

Intelligent Level Transmitter

BT8000 Series

User's Manual



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1. Overview

BT8000 intelligent level transmitter is a kind of input level measurement instrument, circuit module with power reverse connection protection, wide voltage supply, input structure of all stainless steel sealing, minimal V/I conversion programme, ultra-high stability, greatly improving the reliability of the product. A wide range of products, widely used in industrial processes, hydrology and water conservancy, geological exploration and other industries of liquid level measurement.

2. Main Features

- ※ High-quality silicon piezoresistive measuring elements.
- ※ Digital compensation, no offset due to mechanical vibration potentiometers.
- ※ Power reverse connection protection, over-voltage protection.
- ※ Anti-surge, EMI.
- ※ All stainless steel sealed construction, IP68 protection.

3. Technical parameters

Main performance indicators	
Measurement Accuracy	$\pm 0.5\%$ f-s
Range (Of Scales Or	0 To 10 Mh ₂ o...300 Mh o ₂
Overload Capacity	2x f-s
Load Capacity	(u-9)/0.02 (ω)
Temperature Behaviour	
Compensation	0 To 70°C
Operating Temperature	-10 To 80°C
Temperature Drift	Zero Position: 0.05%f.s/°c
	Full Scale: 0.05% f.s/°c
Storage Temperature	-40 To 125°C
Electrical Characteristics	
Supply Voltage	Dc9 To 30v (Typical 24v)
Power Protection	Anti-Reverse Connection,
Output Method	2-Wire 4 ~ 20ma
Structural Properties	
Measuring Medium	Compatible With Stainless Steel,
Pressure Port	Stainless Steel Protective Cap Or g1/2, m20*1.5 External Threads
Shell Material	Stainless Steel 1cr18ni9ti, 316l
Cable Material	Pe
Environmental Properties	

Protection Level	Ip68
Explosion-Proof Grade	Exiaiiic t6
Insulation Performance	100MΩ@50v
Vibration	20g, 20~5000hz
Shock	20g, 11ms

4. Electrical Connection

Two-wire 4-20mA current loop interface, using DC24V power supply, red line to the positive side of the power supply, blue line to the negative side of the power supply, shielding layer connected to earth.

Serial	Thread	Define
1	bonus	DC12-24V+
2	indigo plant	4 ~ 20mA output (GND)

5. 4-20mA Typical Application

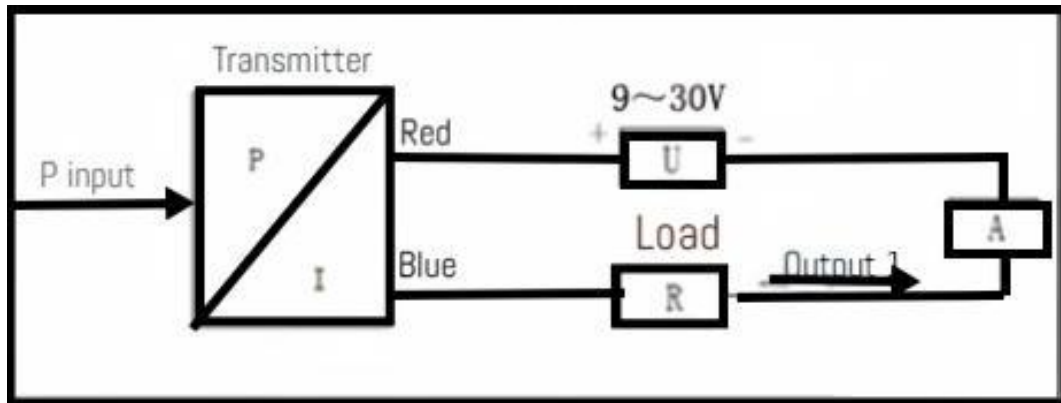
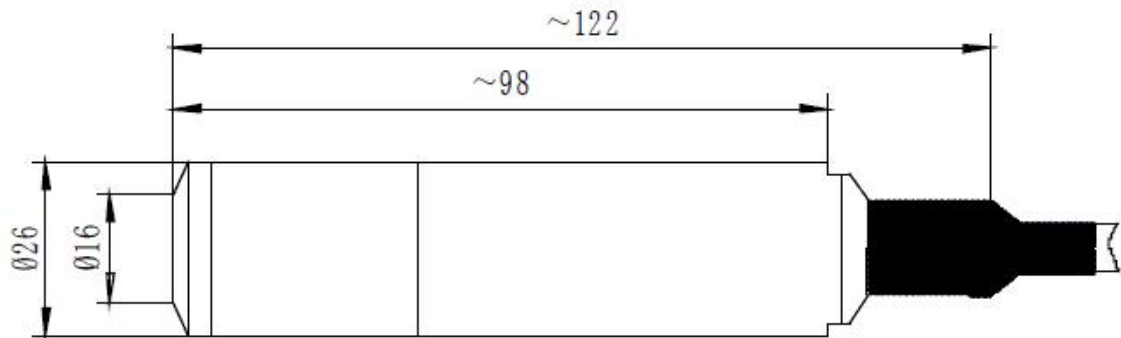
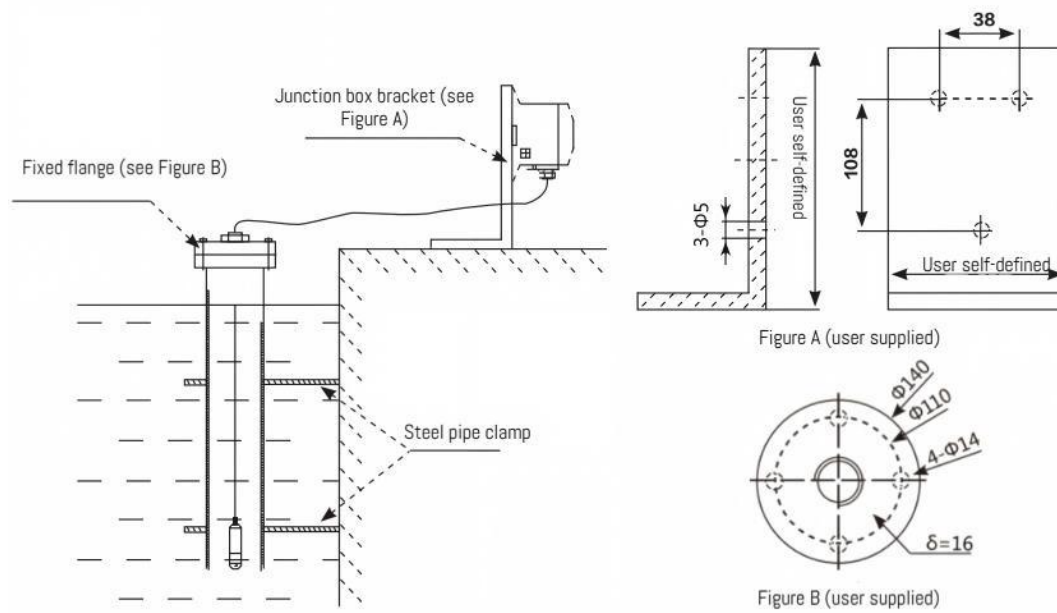


Figure 1 4~20mA application

6. Mechanical structure (Dimensions in mm)



7. On-site installation diagram



8. Selection Guide

BT8000/K/RK		Level Transmitter			
	Measuring Range	0 ~ 300 mH ₂ O			
	[0~X] mH ₂ O L	X-Liquid Level Range, L-Cable Length			
		Code	Output signal		
		E	4 ~ 20mA		
			Code	Structural Material	
				Housing	Diaphragm
			S1	Stainless Steel	316L
			S2	316L	316L
			S3	316L	Tantalum
				Code	Other parameters
				C1	End Face Seal M20*1.5 External
				C2	Water Line Seal M20*1.5 External
				C3	G1/2 External Thread
				FL	Fixed Flange
				LM	Current Limiting Protection
BT8000RK	[0 ~ 10] mH ₂ O 6	E	S2	FL	Complete Model Example