

TKWL-2100系列音叉物位开关

TKWL-2100 Series Fork Level Switch

产品概述

Product Overview

TKWL-2100系列音叉物位开关是通过压电晶体的谐振来引起其振动的，当受到物料阻尼作用时，振幅急剧降低且频率和相位发生明显的变化，这些变化会被内部电子电路检测到，经过处理后，转换成开关信号输出。该产品可以对料罐的高低位进行监测、控制和报警，适用于各种液体、粉末、颗粒状固体。

Overview The TKWL-2100 series fork level switch operates by inducing vibration in a piezoelectric crystal through resonance. When the fork comes into contact with the material, the amplitude decreases rapidly, and there are noticeable changes in frequency and phase. These variations are detected by the internal electronic circuitry, processed, and converted into switch signals. This product is designed for monitoring, control, and alarm functions for high and low levels in tanks, and it is suitable for various types of liquids, powders, and granular solids.

产品原理

Product Principle

音叉开关的工作原理是通过安装在音叉基座上的一对压电晶体使音叉在一定共振频率下振动。当音叉料位开关的音叉与被测介质相接触时，音叉的频率和振幅将改变，音叉料位开关的这些变化由智能电路来进行检测，处理并将之转换为一个开关信号。

The working principle of a fork level switch involves a pair of piezoelectric crystals mounted on the fork base, causing the fork to vibrate at a specific resonant frequency. When the fork of the level switch comes into contact with the measured medium, the frequency and amplitude of the fork will change. These changes are detected by the intelligent circuit of the fork level switch, processed, and converted into a switch signal.

产品特点

Product Features

- 1、运行真正免受流动、湍流、气流、泡沫、振动、固体含量、涂覆、液体特性以及产品变化的影响；
- 2、不需要标定而且所需要的安装工序最少；
- 3、极性不敏感而且具有短路保护功能；
- 4、无活动零件或缝隙真正实现免维护；
- 5、发光二极管指示，可依据习惯调整状态指示；
- 6、“快速滴落”的音叉设计对于粘性液体具有更快的相应时间。

1. Immune to the effects of flow, turbulence, air flow, foam, vibration, solid content, coating, liquid properties, and product variations.

2. Calibration-free and requires minimal installation procedures.

3. Insensitive to polarity and equipped with short-circuit protection.

4. Maintenance-free with no moving parts or gaps.

5. LED indication with adjustable status indication based on user preference.

6. "Fast-drop" fork design for faster response time, particularly suitable for viscous liquids.

产品信息

Product Information

 TKWL-2100	供电：24VDC/220VAC 输出方式：SPDT/DPDT继电器 环境温度：-20~80℃ 介质温度：-40~120℃/-40~200℃ 工作压力：<2MPa 介质密度：固体≥0.1g/cm³ 液体≥0.6g/cm³ 功耗：0.5W 过程连接：螺纹/法兰 防爆等级：ExdbIICT6 Gb	Power supply: 24VDC/220VAC Output mode: SPDT/DPDT relay Ambient temperature: -20~80℃ Media temperature: -40~120℃/-40~200℃ Operating pressure: <2MPa Media density: Solid ≥ 0.1g/cm³, Liquid ≥ 0.6g/cm³ Power consumption: 0.5W Process connection: Thread/Flange Explosion-proof rating: ExdbIICT6 Gb
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选型指南

Selection Handbook

TKWL-2100							
电气接口 Electrical interface M20*1.5 M 1/2NPT N 特殊定制 X Customized							
供电电源 Power supply DC24V A AC220V B							
密封温度 Sealing temperature 普通密封-40~120℃ P Standard sealing -40~120℃ 高温密封-40~200℃ 带散热器 G High-temperature sealing -40~200℃with heat sink							

探头材质 Probe material		
304	1	
316L	2	
304+PTFE	3	
316L+PTFE	4	
304+PFA	5	
316L+PFA	6	
特殊定制	X	
Customized		

过程连接 Process connection		
G1螺纹		A
G1 Threaded		
卡箍50.5		B
Clamp 50.5		
DN50法兰		C
DN50 flange		
其它		Z
Other		

防爆形式 Explosion-proof type		
普通型		P
Ordinary type		
防爆型		D
Explosion-proof type		

插入深度 Insertion depth		
单位 (mm) Unit (mm)		

