

## HR8000/K/RK Smart Liquid Level Transmitter

### Overview

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HR8000 smart liquid level transmitter is a kind of input liquid level measuring instrument, which realizes full-scale digital linear correction, digital temperature error compensation in full temperature zone, and stores compensation parameters in non-volatile memory, adopting multiple security protection mechanisms. It avoids the problem that the product can not be used due to the loss of calibration parameters; the circuit module has power supply monitoring, watchdog monitoring function, and the input structure is all stainless steel sealed, which greatly improves the reliability of the product.

The product performance is stable and reliable, and it is widely used in liquid level measurement and control in industries such as hydrology and water conservancy, municipal water supply, petroleum, chemical industry and geological exploration.



HR8000



HR8000RK



HR8000K

## Features

- All stainless steel sealing structure, IP68 protection
- High quality silicon piezoresistive measuring element
- Digital compensation and adjustment, no potentiometer offset due to mechanical vibration
- Reverse power protection and overvoltage protection
- Anti-surge, electromagnetic interference
- Optional K-type stainless steel straight tube armor protection or RK type all welded stainless steel hose armor protection
- Anti-sand structure design, water guide head detachable, easy to maintain and clean regularly

## Specification

Main performance indicators	
Measurement Accuracy	$< \pm 0.5\% \text{ F}\cdot\text{S}$
Range	0~10 mH <sub>2</sub> O...300 mH <sub>2</sub> O
Long-term stability	0.2%F·S/year (>20 米 m)
	0.1%F·S/year (≤20 米 m)
Overload capability	2X F·S

Load capacity	(U-12)/0.02 (Ω)
Temperature characteristics	
Compensation temperature	0~70℃
Operating temperature	-10~80℃
Temperature drift	Zero 0.05%F.S/℃
	F.S: 0.05%F.S/℃
Storage temperature	-40~125℃
Electrical characteristics	
Supply voltage	DC12 ~ 30V (typical 24V)
Power protection	Anti-reverse connection, over voltage protection
output method	two wire system 4 ~ 20mA
Structural characteristics	
Measuring medium	Compatible with stainless steel and fluoro rubber
Pressure interface	Stainless steel protective cap or G1/2, M20*1.5 male
Housing material	Stainless steel 1Cr18Ni9Ti, 316L optional
Cable material	Polyurethane, PVC optional

Environmental characteristics	
Protection level	IP68
Explosion-proof grade	Exia IIC T6
Insulation	100MΩ@50V
Vibration	20g, 20 ~ 5000Hz
Shock	20g, 11ms

## Electrical connections

The two-wire 4~20mA current loop interface is powered by DC24V power supply. The red line is connected to the positive pole, the blue line is connected to the negative pole, and the shielding layer is connected to ground.

No.	colour	Definition
1	Red	DC24V+
2	Blue	4 to 20 mA output (GND)

## Typical application

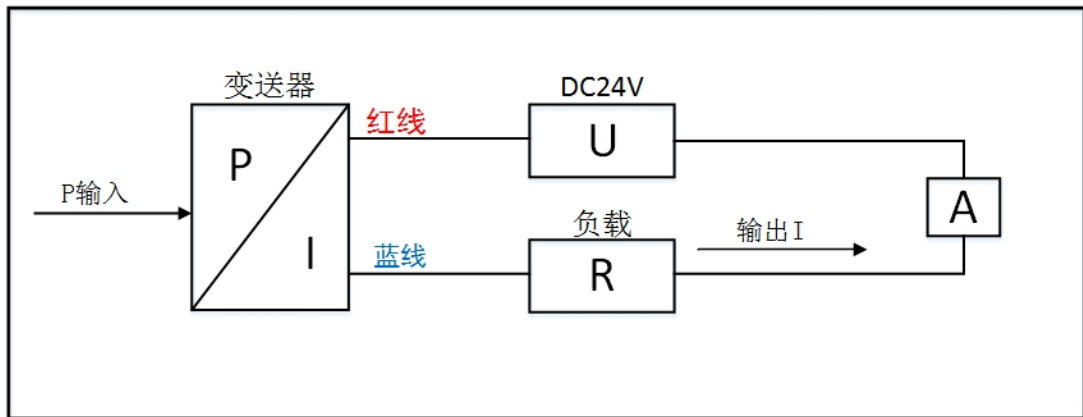
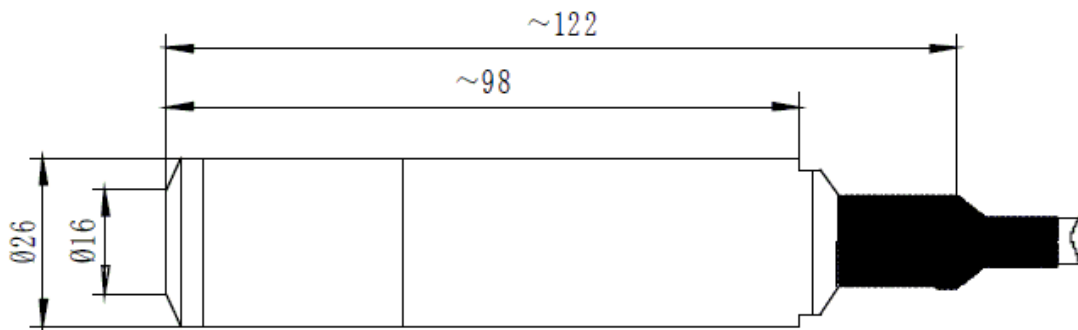
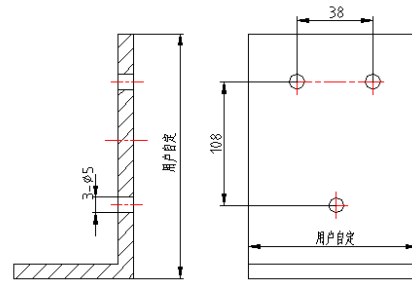
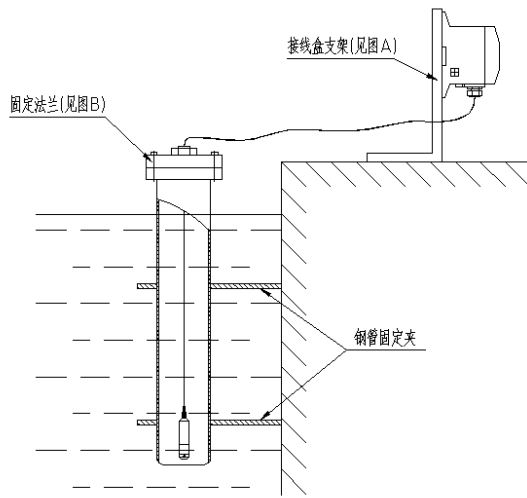


图 1 4~20mA 应用

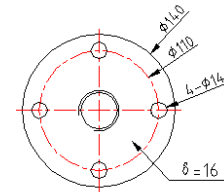
Outline Construction: (unit: mm)



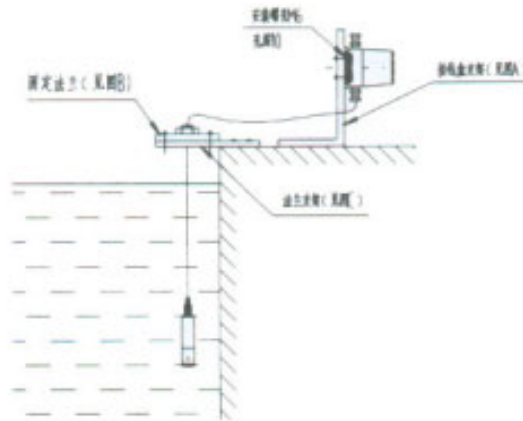
Site installation diagram



图A(用户自配)



图B(用户自配)



### Selection tips

1. The measured medium should be compatible with the material in the contact product part. If the medium to be tested is not water, indicate the density of the measured medium in the

The cable is recommended to use polyurethane material, which is soft and wear resistant.

2. For special requirements, please contact us and indicate in the order.

## Order guide

HR8000/K/RK	smart liquid level transmitter				
	Range	0 ~ 300 mH <sub>2</sub> O			
	[0~X] mH <sub>2</sub> O L	X-level range, L-cable length			
		code	output signal		
		E	4 ~ 20mA		
		code	Structural material		
			Housing	Diaphragm	Process connection
	S1		stainless steel	316L	stainless steel
		S2	316L	316L	316L
		S3	316L	Ta	316L
			code	Others	
		C1	M20×1.5 male, face type seal		
		C2	M20×1.5 male, waterline seal		
		C3	G1/2 male		
		FL	Fixed flange		
		LM	Current limiting protection		
HR8000	[0 ~ 10] mH <sub>2</sub> O 6	E	S2	FL	Full model example