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Supmea

www.supmea.com

Supmea pH sensor

Datasheet

Add: No.600,No.21 Street, Hangzhou
Economic&Technological Development Area,
Zhejiang,China

Supmea pH electrode/ORP electrode

pH and ORP combination electrodes

Product description

Supmea pH electrode is a high-quality sensor for the analysis and measurement of liquid components during industrial automation. These electrodes are known for their use of top-quality materials and components. They are designed as combined electrodes (the measuring electrode and the reference electrode are combined in one shaft).The temperature probe can also be integrated as an option.

According to different environments to provide electrodes to meet the requirements

- For industrial wastewater engineering measurements
- For high-alkaline liquid measurements
- For high acidic liquid measurements
- For high-temperature sterilization processes measurements
- For desulfurization process liquid analysis
- For measurements in low-ion media

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Type of pH electrode

Electrode model	Designation	pH and ORP range	Temperature range
SUP-pH5011	Industrial sewage electrode	0-14pH	0-60℃
SUP-pH5041	Glass pH electrode	0-14pH	0-90℃
SUP-pH5050	High Temperature Glass pH probe	0-14pH	0-130℃
SUP-pH6020	Germany pH electrode	0-14pH	-5-80℃
SUP-pH5013A	PTFE pH electrode	0-14pH	0-90℃
SUP-pH5012	Desulfurization pH electrode	0-14pH	0-60℃
SUP-pH263	Biological fermentation	0-14pH	0-130℃
SUP-pH443	SUPcial electrode for thermal power plant	0-14pH	0-130℃
SUP-pH4850	Digital Online pH Electrode	0-14pH	0-50℃
SUP-ORP5011	Industrial ORP electrode	±2000mV	0-60℃
SUP-ORP5041	Glass ORP electrode	±2000mV	0-60℃

Features of pH electrode

1. Adopt international advanced solid dielectric and large area PTFE liquid junction, easy maintenance.

2. Long distance reference diffusion path, extends electrode life greatly in harsh environments.

3. Electrode is made of high quality low-noise cable, make signal output length greater than 40 meters or more, without interference.

4. No supplemental dielectric, a little maintenance.

5. High accuracy, fast response, good repeat-ability.

6. With silver ions Ag / Ag-Cl reference electrode.

7. Proper operation to extend service life

8. Side or vertically installation to the reaction tank or pipe.

9. Electrode can be used interchangeably with similar electrodes.

SUP-pH5011	**Industrial sewage electrode**

Technical parameters

Measure range:
0-14pH

Temperature range:
0-60℃

Temperature compensation:
NTC10K(standard)/PT1000/PT100

Pressure resistant:
0.6MPa

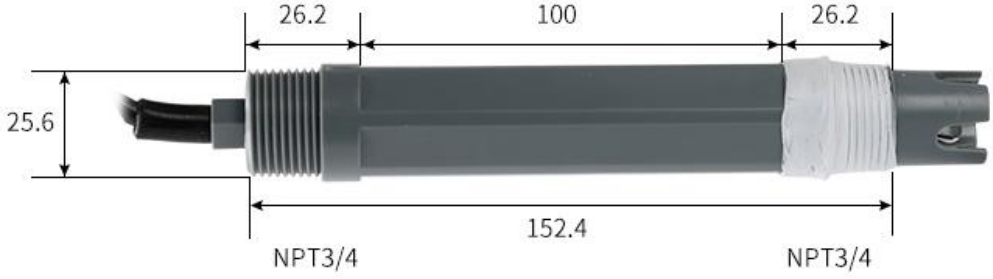
Material:
PPS/PC/PTFE

Cable length:
5m/10m/15m
Tread type:
3/4NPT

Application

Recommended application:
Drinking water monitoring and treatment
Swimming pools
Aquariums(also marine aquariums)
Lightly polluted service water
Process water and wastewater
Rainwater,pond water and surface water
Not recommended:
≥60℃
Strong acid and alkaline
Contains organic, heavy metal ions
Biotechnology, sterilization process

Product size



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SUP-pH5041	**Glass pH electrode**
Technical parameters	Measure range: 0-14pH Temperature range: 0-80℃ Temperature compensation: NTC10K(standard)/PT1000/PT100 Pressure resistant: 0.6MPa Material: Glass Cable length: 5m/10m/15m Tread type: PG13.5
Application	Recommended Application: Drinking water monitoring and treatment Swimming pools Lightly polluted service water Process water and wastewater Rainwater,pond water and surface water Not recommended: ≥80℃ Biotechnology, sterilization process

SUP-pH5050	High Temperature Glass pH electrode

Technical parameters

Measure range:
0-14pH

Temperature range:
0-130℃

Temperature compensation:
NTC10K(standard)/PT1000/PT100

Pressure resistant:
0.6MPa

Material:
Glass

Cable length:
5m/10m/15m

Tread type:
PG13.5

Application

Recommended Application:
Drinking water monitoring and treatment
Swimming pools

Lightly polluted service water
Process water and wastewater
Rainwater,pond water and surface water

Not recommended:
≥130℃
Biotechnology, sterilization process

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SUP-pH6020	**Germany pH electrode**

Technical parameters

Measure range:
0-12pH

Temperature range:
-5-80℃

Temperature compensation:
No

Pressure resistant:
0.6MPa

Material:
Glass

Cable length:
5m/10m/15m

Tread type:
PG13.5

Application

Recommended Application:
For industrial and communal water and wastewater engineering
For measurements in suSUPnsions and varnishes
For measurements in low-ion media
For high-alkaline, high-temperature and sterilization processes
For media containing fluorides and low-temperature applications
PRO version for the toughest operating condition

Not recommended:
≥80℃
Strong acid and alkaline
Biotechnology, sterilization process

SUP-pH5013A	PTFE pH electrode

Technical parameters

Measure range:
0-14pH

Temperature range:
0-90℃

Temperature compensation:
NTC10K(standard),PT1000

Pressure resistant:
0.6MPa

Material:
PTFE

Cable length:
5m/10m/15m

Tread type:
3/4NPT

Application

Recommended application:
Strong acid and alkaline
Lightly polluted service water
Process water and waste water
Rainwater,pond water and surface water

Not recommended:
≥60℃
Contains organic, heavy metal ions
Biotechnology, sterilization process

SUP-pH5012	Desulfurization pH electrode

Technical parameters

Measure range:
0-14pH

Temperature range:
0-60℃

Temperature compensation:
NTC10K(standard),PT1000

Pressure resistant:
0.6MPa

Material:
PC

Cable length:
5m/10m/15m

Tread type:
3/4NPT

Application

Recommended application:
Drinking water monitoring and treatment
Swimming pools
Aquariums(also marine aquariums)
Lightly polluted service water
Process water and waste water
Rainwater,pond water and surface water

Not recommended:
≥60℃
Strong acid and alkaline
Biotechnology, sterilization process

SUP-pH4850	**pH Digital Online Electrode**
Technical parameters	Measure range: 0-14pH Temperature range: 0-50℃ Temperature compensation: NTC10K(standard),PT1000 Pressure resistant: 0.6MPa Material: PPS/PC Cable length: 5m/10m/15m Tread type: 3/4NPT
Application	Recommended Application: Drinking water monitoring and treatment Swimming pools Aquariums(also marine aquariums) Lightly polluted service water Process water and waste water Rainwater,pond water and surface water Not recommended: ≥60℃ Strong acid and alkaline Biotechnology, sterilization process

SUP-ORP5011	**Industrial ORP electrode**
Technical parameters	Measure range: -2000mV~+2000mA Temperature range: 0-60℃ Temperature compensation: NTC10K(standard) Pressure resistant: 0.3MPa Material: PPS/PC/PTFE Cable length: 5m/10m/15m Tread type: 3/4NPT
Application	Recommended application: Drinking water monitoring and treatment Swimming pools Aquariums(also marine aquariums) Lightly polluted service water Process water and wastewater Rainwater,pond water and surface water Not recommended: ≥60℃ Strong acid and alkaline Contains organic, heavy metal ions Biotechnology, sterilization process

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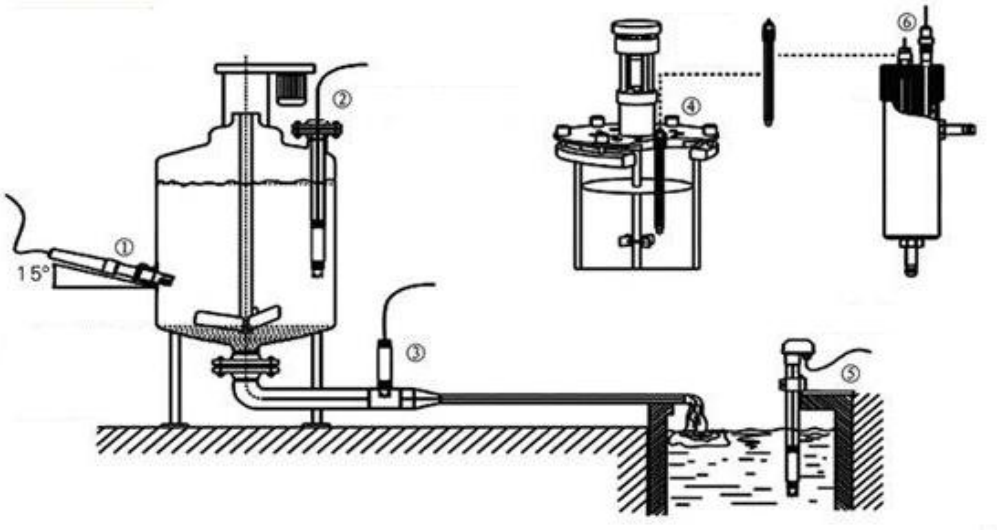
SUP-ORP5041	**Glass ORP electrode**
Technical parameters	Measure range: -2000mV~+2000mA Temperature range: 0-80℃ Temperature compensation: NTC10K(standard)/PT1000/PT100 Pressure resistant: 0.6MPa Material: Glass Cable length: 5m/10m/15m Tread type: PG13.5
Application	Recommended Application: Drinking water monitoring and treatment Swimming pools Lightly polluted service water Process water and wastewater Rainwater,pond water and surface water Not recommended: ≥80℃ Biotechnology, sterilization process

Electrode sheath

PTFE pH sheath

Stainless steel pH sheath

Installation of electrode



Schematic diagram of common installation method

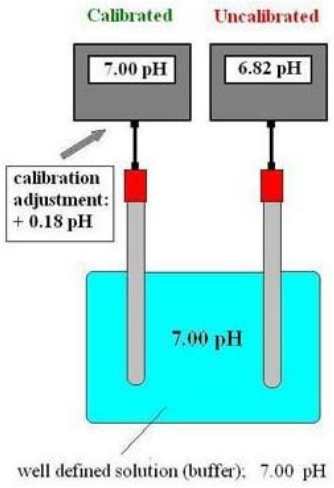
①Side wall installation ②Flange mounted at the top ③Pipe installation
④Top installation ⑤Submersible installation ⑥Flow-through installation

The interface must be in 15°oblique angle, or it will affect the normal test and use of the e lectrode. We won't be responsible for any results due to this.

pH Calibration

A pH calibration is the procedure of adjusting the pH meter by measuring solutions of known pH values.

Why you need to calibrate:



The characteristic of a pH electrode will change with time due to electrode coating and aging. And even a pH electrode would be stable over time, pH electrodes cannot be produced with identical characteristics.

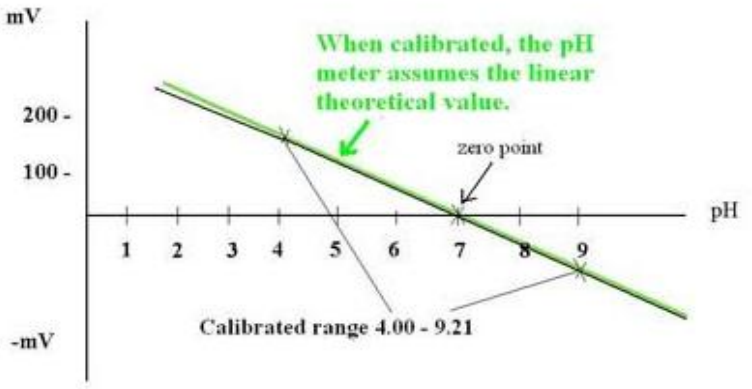
In practice the response of a real pH sensor does not exactly follow the Nernst equation. This difference between the theoretical and actual behavior of a pH electrode must be compensated for. A calibration is required to match the pH meter to the current characteristics of the used pH sensor.

Multi-point calibration

To achieve the best possible accuracy, the calibration should cover the range of the desired measurement values. If the readings go beyond the calibrated range, the pH meter assumes linearity and simply extrapolates the value to be displayed. The true value may be slightly different.

More advanced pH meters will let the user calibrate at three, four or five and even higher numbers of pH values. A multi-point calibration mean, in comparison to a two-point calibration, that you can calibrate your pH tester on both sides of the zero point (pH 7.00). This will expand your pH measurement range without the need of recalibrating.

Example) Three-point calibration at pH 4.00 , 7.0 and 9.21.



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