

[Overview]

- IoT ORP analyzer with dual RS-485 and Wi-Fi web interfaces for remote or on-site monitoring from any phone — no meter and no app required. Delivers accurate, stable ORP readings to any meter or software.
- Optional auto-cleaning: built-in micro air pump, adjustable schedule and settling time, holds the last reading while cleaning — longer service intervals.
- Guided calibration in a phone browser: swap the cap for a standard-solution bottle and follow the steps.
- AI diagnostics: calibration and cleaning alerts, electrode fouling and aging check.

[Features]

- All-in-one: IoT transmitter and sensor built in, ready on power-up.
- IP68 corrosion-resistant body, submersible without a guard tube.
- Rugged isolated cable; power and IoT lines surge-isolated.
- Temperature compensated; complies with Taiwan EPA NIEA W218.51C.
- Stores calibration data: calibrate first, then install on site.
- Breakthrough 2-point calibration (220 mV & 468 mV), done at the factory.
- Holds the last reading while calibrating or cleaning; status readable (calibrating/cleaning/settling/service).
- Last 3 calibration records (date/slope/points) via Web & RS-485.



[Applications] Wastewater, seawater, groundwater, aquaculture, rivers and lakes.

[ORP Models]

ORP485 — Code 1 — Code 2 — Code 3

Code 1	Function	Code 2	Connector	Code 3	Cable / Hose Length
N	No auto-clean	C	Quick plug	N	3 m
A	Auto-clean, 12VDC pump			C	3 m + quick plug
A24	Auto-clean, 24VDC pump	F	Cable gland	xN	x m cable
				xC	x m + quick plug

C: Quick plug



F: Cable gland



[Technical Specifications]

- RS-485 Modbus RTU; web interface, no app, operate from a phone.
- Data resolution: 16-bit (0.001% F.S).
- Surge protection: 8000 VDC.
- Protection: reverse polarity, overload, short circuit.
- Principle: potentiometric measurement of the sample's oxidizing or reducing potential.
- Installation: submersion, tee fitting or insertion.

[ORP Specifications]

ORP		Temperature	
Range	-2000~2000mV Slope 70~130% Zero offset -50~50 mV	Sensor	NTC30K
		Range	-10~120°C, ATC
		Accuracy	±0.2°C
Accuracy	±1mV	Resolution	0.1°C
Resolution	0.1mV	Reproducibility	0.1°C
Pressure	Max. 100 psi	Others	
Op. Temp.	0~100 °C	Top Thread	3/4" NPT thread
		Bottom Thread	M42 thread
Response	T90 < 5 s	Housing	PP, food grade, acid/alkali-proof
		Electrode	Glass, platinum ring
Interface	RS-485 Modbus RTU Web browser direct read (192.168.1.80)	Size	ø50*L213.9mm
		Weight	≤340 g
		Power	Cleaning: 12 or 24 VDC (opt.) No cleaning: 9~36 VDC
Approvals	CE (EU) FCC (US)	Consumption	Cleaning: 6.8 W No cleaning: 0.8 W
		IP Rating	IP68

[Dimensions] Unit: mm

