LEVEL SWITCHES · FOR BULK SOLIDS

# SILOSIGHT™

## Rotary paddle bin level switch

Silosight™ SSR-100 is a rotary paddle level switch for bulk solids in silos, bins and hoppers, supplied by Lamont Controls for high, intermediate and low level alarms. A synchronous motor turns the paddle at about 1 RPM; when material covers the paddle and stops it, the SPDT relay transfers.

| OUTPUT CONTACT | SUPPLY | TEMPERATURE |
|---|---|---|
| **10** A | **120** VAC | **to 212** °F |
| SPDT relay · 250 VAC | 24 VDC · 220 VAC on request | 100 °C · standard |

### 01 KEY HIGHLIGHTS

- Point level switch for bulk solids in silos, bins and hoppers: high, intermediate or low level
- Rotary paddle, motor-stall sensing: no calibration; unaffected by dust, humidity or material dielectric
- SPDT relay output, 10 A at 250 VAC
- 120 VAC, 50/60 Hz, standard; 24 VDC and 220 VAC on request; 3 W
- ¾ in NPT process connection; side or top mounting
- 4-vane metal paddle at 1 RPM; other paddles and shaft extensions on request
- Stall torque 0.3 to 1 N·m, four-position spring, adjustable in the field
- Process temperature to 212 °F (100 °C), standard; bulk density from 31 lb/ft³ (0.5 g/cm³)

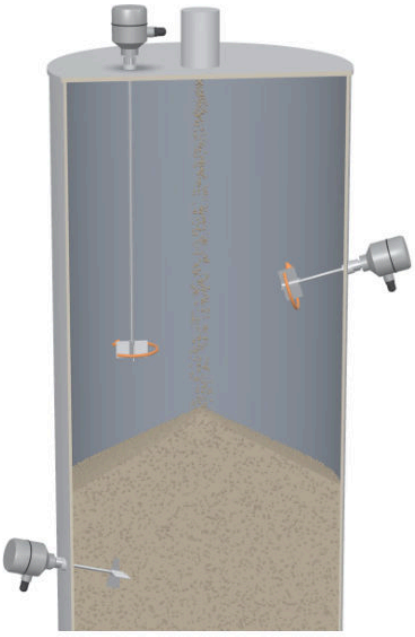
### 02 KEY BENEFITS

- No calibration: the relay transfers when material stops the paddle and returns by itself when it turns again
- High level: stop the fill before a silo, bin or hopper overfills
- Low level: signal an empty bin, or protect a feeder or conveyor that runs out of material
- Suits the material: a larger or smaller paddle and the torque spring set the sensitivity
- Side or top: a shaft extension places the paddle at the required depth below the roof

Supplied by Lamont Controls. For ordinary (non-hazardous) locations: not for a classified location, where a combustible dust or flammable gas atmosphere may be present. Not for use in a safety instrumented function.



**PADDLE NOT FITTED** PHOTOGRAPH



**PRINCIPLE OF OPERATION** RENDER

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# Technical specifications

SILOSIGHT SSR-100 ROTARY PADDLE BIN LEVEL SWITCH

| CATEGORY | OPTIONS / SPECIFICATIONS | |
|---|---|---|
| **Operating principle** | Paddle turning | A synchronous motor turns the paddle at about 1 RPM. With no material at the paddle it turns freely and the relay holds the uncovered (empty) state. |
| | Paddle covered | Material covers the paddle and stops it; the motor stalls and the relay transfers to the covered (full) state. When the material falls away the paddle turns again and the relay returns. |
| **Function** | Point level detection of bulk solids: high, intermediate or low level, for alarms and for conveyor and pump interlocks. | |
| **Typical materials** | Cement, lime, sand and other building materials; plastic pellets and granules. | |
| **Output contact** | Relay | SPDT, 10 A at 250 VAC |
| | Terminals | L: closed while the paddle turns (empty) · C: common · H: closed when the paddle is stalled (full) |
| | Alarm | High level alarm across C–H; low level alarm across C–L |
| **Supply** | Standard | 120 VAC, 50/60 Hz, with an external fuse or breaker |
| | On request | 24 VDC · 220 VAC; supplied wired for one voltage |
| | Power | 3 W |
| **Process connection** | ¾ in NPT. | |
| **Paddle and drive** | Paddle | 4-vane metal paddle, standard; a larger paddle for light or fluffy materials, a smaller one for dense or coarse materials |
| | Speed | 1 RPM, synchronous motor |
| | Stall torque | 0.3 to 1 N·m, four-position spring; factory setting weak, correct for most standard materials |
| **Bulk density** | 31 lb/ft³ (0.5 g/cm³) and above. | |
| **Temperature** | Process temperature to 212 °F (100 °C), standard; higher-temperature versions on request. | |
| **Insulation** | 1,500 V for 1 minute. | |
| **Mounting** | Side | Through the vessel wall, inclined 15–20° downward |
| | Top | Through the roof; shaft extension available where the switch point is below the roof |
| **Loss of power** | The switch tracks the level only while it is powered. Supervise the supply, or design the alarm circuit so that loss of power drives the safe state for the process. | |
| **Location** | Ordinary (non-hazardous) locations. Not for a classified location, where a combustible dust or flammable gas atmosphere may be present. Not for use in a safety instrumented function. | |
| **Ordering** | SSR-100, with the supply voltage, the paddle and any shaft extension. Example: SSR-100, 120 VAC, ¾ in NPT, 4-vane metal paddle. Request a quotation at lamontcontrols.com/request-a-quote with the quantity and the alarm for each switch; the material and its bulk density; side or top mounting, with the switch point for a top mount; the supply voltage and the process temperature. One request can cover several switches, with a tag number for each. | |
| **Liquid level** | For liquid level alarms on tanks and vessels, SnapTrip™ float and displacer switches. | |

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