



RKL-01 Submersible Liquid Level Transmitter



Φ27mm



Φ19mm



Φ16mm, Φ13mm

Overview

RKL-01 Submersible Liquid Level Transmitter features a stainless steel isolation diaphragm and utilizes diffusion silicon pressure sensor element, the pressure core body adopts the process of laser trimming resistor for a wide temperature range of zero and sensitivity temperature compensation. Special cable for air-venting conduit and waterproof technology ensures water tightness, and ventilation between inside and outside, ensuring long-term measurement stability and accuracy.

Features

- High accuracy, high sensitivity
- Fast response
- Good stability
- Long service life
- Strong resistance to interference
- Anti-corrosion material optional
- Low temperature drift
- Wide temperature range compensation

Applications

- Agricultural irrigation
- Petroleum
- City water supply
- Power generation plant
- Urban water drainage
- Hydrographic survey
- Environmental protection

Technical Parameter

Item		Technical Specification		
Product diameter	Φ27mm default	Φ19mm	Φ16mm	Φ13mm
Range ^①	0 ~ 0.5m...500mH2O or 0 ~ 5KPa...5MPa	0 ~ 5m...300mH2O or 0 ~ 50KPa...3MPa	0 ~ 0.5m...200mH2O or 0 ~ 5KPa...2MPa	0 ~ 3m...300mH2O or 0 ~ 30KPa...3MPa
Temperature coefficient of zero	±0.015%FS/°C@25°C		2%FS (Max)	±0.015%FS/°c@25°C
Temperature coefficient of span	±0.02%FS/°C@25°C		2%FS (Max)	±0.02%FS/°c@25°C
Supply voltage	10-30VDC,24V typ.			
Output	4-20mA,0-5V,0-10V,RS485			
Overload pressure	1.5×FS			
Measuring medium	The liquid(not sticky) compatible with 316 stainless steel			
Total accuracy	0.1%FS,0.25%FS, 0.5%FS (standard)			
Long-term stability	0.1%FS/year typ., 0.2%FS/year max			
Ingress protection	IP68			
Operating temperature	-20°C~ +85°C			
Compensating temperature	-10°C~ 70°C, -40°C~ 70°C(Φ27mm)			
Main material	Sensor:316L, housing:304SS (316L is optional)			
Cable	Outer layer material: PUR, Atmospheric pressure compensation cable, Polymer waterproof plug at cable end, if the range is greater than or equal to 100M, PUR reinforced cable is required.			
Cable weight	PUR cable: 0.056kg/m, PUR reinforced cable: 0.06kg/m			



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Technical Parameter

Item	Technical Specification
Power consumption	Current output:(U*0.02)W, Voltage output:(U*0.008)W, Digital output:(U*0.015)W
Load capacity	Current output: $\leq (U-10)/0.02\Omega$, Voltage output: $\geq 20k\Omega$
Insulation resistance	100M Ω @ 250VDC
Response time	1ms
Pressure connection	Screw thread, throw-in type
Weight (probe unpacked)	Probe 27mm: 0.3kg, Probe 19mm, 16mm, 13mm, Weight: 0.2kg
Storage condition	-40°C-75°C(dry soundings)

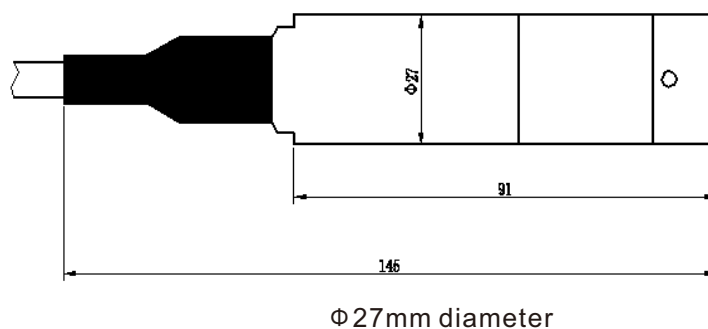
Corresponding relationship between product outer diameter, accuracy, and measuring range

Accuracy	0.5%FS (standard)	0.25%FS	0.1%FS
Product outer diameter	$\Phi 27, \Phi 19, \Phi 16, \Phi 13$	$\Phi 27, \Phi 19$	$\Phi 27, \Phi 19$
Starting range	Range ① indicates the range	Range $\geq 2m$	Range $\geq 4m$

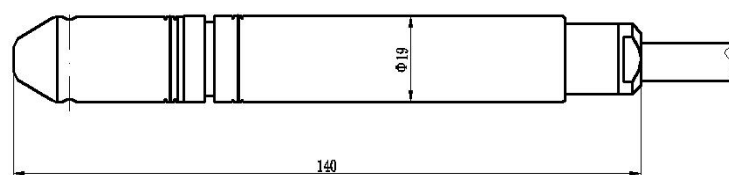
Dimensions

Unit:mm

The following pictures show product size diagrams with different diameters



Φ 27mm diameter



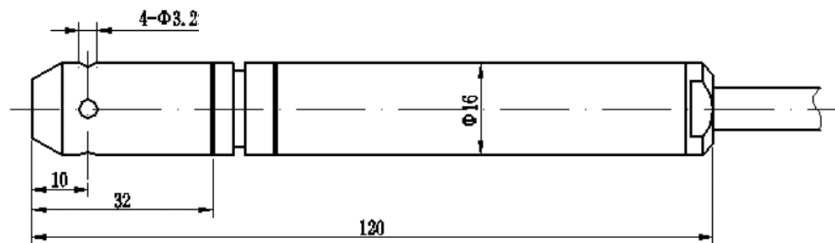
Φ 19mm diameter



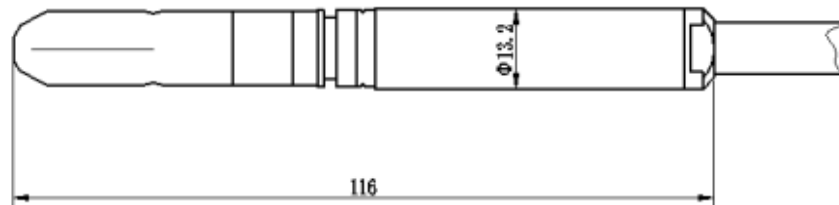
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Dimensions

Unit:mm



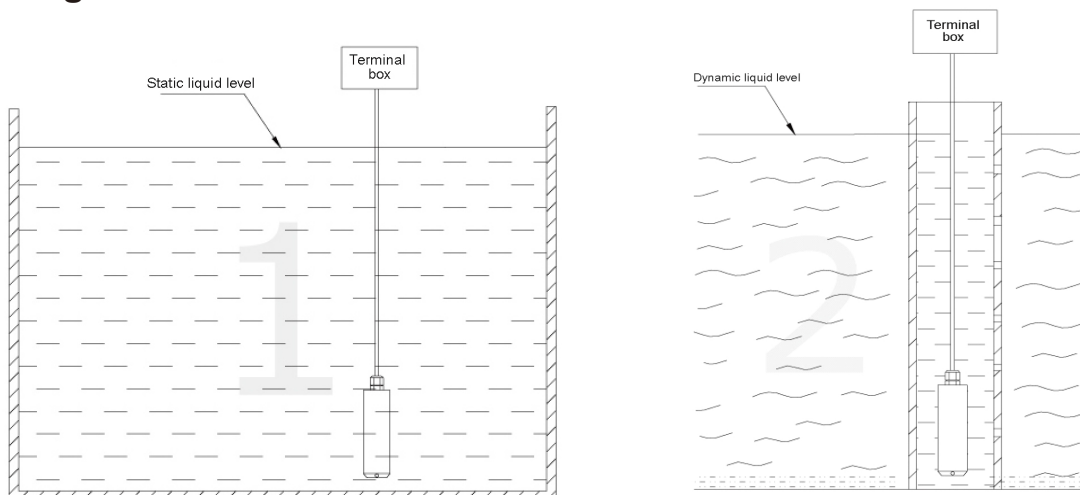
Φ 16mm diameter



Φ 13mm diameter

The default diameter is 27 millimeters. The outer diameter can be customized to 19mm, 16mm, or 13mm, 13mm diameter product requires external transmitter module.

Mounting



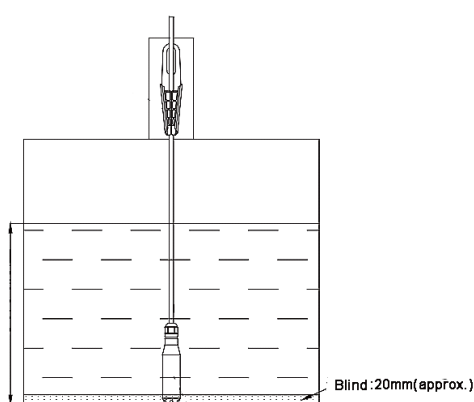
As shown in picture 1, when the sensor is installed in static water such as in pools, water towers, probe is immersed into the bottom and should be as far as possible away from the pump or valves. The terminal box should keep above water surface and prevent water penetrating into cables. Please make sure the airway not be blocked.

As shown in picture 2, when installing the sensor in dynamic water environments dams or rivers, insert the probe into a steel pipe (inner dia is around 45mm), with multiple holes drilled at varying heights on the pipe side wall facing away from the water flow direction. The terminal box should keep above water surface and prevent water penetrating into cables. Please make sure the airway not be blocked.



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Fixed Bracket (Optional)



Parameter Selection Table

Remark	Series	Supply	Output	Accuracy	Range	Fixed bracket	Diameter	Cable Length
RK	01	A						10-30V
		X						Other
			A					4-20mA
			B					0-5V
			C					0-10V(Supply>15VDC)
			D					RS485(MODBUS-RTU)
			X					X
				P1				0.1%
				P2				0.25%
				P3				0.5%
					R(0-200m)			0-200m optional
						A		With bracket
						N		Without bracket
							A	Φ27mm
							B	Φ19mm
							C	Φ16mm
							D	Φ13mm
								5000 5m
							

Example: RKL-01AAP3R3mNA5000 Supply:10-30V, Output:4-20mA, Acuracy:0.5%FS, Range:3m H2O, Without bracket, DiameterΦ27mm,Cable Length:5m.

Revision time	Reviser	Current Version	Remarks
20250409	Lee	V5. 0	