RK500-13 (Liquid cooling) EC Sensor

Overview

With the rapid development of AI computing, new energy, and other fields, the computing power and cooling requirements of devices continue to rise, making liquid cooling technology a mainstream cooling solution for high heat density scenarios.
However, under long-term high-load operation of the liquid cooling system, impurities will gradually mix into the cooling liquid, leading to a slow increase in conductivity. If not monitored in time, once the conductivity exceeds the safety threshold, it may cause server short circuits or even complete cabinet malfunction, resulting in huge losses for enterprises. In industrial manufacturing such as new energy batteries and precision machining, abnormal fluctuations in the conductivity of cooling liquid can also affect machining accuracy, and even lead to equipment damage, production delays, and weakened competitiveness of enterprises.
The RK500-13 liquid-cooled conductivity sensor utilizes advanced anti-polarization and signal isolation technology, effectively eliminating external interference and ensuring precise and stable performance even in complex electromagnetic environments. Its convenient installation and compatibility with various media such as propylene glycol, ethylene glycol, and deionized water provide reliable safety guarantees for liquid cooling systems.

Features

- On-line & real-time measurement
- High accuracy
- Electromagnetic isolation
- Strong resistance to corrosion
- Polarization resistance
- High temperature resistance
- Integral design without external transmitter

Applications

- Liquid cooling industry
- Environmental protection
- Water conservancy
- Aquaculture

Technical Parameter

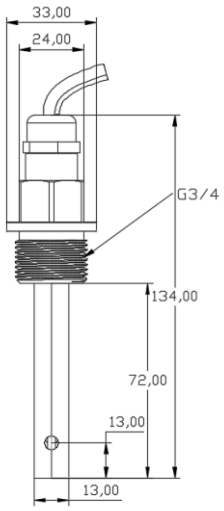
Item	Technical Specification
Main material	316L
Applicable medium	Deionized water, PG25,EG25
O-ring material	EPDM
Screw thread	Upper:G3/4
Sealing method	End face sealing
Outlet mode	Direct outlet, customizable M16 aviation plug outlet
Accuracy	±1%FS
Resolution	1μS/cm
Power consumption	<0.2W
Operating temperature	0-+60℃

Technical Parameter

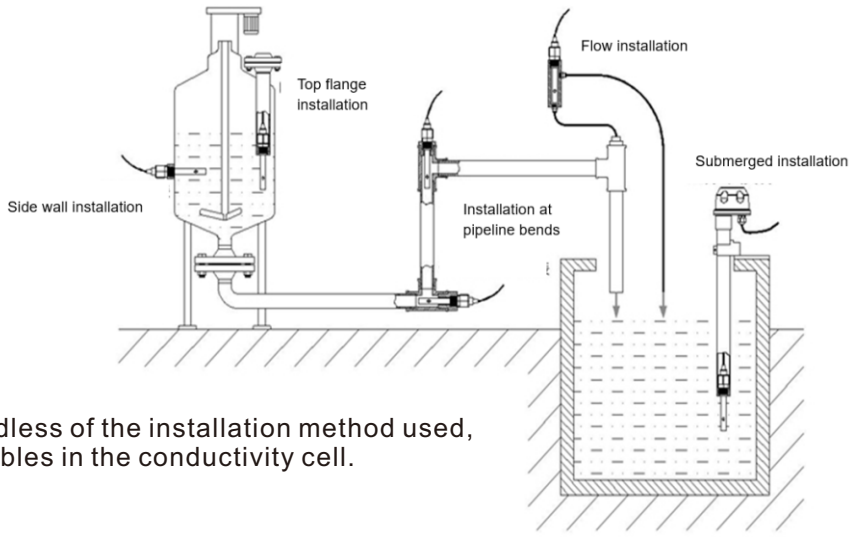
Item	Technical Specification
Temp. compensation	Thermal resistance
Range	0-2000μS/cm(0-10000μS/cm can be customized)
Supply	7-30VDC
Output	4-20mA&RS485 at the same time
Response time	1s
Pressure resistance	<1MPa(10Bar)
Ingress protection	IP68
Storage	10-60°C@20%-90%RH
Cable length	5m default, other cable lengths can be customized

Dimension

Unit:mm



Dimension&Mounting



Attention: Regardless of the installation method used, please avoid bubbles in the conductivity cell.

Parameter Selection Table

Remark	Series	Type	Supply	Range	Cable Length	
RK						
	500					
		13				
			A			7-30VDC
			X			Other
				A		0-2000μS/cm
				X		Other
					5000	Unit(mm)
					...	Unit(mm)

Example: RK500-13AA5000 Supply:7-30V, Range: 0-2000μS/cm, Cable length:5m.

Revision time	Reviser	Current Version	Remarks
20260224	Echo	V5. 0. 1	