

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

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

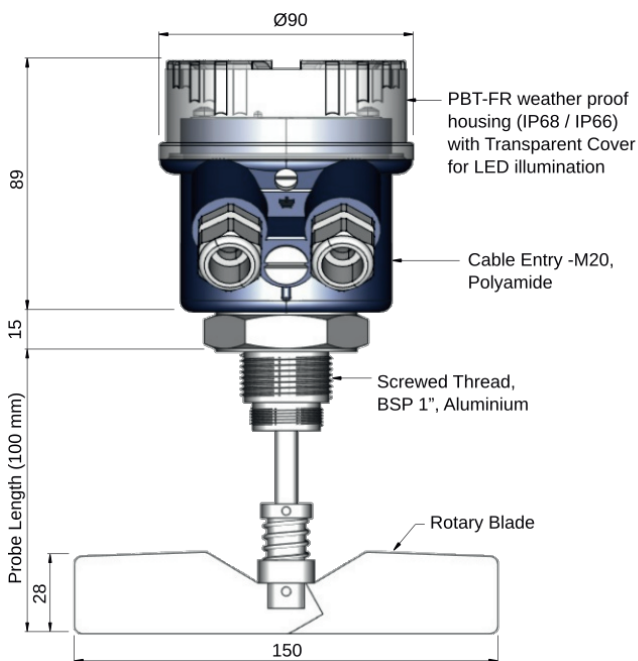


Figure 1: Orbit-Lite

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	CLB : 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 : Threaded, G 1" (BSP), Aluminium
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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