

SE1X0 Rotary Paddle Level Switch

Operation Manual

PRINCIPLE

The SE(RP) series operating principle is simple. A unit is usually located through a bin wall at the top, middle or low level of a bin. During normal operation(no material present) a synchronous motor rotates the paddle at 1 RPM. When this paddle rotation is impeded by material, the motor will stall and cause the micro switch to change state.(Indicating an alarm or control).

SPECIFICATION

Power source: (A)110Vac, (B)220Vac, (C)240Vac, (D)24Vac, 50/60Hz, (E)24Vdc

Power consumption: 3W

Contact capacity: SPDT 5A / 250Vac

Rotary paddle speed 1RPM / 1.2RPM

Insulation voltage: AC 2500V / 1minute

Applicable density: 0.5 g/cm³

Connection type: Screw : 1"PF, Flange: JIS 2-1/2" x 5 kg/cm²

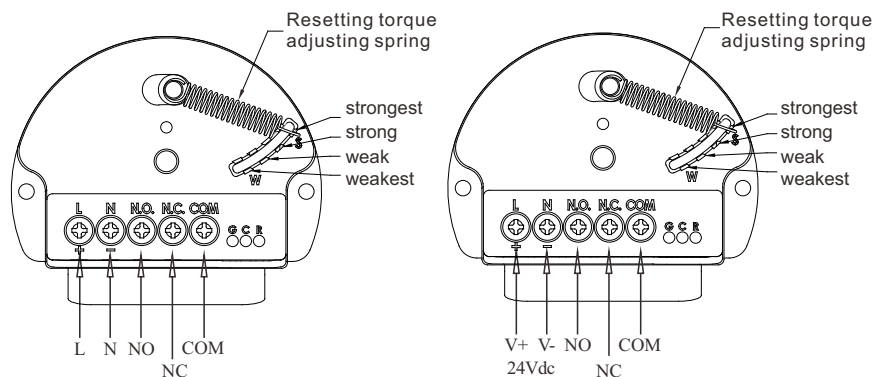
TORQUE ADJUSTING MECHANISM

The torque force can be adjusted according to the specific gravity of the targeted materials to be measured. When the specific gravity of the material is too low (the paddle still rotates when in contact with the material), adjust the torque spring to hook on to the weaker hole, thereby increasing the sensitivity. Refer to the Panel Diagram.

If the torque of paddle is insufficient (the paddle does not rotate when not in contact with the material), adjust the torque spring to hook on to the stronger hole, thereby decreasing the sensitivity.

※Note! Do not tamper with the spring torque as it may cause the Rotary Paddle to malfunction.

WIRING



Available: SE1 (A,B,C,D)

Available: SE1(E)

MAINTAIN

1. Please check "Shaft" & "Paddle" for bending or damage.
2. Please check the connection between "Shaft" & "Paddle"
3. Please clean out the "Shaft" & "Paddle" regularly.

INSTALLATION

1. For horizontal installation by the side mounting, please take 15° ~ 20° angle downward to avoid material impact the shaft & paddle directly.
2. The conduit opening should be place on downward position, tight the wire connection.
3. If the hopper (bin) already installed the Air Vibrator or Vibrator Motor, please use our SE140 Capacitance Level Switch.
4. Please take note that SE110, SE111, SE120, SE140 are for side mounting (Horizontal Installation) only.
5. SE130, SE146, SE160 are for vertical installation only.
6. When install or maintain in the field, to comply with the caution "Open after power off"
7. Corrosive Gas application isn't available for Aluminum & Stainless (SUS) material.
8. The operating temperature in the tank/bin shouldn't over anti temperature of products.

TROUBLE SHOOTING

Abnormal condition	Cause	Solution
The material covers the paddle, indicating that the material does not exist.	The specific gravity of the material is too low, the torque is too large.	Adjust the torque spring hook to the weaker hole position.
	The flow of material at the mounted location is too fast.	Change the mounted location or use another model.
	The mounting location cannot make contact with material because of the angle of repose.	Change to the use of SE130/SE146 Adjustable Shaft Type.
	The device is not powered or the wiring is disconnected.	Repair the wiring and turn on power.
	Un-matching Voltage will lead to insufficient power and motor not rotating.	Correct the matching Voltage shown on the model specification.
	Fastening pin is not inserted or is not folded back, the blades fall off.	Mount the blade, insert the fastening pin and fold the end back.
	Internal shaft parts or motor assembly is damaged.	Contact your local business representative.
The material left the paddle, indicating that the material has arrived.	The paddle torque is too low to rotate.	Adjust the torque spring hook to a stronger hole position.
	The paddle or shaft is deformed by impact.	Replace with good spare parts and install baffle for protection.
	Material bridging, covers a wide range of paddle.	Order customized protective tube type extended into the tank wall length.
	The paddles are blocked or wound by foreign objects, such as filter bags.	Remove obstacles.
	The shaft is stuck with foreign objects in the housing, such as wire.	Remove obstacles and restore the installation.
	The switch contact has reached the limit of service life with poor contact.	Contact your local business representative.

※ If the failure is not listed or cannot be resolved, please contact your local business representative.