CDT-14A ORP Sensor

For weather automation applications

Features

- On-line & real-time monitoring
- Simultaneous ORP and temperature measurement
- Integral temperature element for enhanced accuracy
- Double junction and long diffusion path for reference pollution resistance
- Extended life time by large volume of polymerized electrolyte and porous PTFE diaphragm
- Multiple output signal is optional
- Solid Glass/Platinum electrode for solution ground or ORP measurement

ORP sensor is simple and cost effective solution for a wide variety of waste water and process applications. This all-in-one sensor provides simultaneous measurement of ORP and temperature. The rugged Ryton body is designed for easy installation into on-line via the 3/4 inch tapered threaded connections provided on both ends of the sensor. The wide body sensors (26 mm diameter) hold four separate elements in one unbreakable Ryton body, large volume gelled electrolyte and the double junction reference system slows down depletion and poisoning extending the life time.

Typical installation locations

- Environmental protection
- Agriculture
- Water conservancy
- Industrial wastewater treatment

Design structure

Oxidation-Reduction Potential (ORP) is used to reflect the macroscopic oxidation-reduction properties of all substances in an aqueous solution. The higher the REDOX potential, the stronger the oxidation. The lower the REDOX potential, the stronger the reducibility.

Easy installation

The sensor is installed in a position where the water flow is relatively rapid and the temperature changes are minimal to ensure the accuracy of the measurement data. For example, when installing in the pipeline, you can choose a straight pipe section and away from the elbow, valve and other parts; When installing in a pool or sink, avoid installing in a corner or dead water corner. At the same time, consideration should be given to facilitate future maintenance and calibration operations.

Avoid direct sunlight and dusty environments, and there can be no strong vibration and electromagnetic interference around, in order to prevent affecting the performance and measurement accuracy of the sensor.

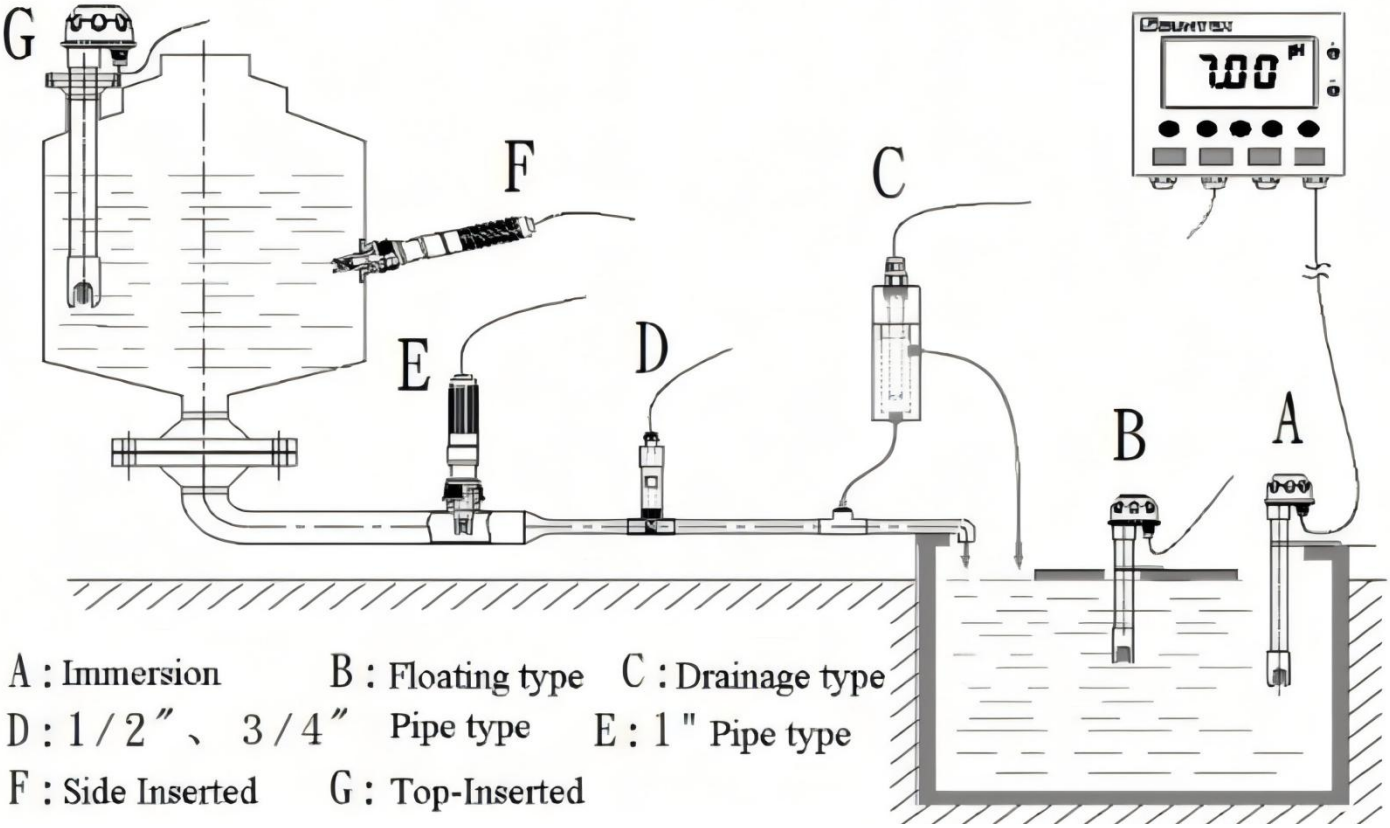
Reliable operation

The correct installation position and method are critical to the reliability of the sensor. Choose a location that accurately reflects the ORP value of the solution to be tested for installation, and avoid installation in places where there are bubbles, sediments or other disturbing factors. At the same time, when installing, ensure that the contact between the sensor and the tested solution is good to avoid leakage or loosening.

Dimensions

CDT-14A connector dimension

Installing



Technical data

Measurement performance, models CDT-14A

Item	Technical Specification
Measurement Principle	Electrochemical(platinum ring)
Range	-1500mV-+1500mV
Resolution	0.1mV
Accuracy	±0.5mV
Supply	7-30VDC
Response time	5s
Output	4-20mA & RS485 at the same time
Operating Environment	-10-+80℃(<0.6MPa)
Stability	≤1%/year
Maintenance	Every 1 months to clean the electrode ,every 6 months calibrated
Power consumption	<0.4W
Ingress Protection	IP68
Storage	10-60℃@20%-90%RH
Cable length	5m default,,customizable

Model number	Type	Output	Special features
CDY-12A	Economical Tipping Bucket Rainfall	Pulses(@10kΩ&0.01uF),RS485	Diameter :φ200mm, height: 271mm
CDG-10B	Solar Radiation	0-5V,4-20mA,RS485	Spectral range:300～1100nm
CDT-11A	PH sensor	0-2V 0-5V 4-20mA RS485	Probe: Φ28*160mm
CDT-12A	DO sensor	RS485 4-20mA	Range 0-20mg/L(ppm)
CDT-12B	DO sensor(calibrable)	RS485 4-20mA	Range 0-20mg/L(ppm)
CDT-14A	ORP sensor	RS485 4-20mA	Range -1500mV-+1500mV
CDT-15A	Suspended Matter	RS485	Range 0-200mg/L,0-1000mg/L,0-5000mg/L
CDT-17B	Soil PH sensor	RS485 4-20mA	Probe material:304SS
CDT-19B	Turbidity (SS) sensor	RS485 4-20mA	Wavelength of falling radiation：860nm
CDT-21B	Solil EC_salinity	RS485 4-20mA	Probe material:316L
CDT-22B	Soil Moisture & Temperature	4-20mA ,0-5V,0-2V,RS485 optional	Probe material:316L
CDT-30B	Soil Moisture,Temperature & EC	RS485,0-2V	316L stainless steel
CDT-70B	Soil 7 in 1 Sensor	RS485	Soil Moisture,Temperature & EC & PH & NPK
CDT-1T2B	Seismic Detection Wave	0-20mV RS485	Natural Frequency(Hz):10±2.5%
CDT-1T3B	Soil layers temperature&moisture	RS485	Range 0-100℃ 0-70%
CDT-1T4B	TDS Sensor	RS485 4-20mA	Range 0-2000ppm
CDT-1T5B	Dissolved CO2 Sensor	RS485	Range 0-2000ppm
CDT-1T6B	Residual Chlorine	RS485	Range 2mg/L,8mg/L,20mg/L
CDT-N0C	Multi-parameter water quality Sensor	RS485	Multi-parameter integration

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