

Orbit-Lite - Rotary Paddle Level Switch

Version 1.0

Principle

An electric motor drives the shaft connected to the rotating paddle. The twin blades of rotating paddle rotate freely when uncovered. The electric motor is mounted on a sliding-fit rotating disc, which in-turn is connected to a spring. When rotating freely, the spring is relaxed, as the application media covers the blades of the rotating paddle, the torque requirement increases, which extends spring. The spring extension is detected by position sensors, thus level of application media is detected. The power to the motor turned off. Subsequently, when the rotating paddle is uncovered, the spring ensures the motor is back to the position where motor can be powered on.



Features

- Light weight body
- Adjustable switching sensitivity
- AC synchronous motor design, maintenance-free
- Variable sensitivity control, wide application range
- Foldable paddle mechanism for ease of installation
- Transparent cover, easy visibility

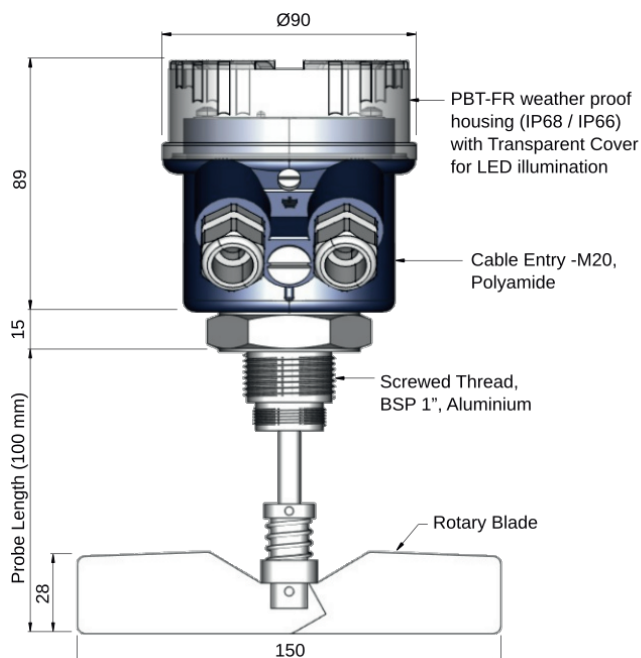


Figure 1: Orbit-Lite

Technical Specifications

- **Input Power Supply:** 230 V AC
- **Output:** 1NO, 1NC 6Amp potential-free at 230 V AC
- **Power Consumption:** 1.37W at 230 V
- **Switching:** Single-point switching
- **Switching Indication:** Bi-color LED for Alarm Status
Green-Normal Red-Alarm
- **Housing:** PBT-FR weatherproof (IP66/ IP68)
with transparent cover
- **Cable Entry:** M20, (Polyamide)
- **Mounting:** Screwed - 1" BSP
- **Operating Temperature:** Ambient - 0°C - 60°C
Process - Up to 200°C
- **Probe Length:** Horizontal Mounting: 100mm-250mm
Vertical Mounting: 100mm - 1000mm
- **Motor:** Synchronous Motor
- **Paddle:** SS 316 foldable paddle
- **Shaft:** SS 316
- **Bearing:** Deep groove ball bearing
- **Sealing:** Paddle shaft sealing, Material: NBR
- **Slip Clutch:** Protects the gear unit against impacts of the measuring vane

Application Specifications

- Free-flowing granules & powders with bulk density $\geq 0.5\text{g/cm}^3$

Manufacturing Level Instruments & Speed Monitoring Systems

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Applications:

Orbit-Lite is particularly designed for application media which has **lower mechanical load**.

- Plastic Industry
- Grain Handling
- Food Processing
- Man-Made Fibre

Product Selection Chart:

Product
RPL : Orbit lite - Rotary Paddle Level Switch (Use in Grains, PVC Powders, Plastic Chips, Cement, Detergent etc. materials)
Housing
CELEBI : Weatherproof plastic housing with transparent cover for LED illumination , Rating IP68/IP66 , Material : PBT-FR and PC
Probe Housing Cable Entry
PC20 : Threaded , M20 Gland , Polyamide
Output
1S : 1NO, 1NC SPDT Relay Output (rated at 6 A, 230 V AC for non-inductive load)
Power Supply
AU2 : 230V AC, 50Hz
Probe Type
RDP : Rod Probe
Mounting
MB10AL : Screwed Thread, BSP 1", Aluminium (Only for Low mechanical loads)
Orientation
TM : Top Mount (Probe Length $\geq$ 251 mm)
AM : Agnostic Mount (Probe Length $\leq$ 250 mm)
Extension Material (Probe Length $\geq$ 151 mm)
EAL : Aluminium with SS 316 shaft rotary blade
Operating Temperature
10T : Up to 100°C
20T : Up to 200°C
Standoff Material (Except "10T")
STAL : Aluminium
Probe Length
1H : 100 mm (Only with "AM")
1.5H : 150 mm (Only with "AM")
1.5H2.5H : 151 to 250 mm (Only with "AM")
2.5H10H : 251 to 1000 mm (Only with "TM")

Example -

RPL-CLB-PC20-1S-AU2-RDP-MB10AL-TM-EAL-20T-STAL-2.5H10H

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