

Calibration and other settings: There are a number of features that can be customized for any particular application such as Fail-Safe mode, switching mode, switching delay, and material Checking interval. Torque can be electronically set for light material by means of a potentiometer.

Fail safe mode: This can be selected by means of a DIP switch. Switch section 4 is for this purpose. When shipped this is in its open position which is for Fail-safe High. This position should be used for High level Alarm. Shifting this switch to ON will make the unit fail-safe Low. This configuration should be used for low level Alarm.

Switching delay: Switching delay can be set for paddle covered by service material or when it gets uncovered. Switch section 1 is for delay setting when the paddle gets covered. Switch section 2 is for delay setting when the paddle gets uncovered. For setting the delay shift the appropriate switch section to its ON position. The paddle rotation will stop. Now press the CAL switch to its ON position and observe the status indicator LED. It will flash. Each flash equals to 1 sec delay. Count the flashes to the required delay seconds and release the CAL button. Shift the delay mode switch back to its OFF position. The paddle will start moving again and switching will take place after the set period that is after the number of LED flashes is completed.

Material checking interval: After the service material covers the paddle, its motion is arrested. It then checks if the material is present periodically. This interval between two checks is adjustable by means of DIP switch section 3. The setting process is similar to the switching delay setting process mentioned above. Larger vessels take more time to fill and empty so they need not be checked for material presence more frequently.

Torque Control: This is a very precise electronically adjustable setting that helps the unit to accurately detect light service materials. The pot setting for torque is factory set to cover a wide range of commonly available service materials. In most of the cases this needs no adjustments at site. In case it is required to set this control for a material which is very light and beyond the standard range then the following precautions have to be followed to avoid damage to the electronics.

1. Remove the factory set seal stuck on this potentiometer.
2. Switch OFF the power to the unit.
3. Carefully set the pot a few degrees clockwise or anti-clockwise as required. Anti-clockwise rotation will reduce the torque whereas clockwise rotation will increase the torque. Lighter the material, lesser is the torque required.
4. After doing the setting, switch ON power and observe whether the torque is appropriate by touching the paddle with hand or by dipping in the sample material.

Indication: There are two LED indicators on the front panel. Green is for the heart beat function which continuously flashes, indicating the healthy condition of the unit. The other is a bi-color LED that indicates the status of the material. Red indicates an Alarm and Green indicates normal.

Paddle operation: The paddle rotates at about 8 RPM when it is free. When immersed in material the rotation stops and it checks the material presence periodically. While checking it vibrates to ensure the status of the material. These vibrations are normal and not a defect. The paddle rotation can halt for a short period and start again. This is also normal and should not be considered as a defect. Movement of material inside the vessel can rotate the paddle but this will not harm its working or do spurious switching.

Technical specifications:-

Housing	Cast aluminum, weather proof, integral with the Paddle probe, Powder coated.
Ambient Temperature	0 to 80 Deg. C
Power Consumption	3 VA (approx.)
Operating Voltage	24 V DC and 90 to 265 V AC 50 to 60 Hz on the same terminal (Universal supply)
Output (Standard)	Two sets of potential free change over contacts rated at 5 A 230V AC 50 Hz for non-inductive loads
Indication	Flashing Green LED for Heart Beat shows Healthy condition. Bi-colored LED – Red for Alarm and Green for Normal
Mounting	1 ½ inch BSP / NPT screwed or 50 NB Flanged.
Wetted Part material	SS316 / SS304
Fail Safe	High or Low selectable by DIP switch
Switching Delay	Covered / uncovered mode selectable by DIP switch. Delay adjustable by push button calibration switch.
Checking Interval	Settable up to 25 Sec by DIP switch and push button Calibration switch.
Paddle	SS316 Foldable paddle suitable for insertion into a standard 1 ½ inch nozzle.
Probe Length	125 to 500 mm insertion

Motor	Sturdy Permanent magnet stepper motor requiring no reduction gearing and clutch arrangement.
Cable Glands	Two PG 13.5 glands
Sensitivity	continuously settable torque electronically controlled
Bearings and Seal	Pre-lubricated radial ball bearings. Effective dust seal used for ingress protection.
Overall Dimensions	Refer diag.
Weight