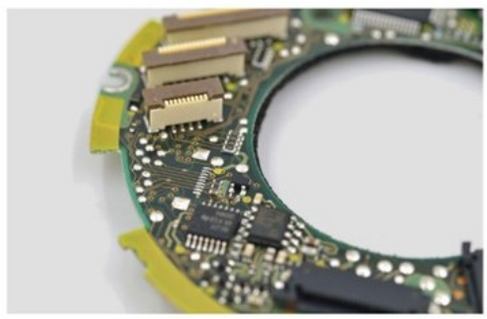
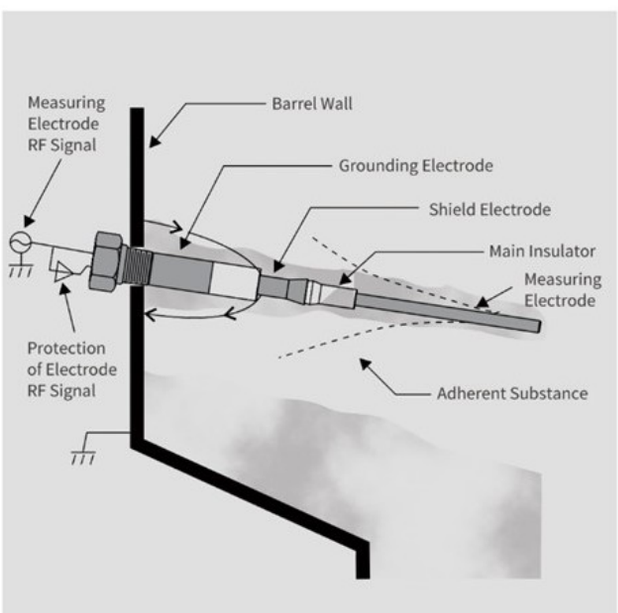
TLCS-410 Admittance Level Switch

The height of the material is reflected by the change of current between the electrode and the container wall. When the material reaches the switching point, the electronic unit reacts, drives the relay to work and outputs the switching signal. A protective electrode is added to the admittance to prevent misoperation caused by hanging material on the electrode. When the material really reaches the set point, the switch control signal is output.





Working Principle

In order to overcome the influence of adhesion, a shield electrode is added between the measuring electrode and the grounding electrode in the Admittance Level Switch to ensure the correct signal alignment. This special electrode structure is particularly suitable for detecting various materials and is not affected by material adhesion. The electrode rod of the Admittance Level Switch is composed of a measuring electrode, a shield electrode, and a grounding electrode. The three electrodes are isolated by insulating materials. When the material touches the measuring electrode, the admittance between the measuring electrode and the grounding electrode increases. Therefore, the level of the material can be judged based on this change in admittance. The shield electrode is placed between the measuring electrode and the grounding electrode, and its signal waveform is completely identical to that of the measuring electrode, but the two are completely isolated and independent. This can suppress the occurrence of material adhesion on the electrode rod itself. The admittance change caused by material adhesion between the measuring electrode and the grounding electrode only affects the admittance

Features

- Unaffected by material adhesion
- Fully enclosed electronic module with "active shielding technology" to avoid the influence of hanging materials and ensure functional safety
- Good stability and unaffected by temperature
- Adjustable delay output of 0-30 seconds
- Suitable for use in high temperature or high pressure environments, with a pressure range of up to 80 bar and temperature range of up to 800°C (customizable up to 1200°C)
- Switchable high and low level failure protection alarm function
- Suitable for detecting liquids, pastes, solids, particles, and interfaces.

Application

- Applied for measuring fly ash, solid particles, liquids, and adhesive materials, especially suitable for ash level control in power plant dust collectors, ash silo level control, etc.
- Overflow protection
- High and low liquid level alarms
- Pump control or restriction detection
- Anti-dry rotation or pump protection

TLCS-410 Admitance Level Switch

Model	TLCS-410-100	TLCS-410-110	TLCS-410-120
Image			
Application	Liquid/Solid/Particles	Liquid/Solid/Particles	Liquid/Solid/Particles
Measurement Signal	Field adjustable for high-level (HLFS) or low-level (LLFS)	Field adjustable for high-level (HLFS) or low-level (LLFS)	Field adjustable for high-level (HLFS) or low-level (LLFS)
Probe Material	304/316/316L	304/316/316L	304/316/316L
Insulation Materials	PTFE	PTFE	PTFE
Process Connection	Threads start from G 1, 1NPT/ Flange/Sanitary Interface	Threads start from G 1, 1NPT/ Flange/Sanitary Interface	Threads start from G 1, 1NPT/ Flange/Sanitary Interface
Process Temperature	-40~80°C(Customizable for high-temperature applications)	-40~80°C(Customizable for high-temperature applications)	-40~80°C(Customizable for high-temperature applications)
Process Pressure	-1~16BAR (-100~1600KPA)	-1~25BAR (-100~2500KPA)	-1~16BAR (-100~1600KPA)
Signal Output	Relay Output	Relay Output	Relay Output
Power Supply	20~46VDC/22~265VAC(50/60Hz)	20~46VDC/22~265VAC(50/60Hz)	20~46VDC/22~265VAC(50/60Hz)
Power	Max.2W	Max.2W	Max.2W
Sensitivity	0.3PF	0.3PF	0.3PF
Certification	CE / ATEX / ISO9001	CE / ATEX / ISO9001	CE / ATEX / ISO9001
Protection Level	IP65	IP65	IP65
Junction Box Material	Aluminum Alloy Paint/PEK /Stainless Steel	Aluminum Alloy Paint/PEK /Stainless Steel	Aluminum Alloy Paint/PEK /Stainless Steel

TLCS-410 Admitance Level Switch

Model	TLCS-410-200	TLCS-410-300	TLCS-410-100B
Image			
Application	Liquid/Solid/Particles	Liquid/Solid/Particles	Liquid/Solid/Particles
Measurement Signal	Field adjustable for high-level (HLFS) or low-level (LLFS)	Field adjustable for high-level (HLFS) or low-level (LLFS)	Field adjustable for high-level (HLFS) or low-level (LLFS)
Probe Material	304/316/316L	304/316/316L	304/316/316L
Insulation Materials	PTFE	Ceramic	PTFE
Process Connection	Threads start from G 1, 1NPT/ Sanitary Interface	Threads start from G 1, 1NPT/ Flange/Sanitary Interface	Threads start from G 1, 1NPT/ Flange/Sanitary Interface
Process Temperature	-40~280°C	-40~450°C (The temperature can reach 1200°C)	-40~250°C
Process Pressure	-1~16BAR (-100~1600KPA)	0BAR (0KPA)	-1~25BAR (-100~2500KPA)
Signal Output	Relay Output	Relay Output	Relay Output
Power Supply	20~46VDC/22~265VAC(50/60Hz)	20~46VDC/22~265VAC(50/60Hz)	20~46VDC/22~265VAC(50/60Hz)
Power	Max.2W	Max.2W	Max.2W
Sensitivity	0.3PF	0.3PF	0.3PF
Certification	CE / ISO9001	CE / ATEX / ISO9001	CE / ATEX / ISO9001
Protection Level	IP65	IP65	IP65
Junction Box Material	Aluminum Alloy Paint/Stainless Steel	Aluminum Alloy Paint/Stainless Steel	Aluminum Alloy Paint/Stainless Steel

TLCS-410 Admitance Level Switch

Model	TLCS-410-500	TLCS-410-510	TLCS-410-520
Image			
Application	Liquid/Solid/Particles	Liquid/Solid/Particles	Liquid/Solid/Particles
Measurement Signal	Field adjustable for high-level (HLFS) or low-level (LLFS)	Field adjustable for high-level (HLFS) or low-level (LLFS)	Field adjustable for high-level (HLFS) or low-level (LLFS)
Probe Material	304/316/316L	PFA/PTFE	PFA/PTFE
Insulation Materials	PTFE	PTFE	PTFE
Process Connection	Threads start from G 1, 1NPT/ Sanitary Interface	Threads start from G 1, 1NPT/ Flange/Sanitary Interface	Threads start from G 1, 1NPT/ Flange/Sanitary Interface
Process Temperature	-40~80°C (Customizable for high-temperature applications)	-40~80°C (Customizable for high-temperature applications)	-40~80°C (Customizable for high-temperature applications)
Process Pressure	-1~16BAR (-100~1600KPA)	-1~25BAR (-100~1600KPA)	--1~16BAR (-100~1600KPA)
Signal Output	Relay Output	Relay Output	Relay Output
Power Supply	20~46VDC/22~265VAC(50/60Hz)	20~46VDC/22~265VAC(50/60Hz)	20~46VDC/22~265VAC(50/60Hz)
Power	Max.2W	Max.2W	Max.2W
Sensitivity	0.3PF	0.3PF	0.3PF
Certification	CE / ISO9001	CE / ATEX / ISO9001	CE / ATEX / ISO9001
Protection Level	IP65	IP65	IP65
Junction Box Material	Aluminum Alloy Paint/PEK /Stainless Steel	Aluminum Alloy Paint/PEK /Stainless Steel	Aluminum Alloy Paint/PEK /Stainless Steel

TLCS-410 Admitance Level Switch

Model	TLCS-410-400	TLCS-410-600	TLCS-410-700
Image			
Application	Liquid/Solid/Particles	Liquid/Solid/Particles	Solid/Particles
Measurement Signal	Field adjustable for high-level (HLFS) or low-level (LLFS)	Field adjustable for high-level (HLFS) or low-level (LLFS)	Field adjustable for high-level (HLFS) or low-level (LLFS)
Probe Material	304/316/316L	304/316/316L	304/316/316L
Insulation Materials	PTFE	PTFE	PTFE
Process Connection	Threads start from G 1, 1NPT/ Sanitary Interface	Threads start from G 1/2, 1/2NPT/ Flange/Sanitary Interface	Flanges start from DN50, 2"
Process Temperature	-40~80°C (Customizable for high-temperature applications)	-40~80°C	-40~80°C (Customizable for high-temperature applications)
Process Pressure	-1~25BAR (-100~2500KPA)	-1~16BAR (-100~1600KPA)	-1~25BAR (-100~2500KPA)
Signal Output	Relay Output	Relay Output	Relay Output
Power Supply	20~46VDC/22~265VAC(50/60Hz)	20~46VDC/22~265VAC(50/60Hz)	20~46VDC/22~265VAC(50/60Hz)
Power	Max.2W	Max.2W	Max.2W
Sensitivity	0.3PF	0.3PF	0.3PF
Certification	CE / ISO9001	CE / ATEX / ISO9001	CE / ATEX / ISO9001
Protection Level	IP55	IP65	IP65
Junction Box Material	Aluminum Alloy Paint/PEK /Stainless Steel	Aluminum Alloy Paint/PEK /Stainless Steel	Aluminum Alloy Paint/PEK /Stainless Steel