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Supmea

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Online pH/ORP controller

Committed to process automation solutions

Datasheet

SUP- PH2.2

Add : 5th floor, Building 4, Singapore Hangzhou Science Technology Park, Hangzhou Economic Development Area, 310018, Hangzhou, China

SUP-PH 2.2 meter is an instrument independently developed by our company for online monitoring of pH/ORP value and through the current analog output to the monitoring room for record preservation. pH /ORP controller is widely used in thermal power, chemical fertilizer, metallurgy, environmental protection, Pharmaceutical, biochemical, food and water industries and for solution pH or ORP Values and temperatures are continuously monitored.The continuous monitoring data can be recorded by remote transmission through substation and output connection.

Characteristics

- Circuit modular design
- Isolated transformer output and less affected by interference
- pH /ORP measurement, temperature measurement
- Manual configuration temperature manual and automatic compensation function
- High and low alarm function.
- Buzzer switch function
- Return function without key operation over a certain time
- Quick access to online calibration
- Large size segment code LCD screen.

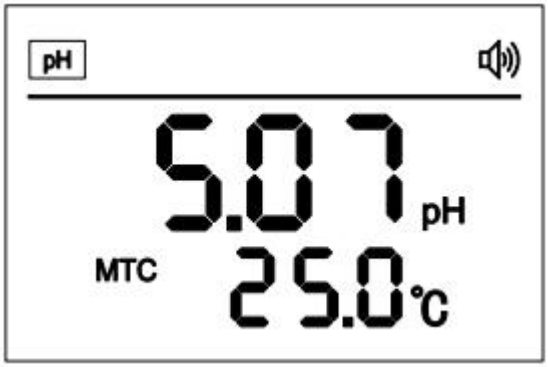
Parameter

Display	3.2 inch segment code LCD screen
Dimension	96mm×96mm×113mm
Cutout dimension	92mm×92mm
Weight	0.6Kg
Measurement variables	pH/ORP
Measuring range	pH：0.00~14.00pH ORP：-1000~+1000mV -1999~+1999mV (customizable)
Accuracy	pH：±0.02pH；ORP：±1mV
Input impedance	≥1012Ω
Temperature compensation	NTC10K: -10~60℃ ±0.3℃, 60 ~ 130 ℃ ±2 ℃ Range: -10~130℃ manual/automatic

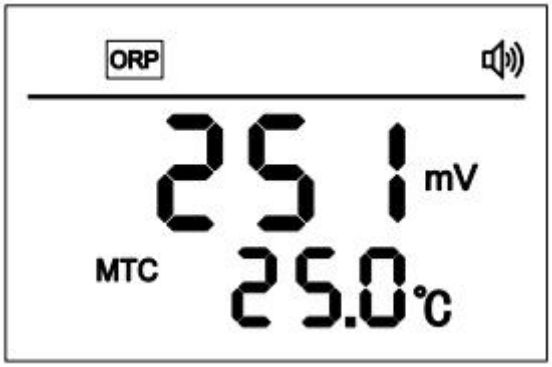
Current output	Isolation type, 4~20mA can be set corresponding pH/ORP and temperature measurement range, maximum load 750 Ω, output accuracy + / - 0.2% FS.
Alarm function	2 channels, capacity AC250V/3A
Relative humidity	10~85%RH (no condensation)
Operating temperature	0~60℃
Power supply	AC：220V±10%，50Hz； 110V±10%，50Hz (customizable)
Consumption	≤5W
Storage condition	Temperature: - 10 ~ 60 ℃ Relative humidity: 5~85%RH (no condensation) Altitude: <2000m

Display

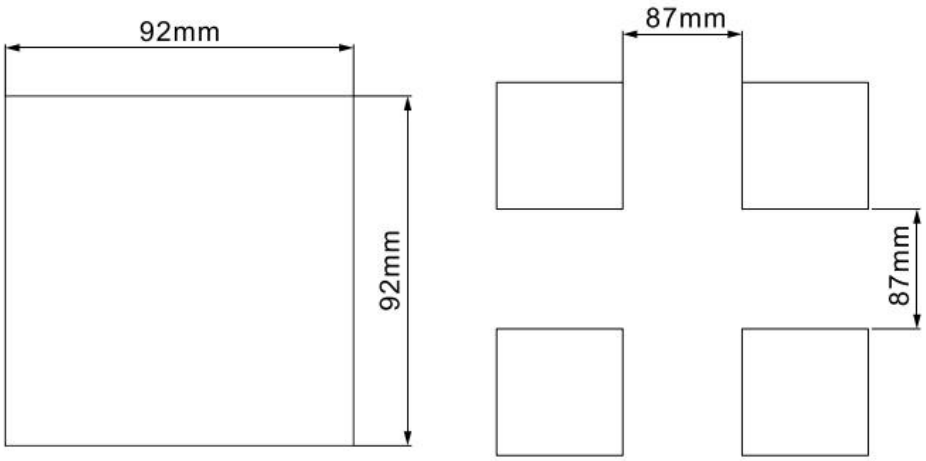
pH monitor：



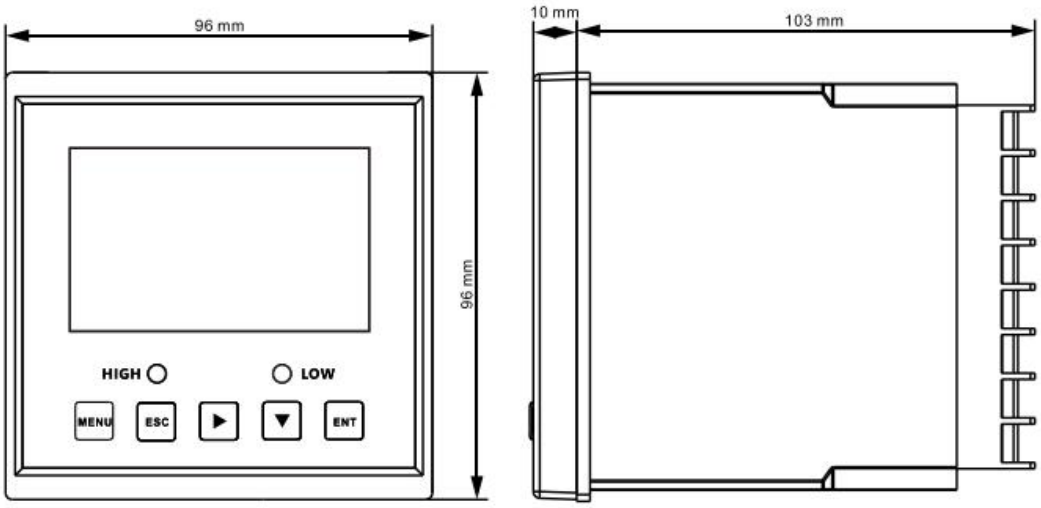
ORP monitor：



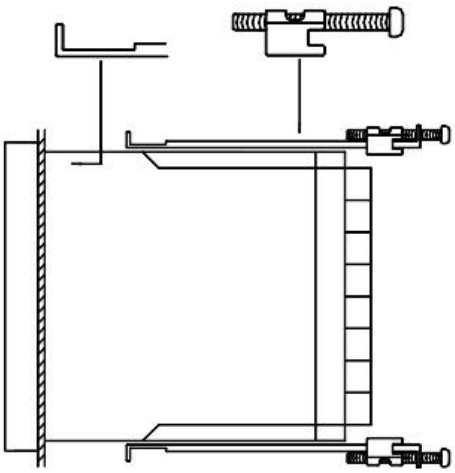
Dimension



Installation dimension

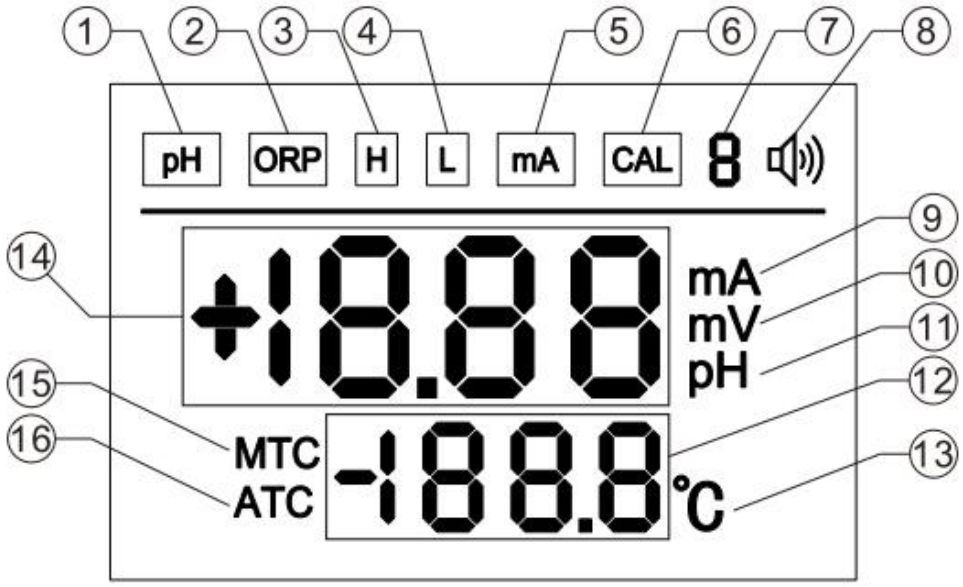


Dimension



Fixed installation

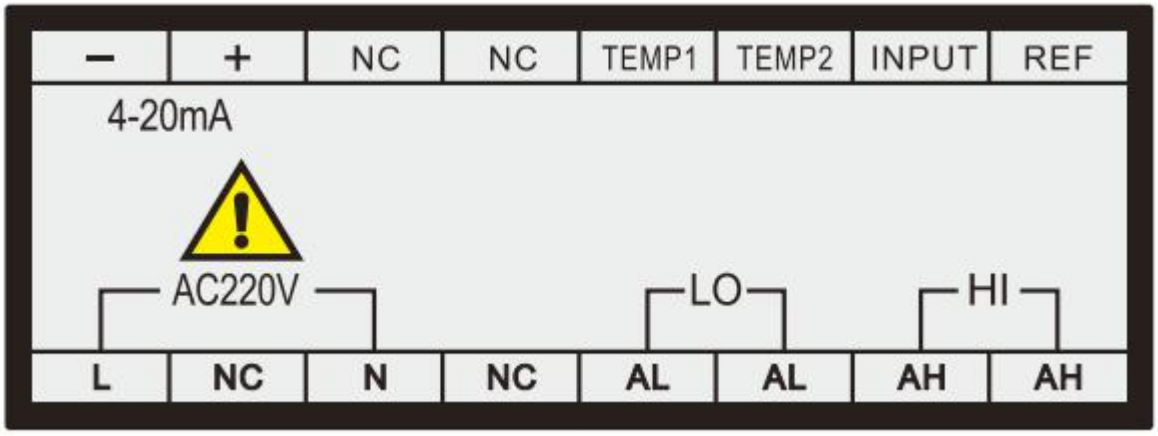
Description



pH 2.2 pH controller

1. Measuring parameter pH
2. Measuring parameter ORP
3. High setting sign
4. Low setting sign
5. 4~20mA put up signs
6. Online calibration sign
7. Configuration settings sign
8. Buzzer sign
9. Current unit
10. ORP unit
11. pH unit
12. Temperature display
13. Temperature unit
14. Main display
15. Manual temperature compensation sign
16. Automatic temperature compensation sign

Wiring



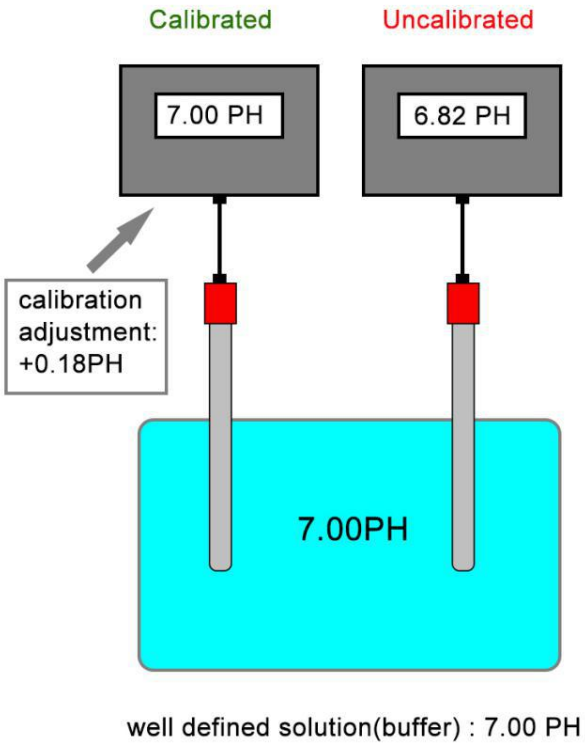
Identification of terminal

- REF: Reference terminal of the electrode
- INPUT: Measuring terminal of the electrode
- TEMP1: Temperature compensating end 1
- TEMP2: Temperature compensating end 2
- NC: Unidentified
- 4-20mA (+): 4-20mA output end+
- 4-20mA (-): 4-20mA output end-
- AC220V (L): AC220V Fire Wire
- AC220V (N): AC220V zero line
- LO: low alarm normally open relay
- HI(AH): High alarm normally open relay

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:



well defined solution(buffer) : 7.00 PH

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.

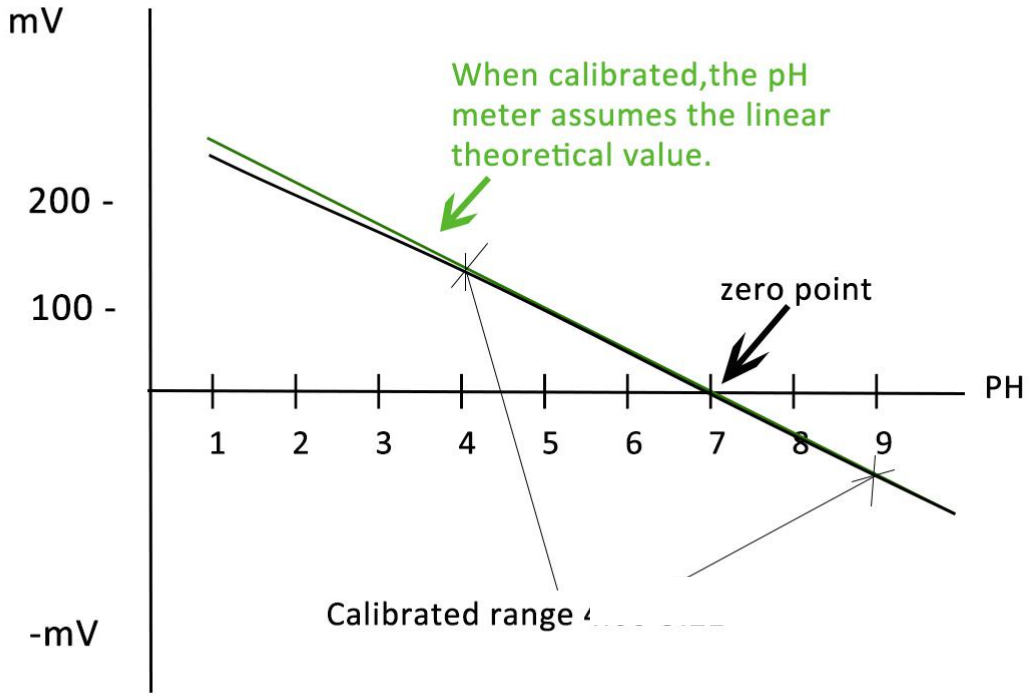
In practice the response of a real pH sensor does not exactly follow the Nernst equation. This difference between the theoretical and actual behavior of a pH electrode must be compensated for. A calibration is required to match the pH meter to the current characteristics of the used pH sensor.

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 re-calibrating.

Example Three-point calibration at pH 4.00, 7.00 and 10.00



Ordering Code

Basic Type	pH2.2
pH/ORP Probe	Plastic pH/ORP sensor with NTC 10K (0-60℃)
	Glass pH/ORP sensor with NTC 10K (0-80℃)
	High Temperature pH sensor with NTC 10K (0-130℃)
	Made in Germany pH sensor
	Made in Germany pH sensor Jumo (0-80℃)
	Plastic pH/ORP sensor with NTC 10K (0-60℃)
	Glass pH/ORP sensor with NTC 10K (0-80℃)
Cable Length	5 meters
	10 meters
	15 meters
Calibration Points	pH4, 7, 10
	pH 4, 6.86, 9.18
Power Supply	220VAC
	24VDC
Medium	Normal water
	Waste water
	Nutrient solution
	Galvanic plating
	Cooling water
	Drinking water
	Others: _____
Note: 4-20mA and relay output are standard functions, make inquiries by placing letter in the pertinent boxes	

Order code: ☐ ☐ ☐ ☐ ☐ ☐

Order example: B C J L N P

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