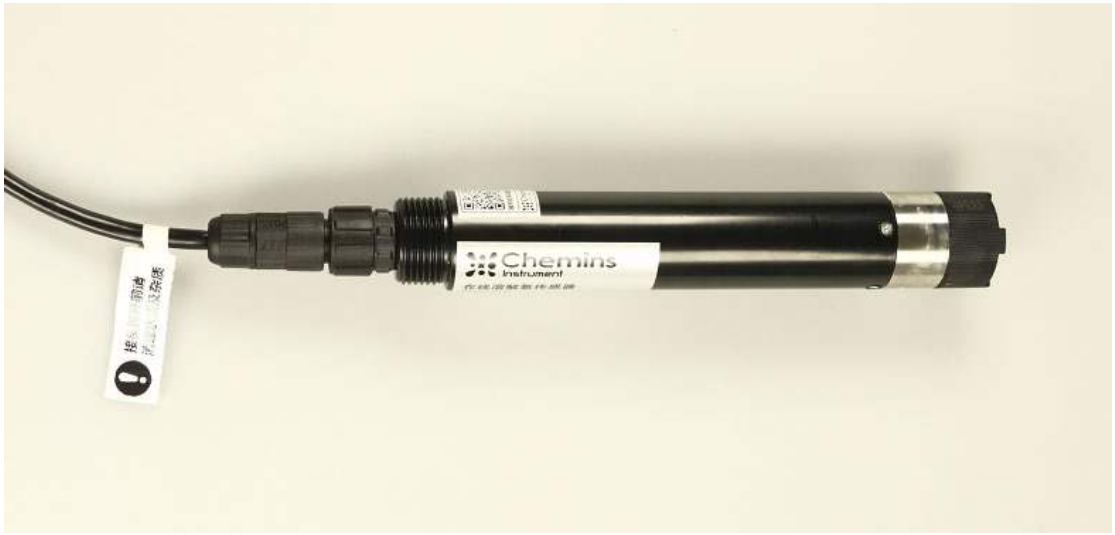
Product datasheet



WE-T123

Brief introduction of the product

WE-T123 is a transmitter used to monitor the dissolved oxygen content in water, and its transmission mode covers LoRa, 4G, NB-IoT and other ways, and the power supply mode is divided into battery power supply and 24V power supply. The dissolved oxygen transmitter uses a highly stable digital sensor that enables real-time monitoring and calculation of on-site liquids. Through LoRa, 4G, NB and other communication technologies, long-distance data transmission is realized, and combined with the industrial edge computing gateway products of Shidian Technology, the data is uploaded to the equipment management platform of Shidian Technology, so as to complete the real-time collection, analysis and calculation, storage and display of dissolved oxygen in the liquid on site.

The transmitter body and probe are designed separately, providing a variety of installation methods for different needs such as the liquid to be measured and the installation method in the field. It is widely used in sewage treatment, clean water monitoring, fermentation tanks, ultrapure water, brewing and other industrial sites.

Key features:

Split design

- The transmitter body adopts LoRa type, supports the frequency band range of 410MHz~490MHz, and supports SMA antenna interface; The 4G type supports full Netcom communication;
- The transmitter communicates with the edge computing gateway of Shidian Technology through the WES-WIO wireless terminal communication protocol to realize the real-time reporting of dissolved oxygen content and status detection data in the liquid in the field.
- External dissolved oxygen probe, optional installation method;

Dissolved oxygen probe specifications

- 5m cable length, support cable length customization;
- It adopts the fluorescence measurement principle, and is designed based on the quenching principle of excitation fluorescence of specific substances in physics.
- Easy to install, 3/4NPT, easy to sink installation or installation in pipes and tanks;

Robust, industrial-grade design

- IP67 protection level of the host and IP68 protection level of the probe;
- The host supports -40~85 ° storage temperature, -20~70 ° working environment temperature, 5~95% relative humidity;
- The working condition of the probe is 0~50° C, the ≤ is 0.2MPa, and the storage temperature is -5~65°C

Comprehensive installation and construction and after-sales maintenance

- The host supports installation methods such as guide rails, wall mounting, snap rings, and hoops;
- The P0 type supports 19000mAh large-capacity lithium battery, with a typical battery life of 5

years in a 5-minute reporting cycle and up to 15 years in a 1-hour reporting cycle.

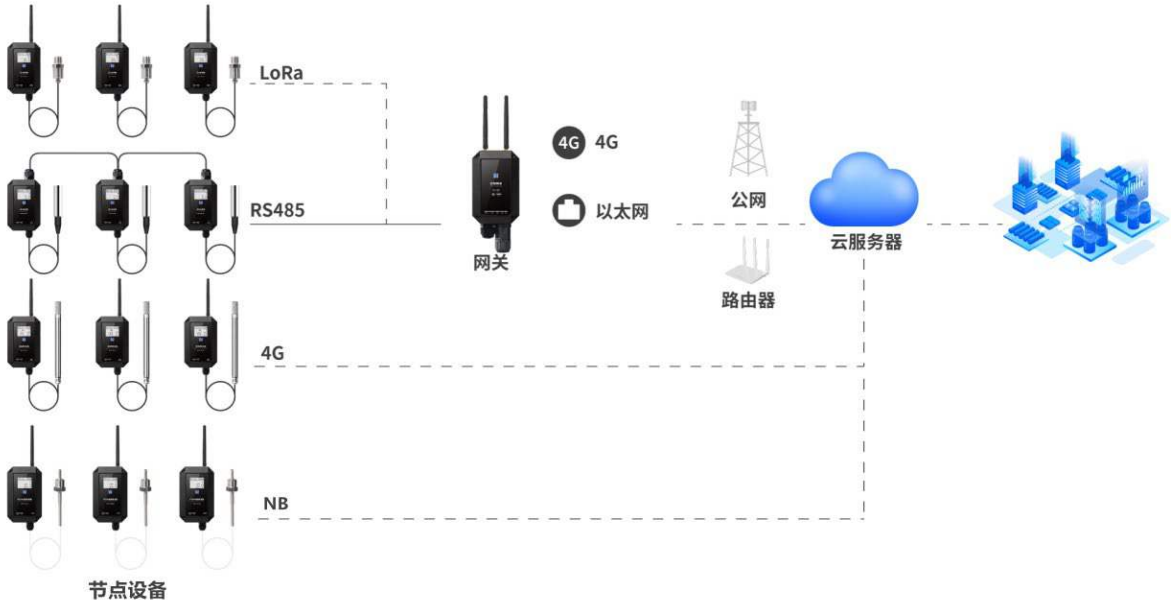
- It supports a wealth of fault detection functions, including dissolved oxygen threshold overrun, abnormal dissolved oxygen changes, low battery and other fault detection, and notifies after-sales maintenance personnel by SMS and email through the equipment management platform of Shidian Technology;
- It supports high-definition LCD display, with LED indicators and buttons, which can view dissolved oxygen values and alarm information in real time on site;

Functional categories	Description of the function	remark
Communication interface	LoRa communication port	Antenna interface type: SMA female Support 410.125~490.125MHz frequency band Maximum 22dBm transmit power, The maximum receiving sensitivity of -147dbm, the signal coverage capacity of 5KM in open line-of-sight
	4G	MQTT、HTTP、WES 云服务协议 LTE FDD B1/3/5/8 LTE TDD B34/38/39/40/41（全频段） 速率(Mbps) LTE FDD：10.3(DL)/5.1(UL) LTE TDD:9.1(DL)/3.1(UL)
	NB	LTE Cat NB2：B3/B5/B8 速率(kbps)：Single-Tone：25.5(DL)/16.7(UL) Multi-Tpne：127(DL)/158.5(UL)
UI	1* Key input	Refer to the UI specification definition, multi-function buttons
	2* LED indicator	System、LoRa 通信指示灯
	screen	128*64 点阵单色 LCD Displays sensor values and status information Set up interactions
Power supply	Powered by lithium batteries	19000mAh, lithium battery
	24VDC power supply	Wide voltage input, 9~30V
environment	The host operating environment	Operating temperature: -20~70° C Working relative humidity: 5~95%.
	Host storage environment	Storage temperature: -40~85° C Storage relative humidity: 5 ~95%.
	Probe operating conditions	0~50° C,≤0.2MPa
	The probe stores the temperature	-5～65℃
Degree of protection	The main unit is waterproof and dustproof	IP67

	ESD	4KV contact, 8KV non-contact
	The probe is waterproof and dustproof	IP68
Physical properties	Exterior dimensions of the host	78 (width) * 121 (height) * 51.4 (depth) mm
	How the host is installed	Wall-mounted, pole-mounted, hoop-gripped, rail-mounted
monitoring	Type of measurement	dissolved oxygen
	Measuring range	溶解氧：0～20.00 mg/L(0～200%饱和度，25℃)
	Detection accuracy	±2%
	Minimum resolution	0.01mg/L
	Fluorescent film head life	1 year (under normal use)
	Probe mounting	Immersion mounting, 3/4 NPT

Specifications

Typical topology



Selection & Ordering

Product base model:

WE-T123

Parameter selection table:

Methods of Communication	A accuracy class	R range	P power supply mode	Sensor probe mounting
LR: LoRa4G: 4G/cat1 NB: NB-IoT	N/A	R20: 0-20	P0: Battery power supply P1: 9~30VDC power supply, other power supply methods are customized	N/A

Example:

WE-T123-LR-R20-P0

LoRa wireless dissolved oxygen transmitter, 0~20mg/L detection range, battery powered