TKWL-1900系列射频导纳物位开关

TKWL-1900 RF admittance level switch



一、产品概述

射频导纳是一种从电容式技术发展起来的、防挂料、更可靠、更准确、适用性更广的物位控制技术，射频导纳中的导纳的含义为电学中阻抗的倒数，它由电阻性成份、电容性成份、电感性成份综合而成。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用高频无线电波测量被测介质导纳值来实现物位测量。

射频导纳技术与电容式技术最重要的区别在于测量的多样化和三电极技术。射频导纳测量的多样化在于不止是测电容量，测量的还有电阻和电感量，使测量更加准确。三电极技术包括电子单元和传感器，在测量电极和地极之间加入屏蔽电极，将测量电极保护起来，不受挂料影响。

二、技术参数

- **电源要求**

交流系统，标准185~255VAC 50/60Hz 5W（最大）；

直流系统，24VDC系统19~29VDC输入 3W（最大）；

- **输出**

SPDT继电器（单刀双掷），触点容量 220VAC 3A；

环境温度：-40~75℃；

介质温度：-40~600℃（高温场合需选高温型）；

- **延时** 1~55s（可选）；
- **分辨率** <0.5PF ；
- **高低位报警** 现场可设置为高位报警方式或低位报警方式；
- **温度影响** 0.15pF/30℃；
- **稳定性** 0.1pF/6个月（最大漂移）；
- **火花防护** 内置火花防护电路；
- **传感元件安装** NPT螺纹或法兰安装（规格可选）；
- **插入长度**

标准450mm（插入长度IL）~250mm（屏蔽CSL长度），也可依用户要求提供，最大6m最小0.1m；

- **电气接口** M20*1.5；
- **分体电缆** 标准长度为5米，最长20米（仅对分体）；
- **重复性** <1mm（导电介质），<10mm（绝缘介质）；
- **响应时间** <0.5S。

Products summary

Radio frequency admittance is a material lelvel control technology, developed from capacitor technology, anti-hanging material, more reliable, more accurate and with more extensive applicability. For radio frequency admittance, the meaning of admittance is reciprocal of electrical impedance, which is composed of resistive component, capacitive component and perceptual component comprehensively, while the radio frequency can be understood as emissing high-frequency radio wave, so the RF admittance level control technology realizes measurement for material level by measuring the admittance of measured medium with high-frequency radio wave.

The most important difference between RF admittance technology and capacitive technology is diversified measurement and three-electrode technology. The diversification of RF admittance measurement lies in not only measuring capacitance but also resistance and inductance, which make the measurement more accurate. Three-electrode technology includes electronic unit and sensor, add shield electrode between measured electrode and ground electrode, protect measured electrode and not affected by hanging material.

Technical parameters

●Requirement of power:
AC system: standard: 185~255VAC 50/60Hz 5W (max)
DC system: 24VDC system: 19~29VDC input 3W (max)
●Output: SPDT relay (SPDT)
Capacity of touch point 220VAC 3A
Environmental temperature: -40~75℃
Medium temperature: -40~600℃
(select high-temperature model for high temperature occasions)
●Time delay: 1~55s (optional)
●Resolution: <0.5PF
●High-low level alarm: the site can be set as high level alarm method or low level alarm method
●Temperature influence: 0.15pF/30℃
●Stability: 0.1pF/6 months (max shift)
●Spark protection: built-in spark protection circuit
●Sensor installation: NPT screw thread or flange installation (specifications are optional)
●Inserting length: standard 450mm(inserting length IL)-250mm(shield length CSL)
Can also be customized based on requirements of users, max 6m and min 0.1m
●Electrical interface: M20*1.5
●Split cable: standard length is 5 meters, 20 meters at maximum (only for split model)
●Repeatability: <1mm (conductive medium) <10mm(insulating medium)
●Response time: <0.5S

TKWL-1900射频导纳物位开关订购信息
Ordering information of TKWL-1900 RF admittance level switch

TKWL-1900							
防爆 **Explosion proof** 普通型 P Ordinary model 隔爆型 D Isolating explosion model							
探头材质 **Material of probe** 304+陶瓷 ceramic A 304 B							
过程连接 **Process connection** 3/4NPT螺纹连接 screw thread connection M 其他螺纹连接 other screw thread connections 请注明 法兰连接 Flange connection Please specify							
供电电源 **Power supply** 24V 2 220V 3							
电气接口 **Electrical interface** M20×1.5 M 1/2NPTN N							
安装类型 **Installation type** 一体式Integrated model A 分体式Split model B							
插深 **Deep inserting**							请注明 Please specify