

RF Admittance Level Switch FRFS series adopts advanced RF admittance technology and overcomes the defects that the capacitor level switch could not eliminate the effect by conductive hanging material. The instrument operates reliably and various technical indexes have archived the international level, which is widely used in control and alarm of liquid, pulp, powder, material level and two different liquid levels. In addition, this product have status indication at site, it is a high cost performance and stable level sensor.



FEATURES

- PP | PVC | PVDF | 316 SS
- Tank Measurement up to 10 ft High
- Excellent Chemical Resistance
- Easy Installation
- Two-wire 4-20mA Output
- Epoxy Coated Junction Box
- NPT | Flange Connection
- Suitable for Corrosive Non-Coating Liquids

PODUCTS APPLICATION

- **Conductive and isolated liquid** - Oil field and chemical industry
- **Conductive and isolated pulp** - Paper making and metallurgy
- **Particles and Power** - Food, feedstuffs, power plant, cement, environment protection industry etc

SPECIFICATIONS

Power Supply	220VAC, 50/60Hz 24VDC, 100mA
Sensitivity	0.3pF or smaller
Operating Temperature	-20 ~ 180°
Ambient Temperature	-40 ~ 80°
Working pressure	-0.1-2.5MPa
Output	DPDT Relay
Contact rating	220VAC, SA non-inductive, 3A inductive
Response Time	Standard : 0.2 S
Delay Time	0.2 - 90 S adjustable
Electric Interfac	eM20 x 1.5
Explosion-proof Grade	Explosion-proof : ExdIIBT4-T6, Intrinsical Safety : ExialICT4-T6
Protection Grade	IP65
Process Connection	Standard : 3/4" NPT thread 1" NPT thread
Material Contacts Liquid	304 316SS and PTFE
Junction Box Material	Aluminum Alloy

Structure Principle

RF Admittance Level Sensor FRFS series consists of sensor unit and electronic unit. The sensor unit mainly includes three parts: measurement probe, shaded pole and ground terminal. The material level is reflected through the change of admittance between the probe and vessel wall. When the level reaches to the switch working point, the electronic unit makes response and driver replay acts, thus output switch signal. The shaded pole can prevent fault signal generated due to the handing on the electrode from occurring. Only when the level actually archives the set point can the switch control signal be output.

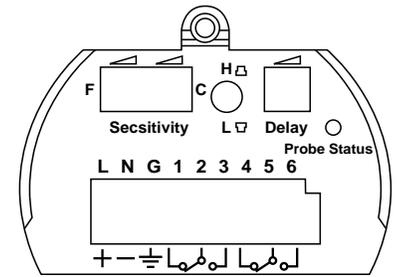


Diagram of terminal connections

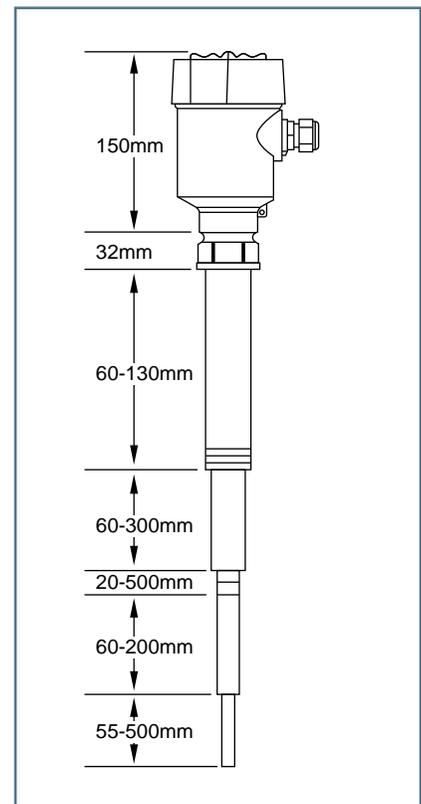
Selection Table

RF Admittance Level Sensor, Heavy hanging resistant, with switch status indication, independent terminal box

1 : 24VDC ; 2 : 220VAC ; 3 : Universal Power supply 24VC/220VAC
0 : Standard Sensitivity (for conductive medium) ; 2 : High Sensitivity (for isolated medium, $\Sigma > 3.0$)
0 : Without Time Delay (standard circuit unit) ; 1 : With Time Delay (0.2-90 s adjustable)
9 : Integral Type ; 0 : Split Type
1 : Thread Connection ; 2 : Flange Connection
0 : Common Type ; D : Explosion-proof Type ; E : Intrinsically Safe Type
01 : Standard Type (<121°C) 11 : Heavy Hanging Type 21 : Moderate Temp. Type (<180°C) 31 : Anticorrosion Type 41 : Flat type
Unit (mm)

Products Series	Power Supply	Sensitivity	Time Delay	Instrument Type	Process Connection	Explosion - proof Option	Electrode Form	Insertion depth
FRFS	-□	□	□	□	□	□	□	-□□□□

Dimensional



Electrode Model Selector

Electrode No	Electrode form & Typical Application	Operating Temperature & Operating Pressure	Insertion depth	Material of electrode
01	Used in liquid, light pulp, particles Heavy hanging type	121°C 1.38MPa	150 ~ 10000mm	316SS and PTFE
11	Used in stirred liquid, thick pulp, particles, high temperature type	121°C 1.38MPa	150 ~ 10000mm	316SS and PTFE
21	Used in liquid, light pulp, particles Anticorrosion type	121°C 1.38MPa	150 ~ 10000mm	316SS and PTFE
31	Used in liquid, light pulp, particles	121°C 1.38MPa	150 ~ 5000mm	PTFE