated.
Enclosure Rating: Weatherproof (W, WH construction): NEMA 4X (IP66); Explosion- proof (E, EH construction): NEMA 4X (IP66) and rated for Class I, Div. 1 & 2, Groups C & D, Div. 1 & 2, Groups E, F, & G.
Switch Type: SPDT or optional DPDT snap switch.
Electrical Rating: 15A @ 120/230 VAC, 5A @ 24 VDC.
Electric Connections: Screw terminals.
Conduit Connection: 3/4″ female NPT.
Process Connection: 1-1/4″ male NPT. Optional flange.
Weight: Control head only: 4 lb (1.81 kg).
Indication Light: Red LED that activates when switch is made or when switch is not made with RL option (Not available on explosion-proof models).
Options: Time delay relay, high temperature construction, top mount, shaft extensions, shaft shields, flexible couplings, other power voltages, reversed light.
Agency Approvals: cUL approved as an auxiliary device or as an auxiliary device for hazardous locations.