

SRF500 series RF admittance level switch

FEATURES

- Strong applicability: used in various occasions, fly ash, particles, powder, liquid, viscous, conductive and non-conductive materials.
- Anti-adhesion circuit: Adopting anti-adhesion circuit can eliminate material adhesion and generate false signals.
- Probe can be folded: the probe and the controller can be separated, no cable connection, installation and removal will not affect the incoming and outgoing materials.
- The probe is resistant to high and low temperatures: The probe is suitable for working environments from -184 °C ~260 °C. Ceramic high temperature probes are also available.
- Large output capacity: The relay contact output with a capacity of 10A and 110Vac is used, and a status lamp displays the working status, and it has a function of 0 ~ 30 seconds delay.
- SMD technology: make the circuit line more resistant to vibration, and the circuit parameters are more stable and reliable.
- Wave pressure technology: increase the working pressure of the probe and extend the service life.



WORKING PRINCIPLE

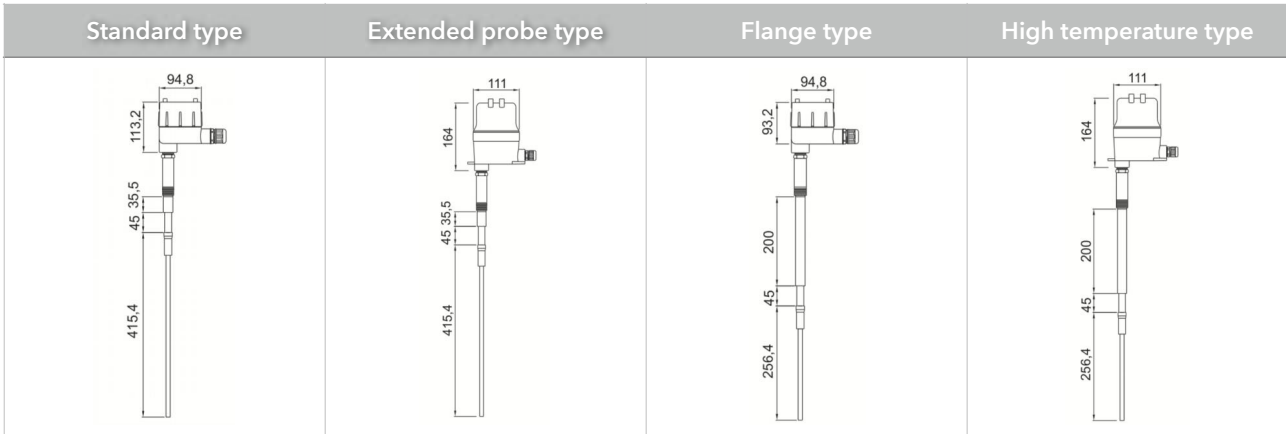
The RF admittance level controller is based on radio frequency (RF) capacitor technology. A radio frequency is applied to the probe and continuous analysis determines the effects caused by the surrounding environment. The energized probe and the container wall form the two pole plates of the capacitor. The insulator of the probe and the surrounding air become dielectric materials. All materials have a dielectric constant that is greater than air. When air is replaced by any other material, the capacitance The effect is strengthened, which changes the impedance of the application, that is, the change in capacitance causes a change in impedance. This effect is measured by the circuit and compared with a reference established by the sensitivity setting (circuit).

The correct sensitivity setting will affect the correct change of the sensor output. The anti-adhesion circuit of the probe can make the measurement circuit ignore the material accumulated on the probe, otherwise it will cause the failure of sensitivity. The anti-stick circuit is excited with the same radio frequency potential as applied to the sensing probe. Because the current cannot flow at the same potential, the anti-adhesion circuit blocks the current that usually flows from the energized probe through the accumulated material to the container wall. This measures the material surrounding the energized probe, not the accumulated material.

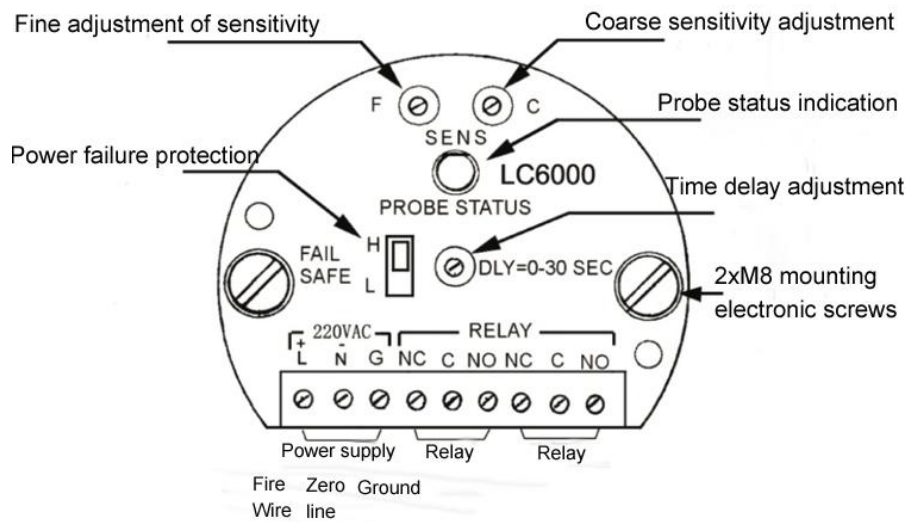
SPECIFICATION

ITEMS	PARAMETER
Measuring medium	Liquid / Powder
Sensitivity	0.5PF
Accuracy	±5mm
Measuring length	200~10000mm
Medium temperature	-40 °C ~800 °C
Repeatability	±3mm
Indication method	LED
Voltage	DC 24V / AC 220V
Power	1 W
Output signal	Relay Dry Contact (DPDT)
Maximum load	8A
Pressure range	0~1Mpa
Ambient temperature	-40 °C ~ 80 °C
Protection level	IP67
Shell material	Aluminum alloy
Sensor material	Stainless steel 316
Connector material	Stainless steel 304
Electrical interface	M20*1.5, 1"BSP, 3/4"NPT
Weight	1.2KG

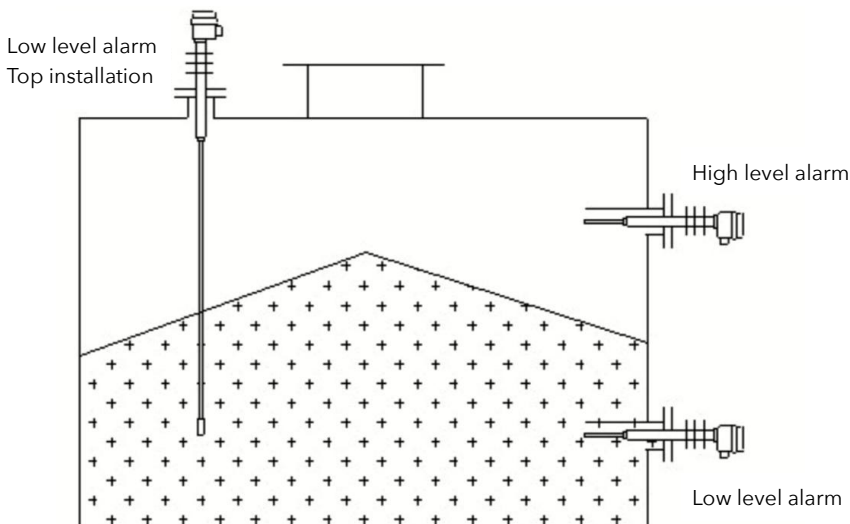
TYPICAL TYPE



WRING CONNECTION



APPLICATION



Typical application:

Detect gravel, material, coal, and other chute materials. Where other probes are easy to break or bend in the flow of materials, this probe is particularly ideal. It is often used for chute blockage detection. Coal blocking detection.

ORDER GUIDE

SRF500	RF admittance level switch						
	CODE	type					
	A	Ordinary type					
	B	High temperature type					
	C	Hygienic type					
	D	Anticorrosive type					
	CODE	Insertion depth					
	1	500m (standard) Shielding layer 35.5mm					
	2	200m (standard) Shielding layer 45mm					
	3	Pole type extension 250-10000 optional					
	4	Cable type extended split 1-100m optional					
	CODE	Voltage					
	A	220V AC ±10%					
	D	24V DC ±10%					
	CODE	Material					
	1	304(standard)					
	2	316					
	3	Other customized					
	CODE	Process connection					
	G	3/4 "NPT thread (standard)					
	T	1 "NPT thread					
	B	1"BSP					
	F	Flange installation (flange specification and standard shall be indicated)					
	C	Other customization					
	CODE	Other parameters					
	A	Normal temperature_° C					
	B	Normal pressure_Kpa					
	C	Protection level IP66					
	D	Flameproof level ExdIICT6					
	E	Maximum temperature _° C					
	F	Maximum pressure Kpa or Mpa					
	G	Other requirements					
SRF500	A	1	A	1	G	AB	Order example