



**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-1-1-CSH-0-0	Weatherproof construction, SPDT switch, 120 VAC power supply, includes PDL-1 paddle and FLG-CSH flange.

Paddles (See top of page)	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.

Contact the factory for pricing of shaft extensions, protective shields, and other options. More detailed information available in our Measurement & Control for Powder, Dust, and Bulk Materials Catalog.

### SPECIFICATIONS

**Service:** Dry powder or bulk materials compatible with wetted materials.

**Sensitivity:** Minimum material density of 5 lb/ft<sup>3</sup> (80 kg/m<sup>3</sup>), maximum of 200 lb/ft<sup>3</sup> (3200 kg/m<sup>3</sup>).

#### 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) maximum for .5 micron or larger material.

**Power Requirement:** Select by part number: 110-120 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, Explosion-proof (E, EH construction): NEMA 4X 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:** UL approved as an auxiliary device or as an auxiliary device for hazardous locations.