

TKWL-1900系列射频导纳物位开关

TKWL-1900 Series RF Admittance Level Switch

产品概述

Product Overview

TKWL-1900系列射频导纳物位开关是一种从电容式发展起来的、防挂料、更可靠、更准确、适用性更广的新型物位控制技术。射频导纳中导纳的含义为电学中阻抗的倒数，它由电阻性成分、电容性成分、感性成分综合而成，而射频即发射高频无线电波，所以射频导纳物位控制技术是通过高频无线电波测量被测介质导纳值来实现物位测量。

The TKWL-1900 series RF admittance level switch is a new type of level control technology that has evolved from capacitive sensors. It is designed to be immune to material buildup, more reliable, more accurate, and applicable to a wider range of applications. In RF admittance, "admittance" refers to the reciprocal of impedance in electrical terms. It is a combination of resistive, capacitive, and inductive components. RF, on the other hand, stands for radio frequency, indicating the use of high-frequency radio waves. Therefore, RF admittance level control technology measures the admittance value of the measured medium through high-frequency radio waves to achieve level measurement.

产品原理

Product Principle

射频导纳物位开关是基于射频电容技术，将无线电频率施加在探头上，对周围的环境进行连续分析，由于所有介质的介电常数和导电性均不同于空气，当探头接触到介质时所引起的微小电容量的变化被电路检测并转换成开关信号输出。其独特的抗粘附电路只对物位改变引起的电容量的变化产生反应，从而消除了由于物料堆积产生的虚假信号。

The RF admittance level switch is based on RF capacitance technology. It applies radio frequency to the probe and continuously analyzes the surrounding environment. Due to the different dielectric constants and conductivity of all mediums compared to air, the slight capacitance change caused by the probe's contact with the medium is detected by the circuit and converted into a switch signal output. Its unique anti-adhesion circuit only responds to capacitance changes caused by level variations, eliminating false signals caused by material buildup.

产品特点

Product Features

1、安装调试简易：全密封一体化安装结构，全部采用数字集成电路，无任何机械可动部件，一经安装校零无需多次调试；

2、低温漂：采用数字电器，与现有产品比较，大幅降低环境温度、湿度对仪表进行的影响，换季无需调零。先进的电路设计能避免物料粘附在探头所产生的虚假信号，又能抗各种波动所造成的影响；

3、现场适应性强：可在高温、高压、大粉尘、高粘度的场合中对固体及液体物料进行检测。

1. Easy Installation and Commissioning: The RF admittance level switch features a fully sealed integrated installation structure. It utilizes digital integrated circuits without any mechanical moving parts, eliminating the need for repeated calibration after installation and zero adjustment.

2. Low Temperature Drift: With digital electronics, the instrument is significantly less affected by environmental temperature and humidity compared to traditional products. It does not require zero adjustment during seasonal changes. The advanced circuit design can prevent false signals caused by material adhesion to the probe and resist the

impact of various fluctuations.

3. Strong Field Adaptability: The RF admittance level switch can be used for the detection of both solid and liquid materials in high-temperature, high-pressure, high-dust, and high-viscosity environments.

产品信息

Product Information

 TKWL-1900	供电: 24VDC/220VAC 输出方式: SPDT/DPDT继电器 环境温度: -20~80℃ 介质温度: -40~200℃/-40~600℃ 工作压力: <2MPa 绝缘护套: PPS、PTFE或陶瓷 灵敏度: 0.5pF~750pF 过程连接: 螺纹/法兰	Power Supply: 24VDC/220VAC Output Mode: SPDT/DPDT relay Operating Temperature: -20 to 80℃ Media Temperature: -40 to 200℃ / -40 to 600℃ Operating Pressure: <2MPa Insulation Sheath: PPS、PTFE or ceramic Sensitivity: 0.5pF to 750pF Process Connection: Threaded/Flange
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选型指南

Selection Handbook

TKWL-1900							
电气接口 Electrical Entry M20*1.5 M 1/2NPT N 特殊定制 X Customized							
供电电压 Power Supply Voltage DC24V A AC220V B							
安装形式 Installation Type 一体式 1 Integral 分体式 2 Separate							
过程温度 Process Temperature -40~200℃ P -40~600℃ G							

探头材质 robe Material 304+PPS 304+PTFE 316L+PTFE 304+陶瓷 304+Ceramic 316L+陶瓷 316L+Ceramic 特殊定制 Customized		
过程连接 Process Connection NPT3/4螺纹 NPT3/4 Threaded DN25法兰 DN25 Flange DN50法兰 DN50 Flange 其它 Other		1
		2
		3
		Z
探杆（缆）长度 Probe (Cable) Length 单位（mm） Unit (mm)		