

TKWL-1600系列超声波液位计

TKWL-1600 Series Ultrasonic Level gauge

产品概述

Product Overview

超声波液位计是由微处理器控制的数字液位仪表，在测量中超声波脉冲由传感器（换能器）发出，声波经液体表面反射后被同一传感器接收或超声波接收器，并由声波的发射和接收之间的时间来计算传感器到被测液体表面的距离。由于采用非接触的测量，被测介质几乎不受限制，可广泛用于各种液体高度的测量。

An ultrasonic level gauge is a digital level instrument controlled by a microprocessor. During measurement, ultrasonic pulses are emitted by a sensor (transducer). The sound waves are reflected by the liquid surface and then received by the same sensor or an ultrasonic receiver. The distance from the sensor to the surface of the measured liquid is calculated based on the time between the emission and reception of the sound waves. Due to the non-contact measurement, the type of medium being measured is almost unrestricted, making it widely used for measuring the level of various liquids.

产品原理

Product Principle

超声波液位计的工作原理是由换能器发出超声波脉冲遇到被测介质表面被反射回来，部分反射回波被同一换能器接收，转换成电信号。超声波脉冲以声波速度传播，从发射到接收超声波脉冲所需的时间间隔与换能器到被测介质表面的距离成正比。

The ultrasonic level gauge operates based on the following principles: The transducer emits ultrasonic pulses that encounter the surface of the measured medium and are reflected back. Some of the reflected echo waves are received by the same transducer and converted into electrical signals. The ultrasonic pulses propagate at the speed of sound, and the time interval required for the emitted and received ultrasonic pulses is directly proportional to the distance from the transducer to the surface of the measured medium.

产品特点

Product Features

- 1、自动功率调整、增益控制、温度补偿；
- 2、物理密封型探头，IP68防护等级，不会进水，提升使用寿命；
- 3、特殊回波处理技术，现场出现故障可供排查故障原因，维护方便；
- 4、具有干扰回波的抑止功能保证测量数据的真实，抗干扰能力强；
- 5、价格低，体积小，重量轻，可用于食品，化工，半导体等行业对液体非接触式物位测量，可用于远程液位监控和泵的控制。

1. Automatic power adjustment, gain control, and temperature compensation.
2. Physically sealed probe with an IP68 protection rating, ensuring water resistance and extending the lifespan of the device.
3. Special echo processing technology allows for on-site troubleshooting in case of malfunctions, making maintenance convenient.
4. Strong interference echo suppression function ensures the accuracy of measurement data and provides

excellent anti-interference capability.

5. Affordable price, small size, and lightweight design make it suitable for non-contact liquid level measurement in industries such as food, chemical, and semiconductor. It can also be used for remote level monitoring and pump control.

产品信息

Product Information

 TKWL-1600/SK	应用：各类工业领域的液位测量，特别是水处理工业。 测量范围：0-10m/0-15m等 测量精度：±0.5% 过程温度：-40 ~ 70℃ 过程压力：-0.02 ~ 0.3MPa 输出信号：4-20mA/HART/Modbus 电源：两线制（DC24V） 四线制（DC24V/AC220V） 现场显示：标配 外壳：铸铝（ABS可定制） 过程连接：螺纹/法兰/支架 探头材质：ABS、PTFE、PVDF等 防爆标志：ExdbIICT6 Gb Extb IIICT80℃ Db	Application: Liquid level measurement in various industrial sectors, especially in the water treatment industry. Measurement Range: 0-10m/0-15m, etc. Measurement Accuracy: ±0.5% Process Temperature: -40 to 70℃ Process Pressure: -0.02 to 0.3 MPa Output Signal: 4-20mA/HART/Modbus Power Supply: Two-wire system (DC24V) Four-wire system (DC24V/AC220V) Field Display: Standard Enclosure: Cast aluminum (ABS customization available) Process Connection: Thread/Flange/Bracket Probe Material: ABS, PTFE, PVDF, etc. Explosion-proof marking: ExdbIICT6 Gb Extb IIICT80℃ Db
 TKWL-1600/FX	应用：各类工业领域的液位测量，特别是水处理工业。 测量范围：0-10m/0-15m/0-20m等 测量精度：±0.5% 过程温度：-40 ~ 70℃ 过程压力：-0.02 ~ 0.3MPa 输出信号：4-20mA/Modbus 电源：四线制（DC24V/AC220V） 现场显示：标配 外壳：ABS 过程连接：螺纹/法兰/支架 探头材质：ABS、PTFE、PVDF等	Application: Liquid level measurement in various industrial fields, especially in the water treatment industry. Measurement range: 0-10m/0-15m/0-20m, etc. Measurement accuracy: ±0.5% Process temperature: -40 ~ 70℃ Process pressure: -0.02 ~ 0.3MPa Output signal: 4-20mA/Modbus Power supply: Four-wire system (DC24V/AC220V) On-site display: Standard configuration Shell: ABS Process connection: Threaded/Flanged/Bracket Probe material: ABS, PTFE, PVDF, etc.

选型指南

Selection Handbook

TKWL-1600								
结构型式 Structural Type 一体式 SK Integrated Type 分体式 FX Split Type								
探头材质 Probe Material ABS A PTFE F 特殊材质 T Special Material								
安装方式 Installation Method G1-1/2螺纹 0 G1-1/2 Thread G2螺纹 1 G2 Thread DN50法兰 2 DN50 Flange DN65法兰 3 DN65 Flange DN80法兰 4 DN80 Flange DN100法兰 5 DN100 Flange DN125法兰 6 DN125 Flange DN150法兰 7 DN150 Flange 特殊定制 T Special Customization								
继电器数量 Relay Quantity 没有继电器 R0 No Relay 1个继电器 R1 1 Relay 2个继电器 R2 2 Relays								

输出信号 Output Signal 4-20mA 4-20mA+HART 485通讯 485Communication 特殊输出信号 Special Output Signal	TA TB TC	
变送器外壳材质 Gauge Enclosure Material ABS 铸铝 Cast Aluminum	PL AL	
供电电源 Power Supply 24V DC两线制 24V DC Two-wire 24V DC四线制 24V DC Four-wire 220V AC四线制 220V AC Four-wire	A B C	
防爆形式 Explosion Protection Type 普通型 Ordinary Type 防爆型 Explosion-proof Type	P D	