

External Ultrasonic Liquid Level Control



Description

The **External Ultrasonic Liquid Level** control is a new type of liquid level monitoring and alarming instrument. The high frequency ultrasonic pulse produced by the probe of the liquid level control can pass through tank wall and transmit between the tank wall and the liquid and then be reflected back. By detecting and calculating the reflective behavior, the level control can identify whether there is liquid at the monitored position. The liquid level control can send relay signal to succeeding devices or other equipment at the mean time, which can realize the function of simultaneous monitoring or controlling.



This instrument is especially suitable for monitoring liquid level in a tank and alarming when the level reaches maximum or minimum. It can be also used to identify the existence of liquid in pipe (dry condition protection). The tank can be made of various kinds of metal, metalloid or unfoamed plastic. Such measurement technique is not interfered by medium density, permittivity, conductivity, reflection coefficient, pressure, temperature, precipitation or other factors. Therefore it can be applied to level control of various types of liquid in industries of pharmaceuticals, petroleum, chemical, electricity, food and so on. It is an ideal choice for the detection of dangerous toxic or corrosive liquid.

Operation Environment

Measurable tank material:

The probe installation area on tank wall should be hard material with good conductivity such as carbon steel, stainless steel, various hard metal, fiber glass, epikote, rigid plastic, ceramics, glass, rigid rubber and other composite material. The internal and external surface of installing position should be smooth. If there are multipal layers in tank wall, the layers should compact

without foam or air gap such as sulfide rigid rubber lining, epikote lining, stainless steel lining, and titanium.

Measurable tank wall thickness: 2-70mm

Measurable tank type: Horizontal tank, spherical tank, vertical tank and so on.

Medium:The measurement result is not interfered by density, permittivity, temperature, pressure, purity, viscosity of medium.

Specifications

Repeatability error	±2mm
Measurable tank wall thickness	Max 70mm
Ambient temperature	-50℃～60℃ (-58 °F - 140 °F)
Ambient humidity	15%～100%RH
Power	DC 24V (18～36V) 0.05A
Output signal	Relay output (1 unit single-pole, double-throw control contact is passive nodes)
Relay capacity	DC 30V 6A / AC 250V 6A
Electrical interface	Different types available for different operating condition
Diameter of threading hole	Φ8mm (adaptive cable diameter Φ6～8mm)

Structure and Parts

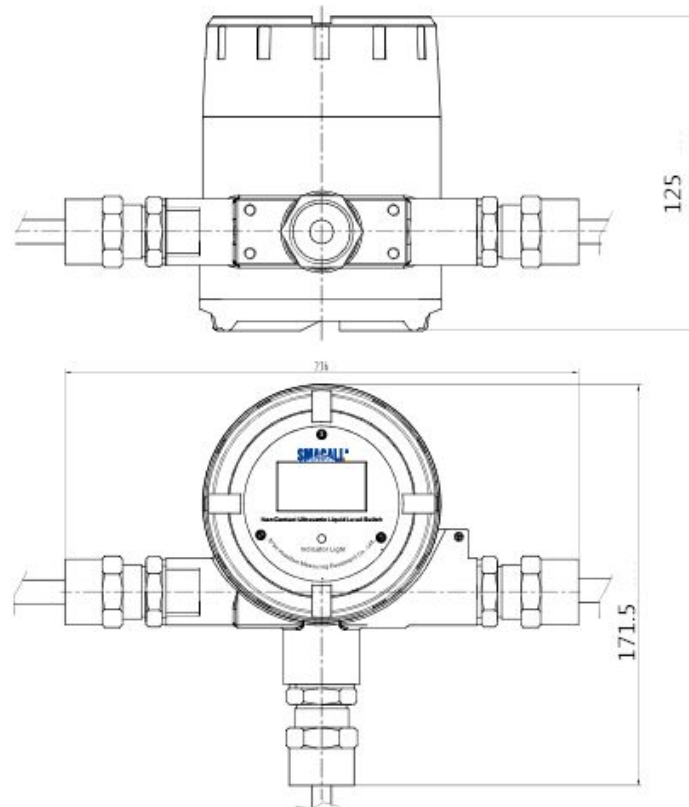


Fig. 1 Structure

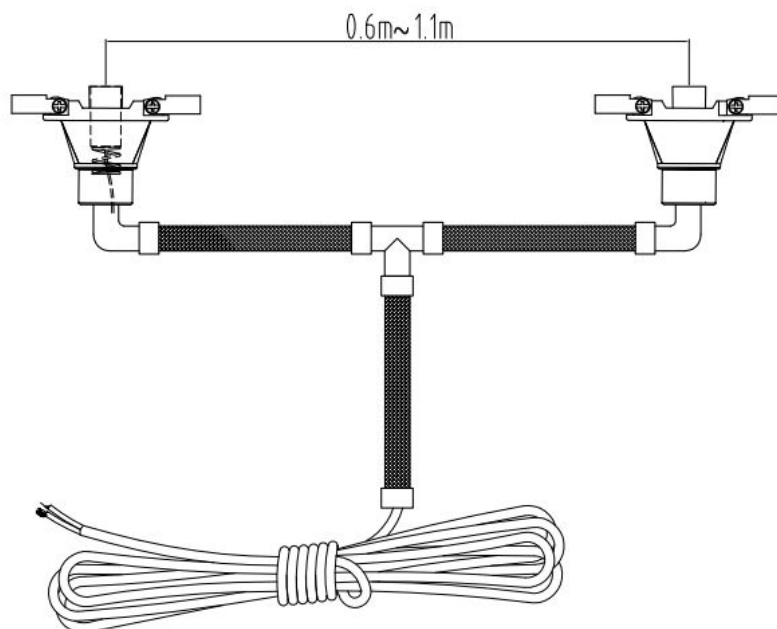


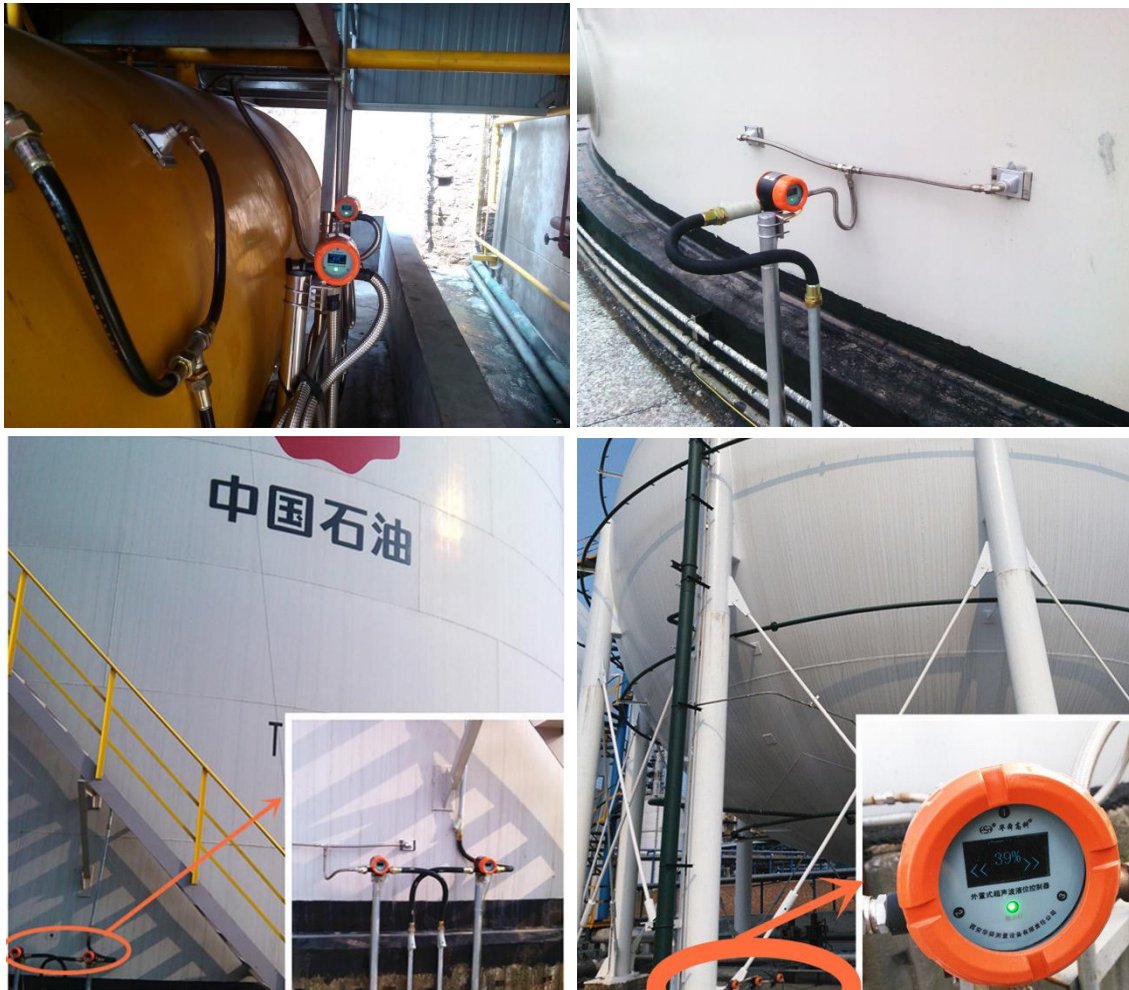
Fig. 2 Probe and Cable Component

Selection Guide

HS-ULC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HS-ULC									P	Ordinary Cable	
									K	Armored Cable	
								A	Basic Equipment		
								B	Stainless Steel Equipment		
								C	For Spherical Tank		
								D	For Petroleum Industry		
							1	M20*1.5 Connector			
							2	G1/2'			
							3	NPT1/2"			
							4	NPT3/4"			
							5	G3/4"			
							L	Two-wire System			
							S	Four-wire System			
							1	Composite Probe			
							2	Dual Probe			
							1	Probe for Pipe with Small Diameter Pipeline			
							2	Probe for Pipe with Large Diameter Pipeline			
							D	Double Calibration			
							E	Single Calibration			
							P	One-piece Type			
							F	Split Type			
							G	Split and High Temperature Type			
							A	Common Type			
							B	Explosion proof Type			
	HS-ULC-EC	2 in 1(Low &High level)Normal Temperature									
	HS-ULC-EG	2 in 1(Low &High level)Normal Temperature									

Explosion proof Mark: Exd II CT6 Gb

Application



For nearly 20 years, Smagall has designed and manufactured a broad range of liquid level meters, controls, fluxgate sensor series and magnetic sensor calibrating and testing system. We design, manufacture and market the best level measurement and control instruments for petrol and hazardous chemical applications.

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