

TKWL-1700系列电容式液位计

TKWL-1700 Series Capacitive Level Gauge

产品概述

Product Overview

TKWL-1700系列电容式液位计是一种可以用于测量液体、油类、固体的液位（物位）变送器。无可动部件，可靠性大大提高，它不受水蒸汽，灰尘或冷凝的影响，具有长期运行稳定可靠，灵敏度高，线性度好，耐高温、耐高压等优点。广泛用于石油、化工、冶金、电力、造纸、制药等各个领域。

The TKWL-1700 series capacitive level gauge is a type of level gauge used for measuring the level (or position) of liquids, oils, and solids. It has no moving parts, which greatly enhances its reliability. It is unaffected by factors such as water vapor, dust, or condensation, and offers long-term stable and reliable operation, high sensitivity, good linearity, and advantages of high temperature and high pressure resistance. It is widely used in various fields such as petroleum, chemical, metallurgy, power generation, paper making, pharmaceuticals, and more.

产品原理

Product Principle

电容式液位计安装在容器中时就构成了一个电容器，电极的金属棒(测量电极)作为电容器的一个极板，容器壁(注：若容器壁为绝缘材料，则应伸入另一个电极，称之为参考电极)作为电容器的另一个极板，当物位上升时，平常包围在两个极板间的空气或其它气体由具有与其不同介电常数的被测物料取代，这样因为极板间介电性的变化而引起电容量发生改变，电容式液位计通过射频电路检测到这种电容变化量并转换成线性电流输出。

When a capacitive level gauge is installed in a container, it forms a capacitor. The metal rod of the electrode (measuring electrode) acts as one plate of the capacitor, while the container wall (note: if the container wall is made of insulating material, another electrode should be inserted, known as a reference electrode) acts as the other plate of the capacitor. As the level of the substance rises, the air or other gas normally present between the two plates is replaced by the measured material, which has a different dielectric constant. This change in dielectric properties between the plates causes a change in the capacitance. The capacitive level gauge detects this capacitance change through radio frequency circuit and converts it into a linear current output.

产品特点

Product Features

- 1、结构简单，无任何可动或弹性元部件，因此可靠性极高，维护量极少。一般情况下，不必进行常规的大、中、小维修；
- 2、适用于容器的物位测量，且测量值不受被测液体的温度及容器的形状、压力影响；
- 3、特别适用于酸、碱等强腐蚀性液体的测量；
- 4、完善的过流、过压、电源极性保护；
- 5、可以测量任何导电介质。

1. Simple structure without any movable or elastic components, resulting in extremely high reliability and minimal maintenance requirements. In general, routine major, medium, and minor repairs are not necessary.

2. Suitable for level measurement vessels, with measurement values unaffected by the temperature of the measured liquid, the shape of the container, or the pressure.

- 3.Particularly suitable for measuring strong corrosive liquids such as acids and alkalis.
- 4.Comprehensive protection against overcurrent, overvoltage, and power polarity.
- 5.Capable of measuring any conductive medium.

产品信息

Product Information

 TKWL-1700	测量范围：0 ~ 30m 电容范围：0.1PF ~ 2000PF 精度：0.5级 工作压力：-0.1 ~ 2MPa 工作温度：-50 ~ 200℃ 环境温度：-40 ~ 85℃ 输出信号：4 ~ 20mA/HART 供电电压：24VDC 过程连接：螺纹/法兰/支架	Measurement Range: 0 ~ 30m Capacitance Range: 0.1pF ~ 2000pF Accuracy: Class 0.5 Operating Pressure: -0.1 ~ 2MPa Operating Temperature: -50℃ ~ 200℃ Ambient Temperature: -40℃ ~ 85℃ Output Signal: 4-20mA/HART Power Supply Voltage: 24V DC Process Connection: Thread/Flange/Bracket
 TKWL-1701	测量范围：0 ~ 6m 电容范围：0.1PF ~ 2000PF 精度：0.5级 工作压力：-0.1 ~ 2MPa 工作温度：-50 ~ 200℃ 环境温度：-40 ~ 85℃ 输出信号：4 ~ 20mA/HART 供电电压：24V DC 过程连接：螺纹/法兰/支架	Measurement Range: 0 ~ 6m、 Capacitance Range: 0.1pF to 2000pF Accuracy: Class 0.5 Operating Pressure: -0.1 ~ 2MPa Operating Temperature: -50℃ ~ 200℃ Ambient Temperature: -40℃ ~ 85℃ Output Signal: 4-20mA/HART Power Supply Voltage: 24V DC Process Connection: Thread/Flange/Bracket

选型指南

Selection Handbook

TKWL-170						
传感器型式 Sensor Type 缆式 0 Cable Type 杆式 1 Rod Type						
安装方式 Installation Method M20*1.5螺纹 A M20*1.5 Thread G1螺纹 B G1 Thread DN50法兰 C DN50 Flange 其它 Z Other						
输出信号 Output Signal 4-20mA 1 4-20mA+HART 2						
电气接口 Electrical Interface M20*1.5 0 1/2NPT 1 特殊定制 X Special Customization						
探杆（缆）材质 Probe (Cable) Material 304+PTFE A 316L+PTFE B 特殊定制 X Special Customization						
探杆（缆）长度 Probe (Cable) Length 单位 (mm) Unit (mm)						