

**06 SERIES**

**Rotating paddle level switches**

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## Rotating paddle level switches

## Features

- Special shaft sealing for dust-proof
- Rotating torque can be adjustable
- Small and compact design for simple mounting
- Stainless steel mechanical parts and robust gear motor, maintenance free
- Easy installation at container
- Can detect very light bulk solids
- Directive: RoHS
- Protection: IP66
- Confirmative to CE

## Measurement principles

The motor driven rotating measurement paddle is hampered in its rotation when it comes into contact with solid material. The reaction's moment is converted into an electrical signal and the motor stops movement. Once the paddle is no longer covered with solid material, the motor starts again.



## Application

Suitable for most bulk materials for plastics, medical, fodder, grains, cement, detergent etc. Industries.

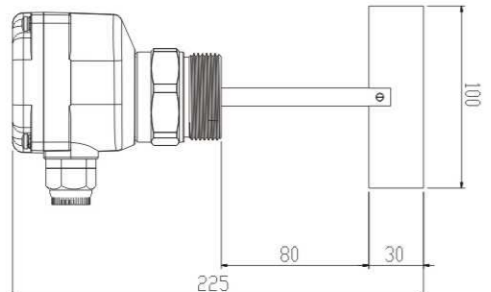
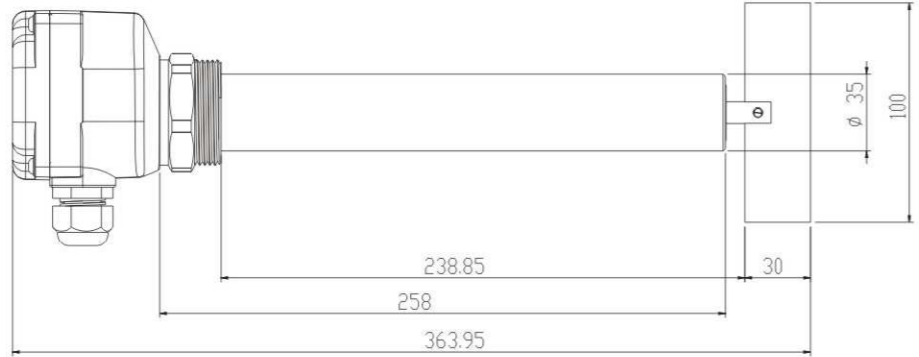


Standard type Sr1000/Standard type with shaft-protection SR3000

**Technical data**

Operating voltage (v) : 24V AC, 110-120V AC or 220-240V AC 50-60Hz  
 Current consumption : 3Watt  
 Measuring torque : 0.5-1.0 kg-cm  
 Process connection: G1-1/2"-n11 (ABS+15% GF), Flange JIS 2-1/2"(S304)  
 Housing material: ABS+15% GF  
 Cable entrance :  $\Phi 7.5$  mm  
 Gravity materials :  $0.5 \text{ kg/cm}^3$  ( $30 \text{ lb/ft}^3$ )  
 Protection : IP 66  
 Switch rating : SPDT 5A/250VAC  
 Rotating rate : 1R.P.M.  
 Installation: Horizontal mounting  
 Operating temperature:  $-20^\circ\text{C}$  to  $+80^\circ\text{C}$

Structure chart

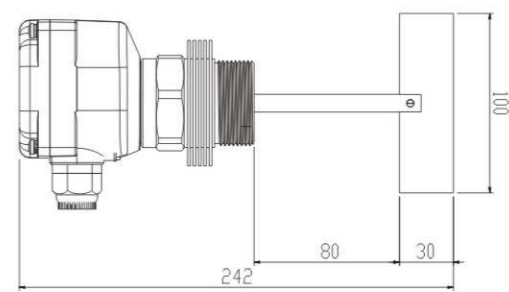
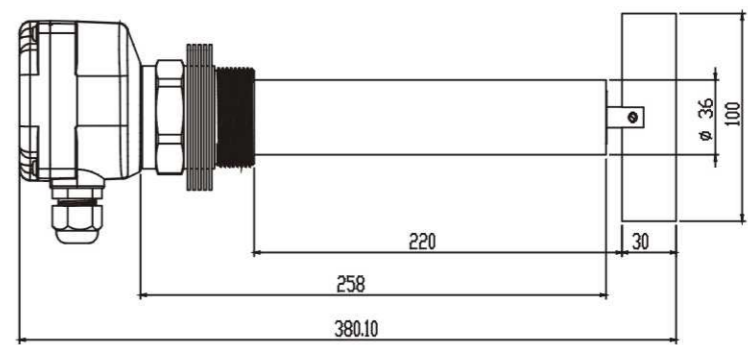
<p>SR1000 Standard type</p>	
<p>SR3000 標準帶保護套型</p>	

High temperature Sr2000/High temperature with shaft-protection SR4000

**Technical data**

Operating voltage (v) : 24V AC, 110-120V AC or 220-240V AC 50-60Hz  
 Current consumption : 3Watt  
 Measuring torque : 0.5-1.0 kg-cm  
 Process connection: G1-1/2"-n11 (ADC-12), Flange JIS 2-1/2"(S 304)  
 Housing material: ABS+15% GF  
 Cable entrance :  $\Phi 7.5$  mm  
 Gravity material :  $0.5 \text{ kg/cm}^3$  ( $30 \text{ lb/ft}^3$ )  
 Protection : IP 66  
 Switch rating : SPDT 5A/250VAC  
 Rotating rate : 1R.P.M.  
 Installation: Horizontal mounting  
 Operating temperature:  $+200^\circ\text{C}$  Max.

Structure chart

<p>SR2000 High temperature</p>	
<p>SR4000 高溫帶保護套型</p>	

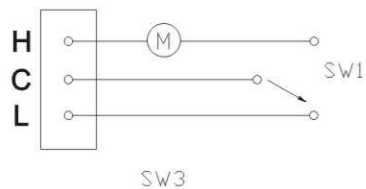
Circuit principle

1. When the motor is running, C.L circuit is closed means no resistance on paddle. When the motor is switched off, C.L circuit will be opened, meanwhile, C.H circuit will be closed means being resistance on paddle,

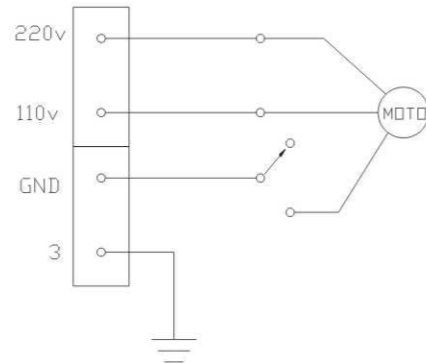
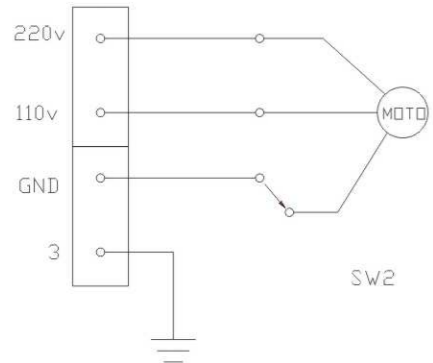
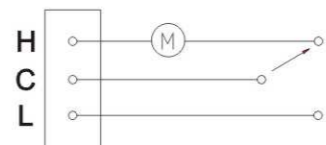
2. When the resistance on paddle disappeared, the motor restarts running, C.L circuit is closed

\*This principle is suitable for all Series 06

Running



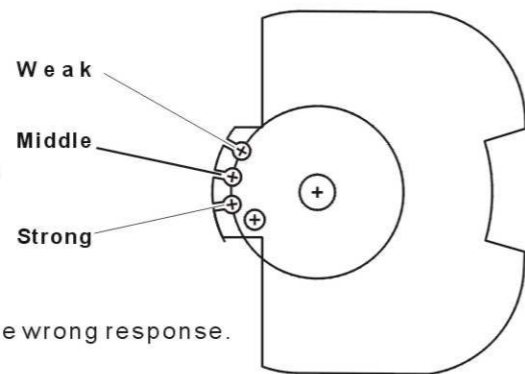
Resistance



Torsional spring adjustment

Torsional spring is used to adjust the torque of rotating axis. The torsional spring can be set at strong position on measuring heavy solid, while the paddle is poor sensitive. On the reverse it can be set at weak position on measuring light bulk solid, while the paddle is sensitivity.

\*Please don't make a random to set the torsion spring to avoid the wrong response.



Paddle shapes and dimensions (stainless steel S304)

T1 type	T2 type	L type	N type
100 x 30(W x H) Mounting hole on container > Φ90mm	80 x 30(W x H) Mounting hole on container > Φ90mm	50 x 30(W x H) Available at heavy bulk solid to avoid the shock on paddle	132 x 100 x 30 Mounting on 1" screw hole without flange

Notice: Sizes of paddles and of shafts are possible to be customized.

Fitting specifications

Flange

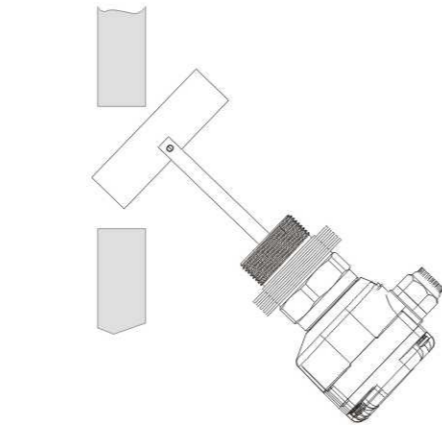
OrderNO.	0607F

Fixture

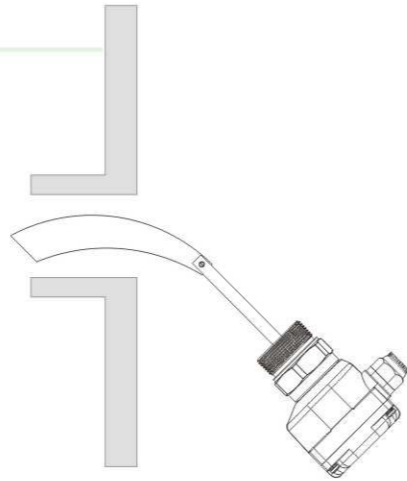
OrderNO.	0607X

### Mounting Instructions

1. Mounting on the wall of container directly: Insert one side of the paddle to the hole of container by 35°, turn it to right position slowly after the other side of the paddle passed through half of the wall-thickness.



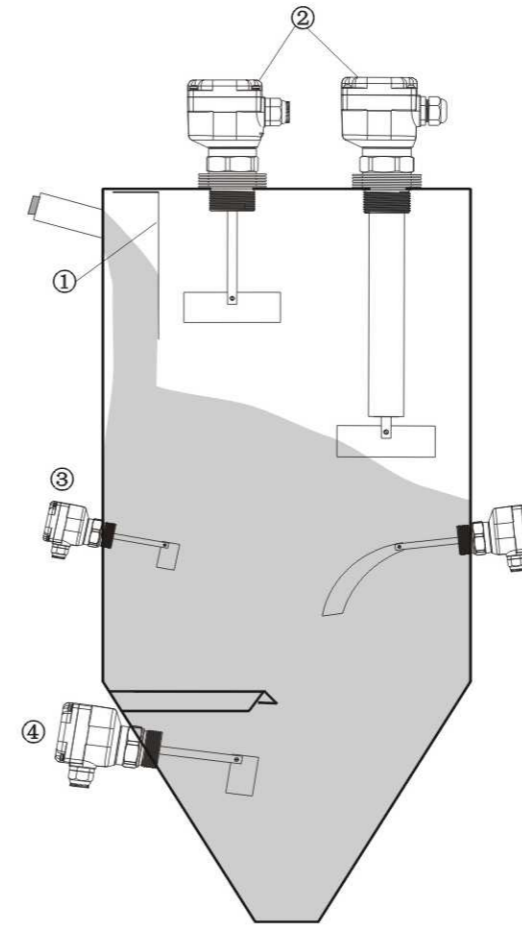
2. The sickle shape paddle can be mounted on the container directly: Insert the paddle to the G1-1/2 inches hole by curving path and tight it on the container.



### Notice

1. When mount it by horizontal, the switches can be fixed at 15°-- 20° against the horizontals in order to avoid the shock of bulk solid.
2. Please select Series SR2000 for high temperature when the temperature of solid in the container is over 80°C.
3. When mounting hole size is 1-1/2 inches, sickle shape paddle shall be selected for screw-mounting on the wall of container directly.
4. The cable entrance of junction box must be downwards, its cable nut has to be screwed tightly.
5. The tank; however, please add an extra shield on the switch to avoid the shock, from the falling materials, might affect the operation of the switch if it is required to do so.
6. Please add a shield for the probe when detect the cakes with the diameter over 15mm or when mount the switch under the entrance of the tank by 7m.
7. To detect powder with high viscosity, the switch should be mounted downwards on the top vertically or on the side with slope.

※Illustration on next page



Left figure:

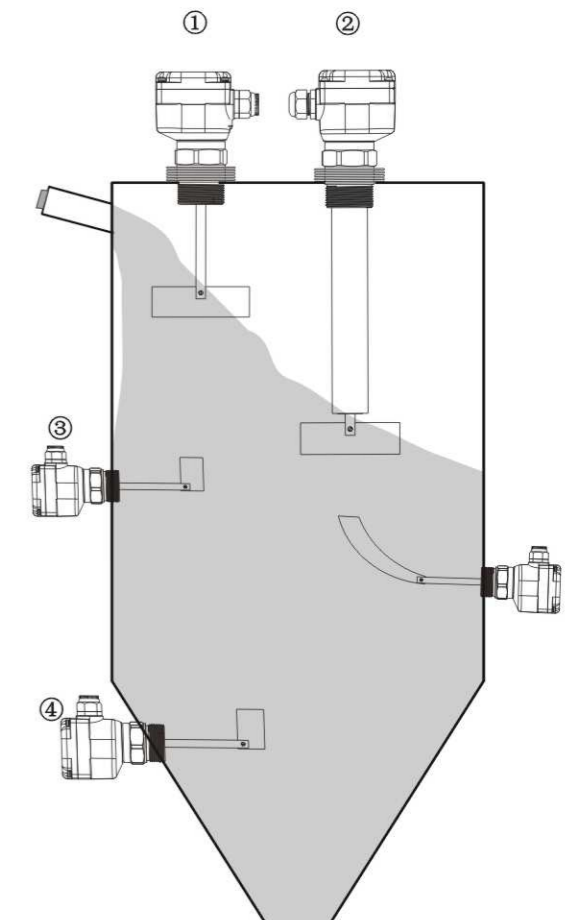
Correct mounting ✓

- ① Shield for protecting the switches 2 from the damage by the shock of feeding.
- ② Sufficient space for mounting and adjusting.
- ③ Degree of lateral mounting.
- ④ Shield for probe in the low position.

Right figure:

Incorrect mounting ✗

- ① The distance between the wall of the tank and the clump of materials is too close; moreover, the switch is not with a shield while mounted beside the entrance.
- ② The distance of ① and ② is too close to mount and to adjust smoothly.
- ③ The switch is not mounted with correct angle, and the cable entrance of junction box should be downwards.
- ④ To avoid damaging the switch and affecting the operation, it is required to add a shield for probe when detect the material with the diameter over 15mm



## Rotating paddle level switches

### Order example

SR	1000	B	220	T1	F
Series	Standrad type	110~120VAC	220mm	100x30(WxH)	Flange

SR	Series: SR
1000	<b>Fork type:</b> 1000: Standard 3000 Standard type with shaft-protection 2000: high temperature 4000: High temperature with shaft-protection
B	<b>Power input:</b> A:24VAC B:110—120VAC C:220—240VAC D: Customized
220	<b>Shaft lenhtht:</b> 80:80mm 220:220mm 470:470mm S: Customized
T1	<b>Paddle Dimension ( mm)</b> T1:100×30(W×H) T2:80×30(W×H) L: 50×30(W×H) N:132×100×30
F	<b>Fitting</b> F: Flange T: Sleeve Each item in this series is included a hexangular nut. If you don't need sleeve or flange, this blank could be clear.

### • Notice

1. Confirm the voltage: 24VAC, 110V~120VAC or 220~240VAC, 50/60Hz
2. Confirm the mode of mounting(top-mounted or laterally mounted)
3. Notice the proportion of the material
4. Confirm the peddle size to check whether it can insert to the flange or the container