

## WD-UYK-248音叉式物位开关

### WD-UYK-248 TUNING FORK LEVEL SWITCH

#### 概述 Introduction

UYK-248型音叉物位开关是一种新型的物位开关。叉体由晶体激励产生振动，当叉体末端被液体浸没时，振动频率发生变化，这一变化通过电子线路检测出来并输出一个开关量，从而实现液位的上、下限报警和控制。

音叉式物位开关被称为“电气浮子”，凡使用浮球液位开关和由于结垢、湍流、搅动、气泡等原因不能使用浮球液位开关的场合均使用“电气浮子”。由于音叉式物位开关无活动部件，因此无需维护和调整，是浮球液位开关的升级换代产品。

本系列产品有普通型、本安型、隔爆型，适用于不同要求的环境场合使用。

UYK - 248 tuning fork level switch is a new type of level switch. Fork fork is inspired by crystal vibration body, when the end of the body is in liquid, the vibration frequency will change, the change is detected by electronic circuit and output a switch signal, so as to realize the upper and lower limit of liquid level alarm and control.

Tuning fork level switch type is known as "electric float", "electric float" is used in the field which float liquid level switch can work or can't work due to scaling, turbulence, agitation, bubbles, etc. Due to the no moving parts, no need for maintenance and adjustment, is an upgraded version of float liquid level switch.

This series products are normal, intrinsic safety, flameproof, applicable to different requirements of the environment.

#### 特点 Characteristics

- 适应性强：被测液体不同的电参数对测量均不产生影响，结垢、湍流、搅动、气泡、中等粘度、高压等恶劣条件对检测也无影响。  
strong adaptability: no effect by different electrical parameters of the liquid, scaling, turbulence, agitation, bubble, medium viscosity, high pressure and other adverse conditions is also no effect on test.
- 免维护：由于音叉式物位开关检测过程由电子电路完成，无活动部件，所以一经安装投运便不需要维护。  
Free maintenance: as the detection of tuning fork level switch is accomplished by an electronic circuit, no moving parts, so once the installation of commissioning will not need maintenance.
- 无需调校：由于音叉式物位开关的检测不受被测介质的电参数影响，所以无论测量何种液体都无需现场调校。  
No calibration: due to the tuning fork level switch is not affected by the electrical parameters of measured medium, so need not calibration on site no matter what kind of liquid measurement.

#### 主要技术指标 Technical Parameters

- 供电电源Power supply: 直流24VDC; 交流220VAC、50/60Hz
- 工作温度Working temperature: -20~200℃
- 输出方式Output: DPDT继电器触点输出relay contact output
- 触点容量Contact capacity: 220VAC 5A
- 防爆等级Explosion-proof: 本安型Intrinsic safety: ExiaIIC4-CT6、隔爆型Flameproof: ExdIIC4-CT6



## 仪表调试 Instrument debugging

仪表出厂前已作全性能的调试，但经过长途运输或长期库存后，在交付使用前仍需对一些主要性能进行检查。

### 1、零点设置 zero set:

将液位设置到欲设定的零点位置(比如空罐状态)，等待液位稳定10-20秒后，按下零点按键5S以上，待绿色发光管闪烁，松开按键，零位设置完毕。

Set the level to zero position( such as empty cans), wait the liquid level stable after 10 to 20 seconds, press the zero button for more than 5 s, stay green light-emitting tube twinkle, loosen the button, finish zero set.

### 2、满度设置 full set:

当液位达到设置报警点，待液位稳定10-20秒后，按下量程按键5秒以上，待绿色发光管停止闪烁且熄灭，松开按键，满度设置完毕。

When the liquid level reach the alarm point, wait liquid level stable after 10 to 20 seconds, presses the button for more than 5 seconds, stay green light-emitting tube stop blinking and extinguished, loosen the button, finish full set.

注：零点和量程设置不分先后顺序，互不影响。如先按量程后按零点，则绿色LED灯会一直闪烁，这不影响测量。

Note: zero and range set regardless of their order, no effect each other. If first full then zero to press, the green LED light flashing all the time, this does not affect the measurement.

## 按键功能 Key function

### 1、K1键功能 K1 functions:

#### a、在测量状态，长按5S，LED1绿色指示灯闪烁，空测量状态设置。

In measuring state, long press 5 s, LED1 green light is flashing, empty measurement Settings.

#### b、在设定状态，短按光标循环移位。

In setting state, short press the cursor ,cyclic shift.

### 2、K2键功能 K2 functions:

#### a、在测量状态，长按5S，指示灯闪烁，满测量状态标志。

In measuring state, long press the 5 s, the indicator light flashing, full measurement status

#### b、在设定状态，短按K2键，加或者循环加。

In setting state, short press K2, add or cycle.

### 3、K1+K2组合键，进入液晶参数设置菜单。

K1 and K2 combination, into parameter Settings menu.

### 4、指示灯功能 light function:

LED1: 操作状态指示灯 Operating status indicator.

LED2: 液位、物位动作翻转指示灯 Liquid level, material level movements turn indicator

## 菜单设置 The menu settings

### 1、高低位报警点设置 High and low alarm point set:

#### a、不带液晶 Without the LCD

在测量状态下，同时按KEY1键和KEY2键，LED1绿色指示灯亮后，短按KEY2键，继电器和LED2红色指示灯动作翻转（如设置好延时，则等待延时后再翻转）。设置好后，再同时按KEY1键和KEY2键，保存数据并退出设置。

In measuring conditions, at the same time press KEY1 and KEY2, the green light LED1 work, short press KEY2, relays and red indicator light LED2 turned action (finishing set up delay, wait to roll again after delay). After setting up, press KEY1 and KEY2 at the same time, save the data and exit the Settings.

## b、带液晶 With the LCD

可进入菜单参数设置界面，进入方法，在测量状态，同时按KEY1+KEY2键进入。找到报警点设置项进行设置。

Enter the menu parameter settings interface, under the measurement condition, at the same time press the KEY1 KEY2 to enter. Find alarm settings item to set.

## 2、延时时间设置 Delay time to set

延时时间的设置值是0-60秒。Set value of delay time : 0-60 seconds.

## a、不带液晶 Without the LCD

在测量状态下，同时按KEY1键和KEY2键，LED1绿色指示灯亮后，短按KEY1键，LED1绿色指示灯闪烁，按闪烁的次数来决定延时的长度，按KEY1键设置循环。

闪烁1次：延时0S，闪烁2次：延时5S，闪烁3次：延时15S。

闪烁4次：延时30S，闪烁5次：延时60S。

In measuring conditions, at the same time, press KEY1 and KEY2, the green light LED1 work, short press KEY1, green light LED1 is flashing, press flicker frequency to determine the length of the delay, press KEY1 set cycle.

Flash one: delay 0 s, flash twice: delay 5 s, flash 3 times: delay 15 s.

Flash four times: delay 30 s, flash 5 times: delay of 60 s.

## b、带液晶 With the LCD

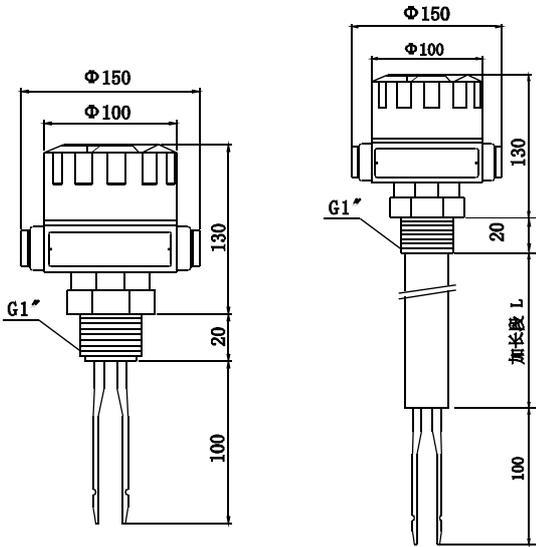
可进入菜单参数设置界面，进入方法，在测量状态，同时按KEY1+KEY2键进入，找到延时设置项进行设置。

Enter the menu parameter settings interface, in the measurement condition, at the same time press the KEY1 KEY2 to enter, find time delay setting to set

## 型号规格表 Model and Spec

WD-UYK-248		音叉式物位开关Turning Fork Level Switch				
WD-UYK-248	0	24VDC 四线制（其中二根电源线，二根信号线）		标准形式 standard	接线和供电方式 Wiring & Power supply	
	1	220VAC 四线制（其中二根电源线，二根信号线）				
	2	24VDC 二线制		非标形式 non-standard		
	3	220VAC 二线制				
		0	标准型 Standard（插入深度L=100mm）			叉体型式 Fork type
		1	延长型 Extensible Type			
		A	接液材质 304 Wetting material 304			接液材质 Wetting material
		B	接液材质 316L Wetting material 316L			
		C	特氟龙涂层 Wetting material F4			
		0	G 1"	螺纹式 Screw: 管螺纹 pipe screw	过程连接 Process connecting	
		1	G 1 1/4"			
		2	G 1 1/2"			
		3	DN40 PN1.6	法兰式 Flange		
		4	DN50 PN1.6			
		5	DN80 PN1.6			
		6	按客户要求 according to customer's request			
		P	普通型 Normal			防爆等级 Explosion proof classification
		D	隔爆型 Explosive-proof			
		B	本安型 Essential-Safe			
	WD-UYK-248 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>					
	★其他特殊要求可在订货时注明! Other special requirement remark in order					

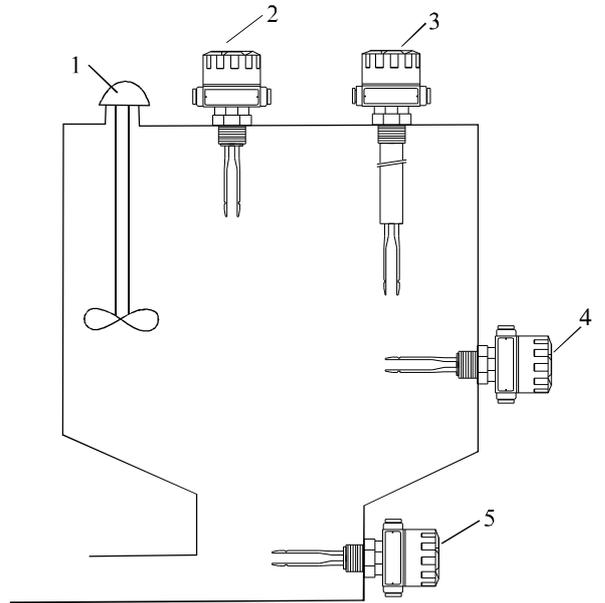
外形尺寸图 Outline dimension



标准型外形尺寸  
Standard Out Size

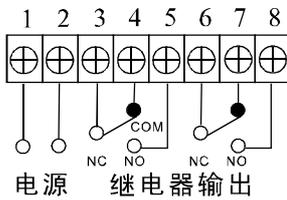
延长型外形尺寸  
Extended Out Size

安装示意图 Installation



- 1. 搅拌机 Blender
- 2. 上限位 Upper limit level
- 3. 上/下限位 Lower/upper limit level
- 4. 下限位 Lower limit level
- 5. 安装在管道上防止泵的空料运行  
Installed on the pipeline to prevent the pump operate without material

接线端子图 Terminal diagram



典型接线图 Typical wiring diagram

