JNC Potassium Sensor K485

[Product Description]



- The IoT potassium ion meter features dual interfaces—RS-485 and a Wi-Fi web interface—allowing remote monitoring or on-site monitoring directly via a mobile phone. It requires no display head and no app, and can provide accurate and stable potassium (K) values to any type of display device or software worldwide.
- Automatic Cleaning Function (Optional): Includes a built-in micro air pump. Cleaning schedule and stabilization time are adjustable. The device automatically holds the last reading during cleaning, effectively extending maintenance intervals.
- Smart calibration function via mobile webpage: Replace the standard liquid bottle with the protective cap on-site, and navigate the calibration process via mobile webpage for ultimate convenience.
- Smart AI Features: Sends notifications for calibration and automatic cleaning status. Automatically detects electrode contamination or aging, ensuring optimal performance.
- Due to the special material properties of the potassium ion electrode, its service life is relatively short; therefore, this product is covered by a warranty of only 6 months.

[Features]

- Integrated Design: Built-in IoT transmission module and sensor; ready to operate upon power-up with all functions pre-installed.
- IP68 Submersible and Corrosion-Resistant Housing: Can be directly submerged in water without the need for protective sleeves.
- High-Strength Isolated Cable: Ready for direct use, with stable signal transmission. Power and IoT communications are protected with surge isolation.
- Temperature Compensation: Measurement method complies with Taiwan EPA’ s NIEA W218.51C specification for automatic monitoring facilities.
- Smart Design: Calibration parameters are stored internally, allowing for immediate installation on-site after calibration.
- Supports three-point calibration, which can be performed using standard solutions or samples with known concentrations.
- During calibration and automatic cleaning, the last measured value is maintained to prevent false readings. The device status can also be monitored (Calibrating / Self-Cleaning / Stable / Under Maintenance).
- The latest three calibration records (date, slope, and calibration points) can be queried via the web interface and RS-485.

[Applications] Sewage, groundwater, aquaculture, river and lake monitoring system

[K Optional code]

K485 – Code 1 – Code 2 – Code 3

Code 1	Function	Code 2	Sensing end connector	Code 3	Line/Air duct length
N	No auto-cleaning	C	Quick connector	N	3M
A	Auto-cleaning(Including standard 12VDC air pump, nozzle)			C	3 meters + quick connector
A24	Auto-cleaning(Including 24VDC air pump, nozzle)	F	Cable head	Value N	Line length
				Value C	Line length +quick connector

Code 2: Quick connector 

Code 2 Cable head 

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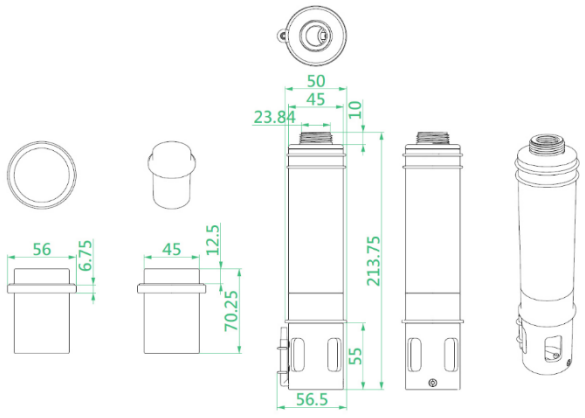
[Technical Specifications]

- S-485 Modbus RTU. The mobile phone operates with web page(no app).
- Data resolution:16 bit(0.001%F.S).
- Surge protection:8000VDC.
- Protection: polarity、overload、short circuit.
- Measurement principle: The sensor’ s front-end material detects changes in potassium (K) potential. The potential difference is converted into concentration and corrected with various compensations, providing accurate data.
- Installation methods: submersible, tee-type, and probe-insertion type.

[K Specification]

K Specification		Temperature Specification	
Measuring range	0~10000mg/L (Or customized for higher concentrations) Slope reading 70~130%	Temperature principle	NTC30K
		Measuring range	-10~120°C(ATC)
		Accuracy	±0.2°C
Accuracy	±5% of reading ± 0.5 mg/L	Resolution	0.1°C
Resolution	0.01 mg/L	Reproducibility	0.1°C
Reproducibility	±3% of reading ± 0.5 mg/L	Other Specification	
Operating Parameters	Operating Temperature: 5~50 ℃	Link above	3/4” NPT
		Link below	M42
Response time	T90 ≤ 120 seconds	Housing Material	PP, acid and alkali resistance/food grade/ zero dissolution
		Electrode material	PVC
Communication	RS-485Modbus RTU Web Browser direct reading (192.168.1.80)	Dimension	ø50*L213.9mm
		Weight	≤340g
		Power	Auto-cleaning:12 or24VDC(optional) Non auto-cleaning:9~36VDC
Safety certification	CE、FCC	Power consumption	Auto-cleaning:6.8W Non auto-cleaning :0.8W
		Ingress Protection Rating	IP68

[Dimension] mm



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