

# PCPH02 Online pH/ORP controller

## Features

- 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



## Product overview

PCPH02 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.

### Notes:

- 1 Do not touch the diaphragm with hard objects, which may cause damage to the diaphragm.
- 2 Please read the Instruction Manual of the product carefully before installation and check the relevant information of the product.
- 3 Strictly follow the wiring method for wiring; otherwise it may cause product damage or other potential faults.

### Notes:

- 1 Do not misuse documentation.
- 2 The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- 3 Complete installation, operation, and maintenance information is provided in the instructions of the product.
- 4 Misuse of the product may cause danger or personal injury.

### Performance parameters

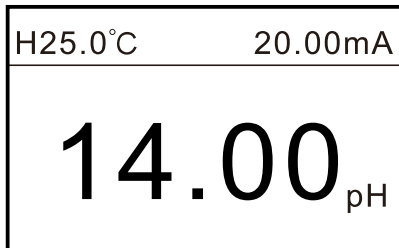
Display	2.8 inch segment code LCD screen
Dimension	96mm×96mm×112mm
Cutout dimension	92mm×92mm
Measurement variables	pH/ORP
Measuring range	pH: 0.00~14.00pH ORP: -1000~+1000mV -2000~+2000mV (customizable)
Accuracy	pH: ±0.02pH; ORP: ±1mV
Input impedance	≥10 <sup>12</sup> Ω
Temperature compensation	NTC10K: -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: 220VAC±10%, 50/60Hz; DC: 24VDC
Consumption	≤5W
Storage condition	Temperature: - 10 ~ 60 ℃ Relative humidity: 5~85%RH (no condensation) Altitude: <2000m

### Display

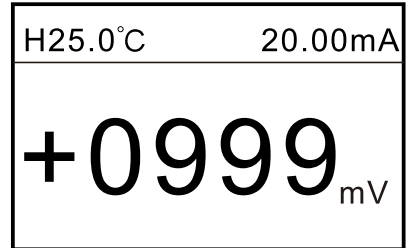
pH monitor:	ORP monitor:
<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: 0 auto;"> <p>H25.0℃      20.00mA</p> <hr/> <p style="font-size: 2em; font-weight: bold;">14.00</p> <p style="text-align: right;">pH</p> </div>	<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: 0 auto;"> <p>H25.0℃      20.00mA</p> <hr/> <p style="font-size: 2em; font-weight: bold;">+0999</p> <p style="text-align: right;">mV</p> </div>

## Display

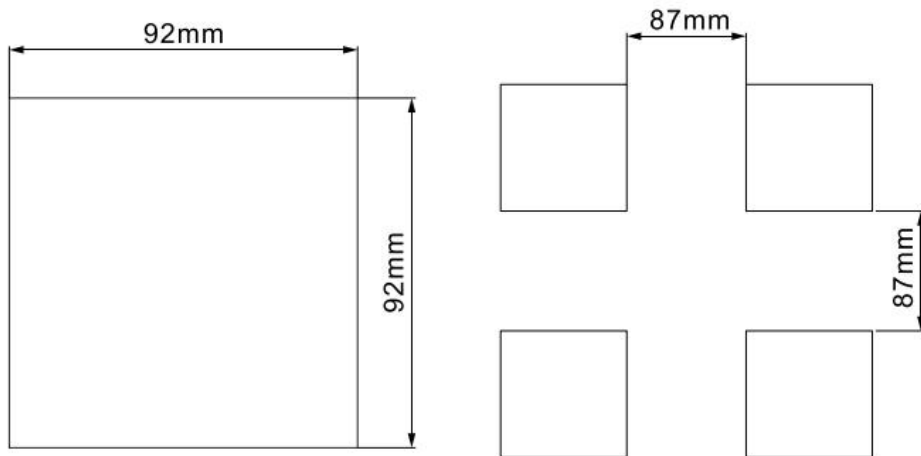
**pH monitor:**



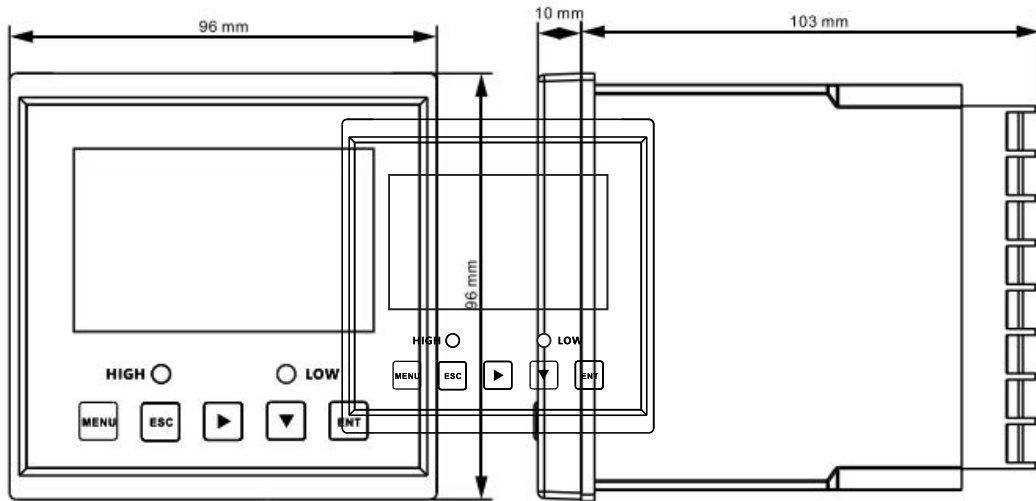
**ORP monitor:**



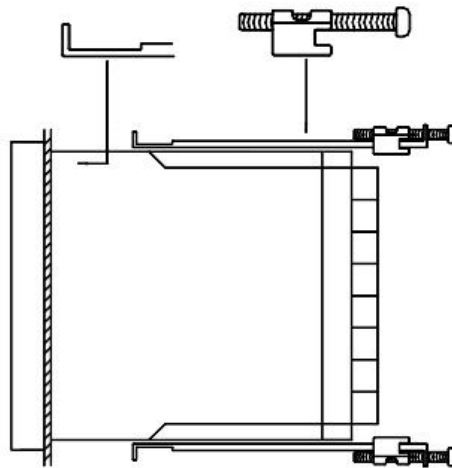
## Dimension



**Installation dimension**

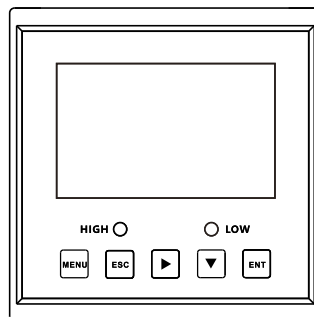


**Dimension**








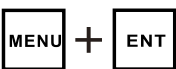
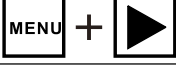
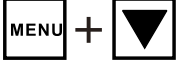
**Fixed installation**

**Description**

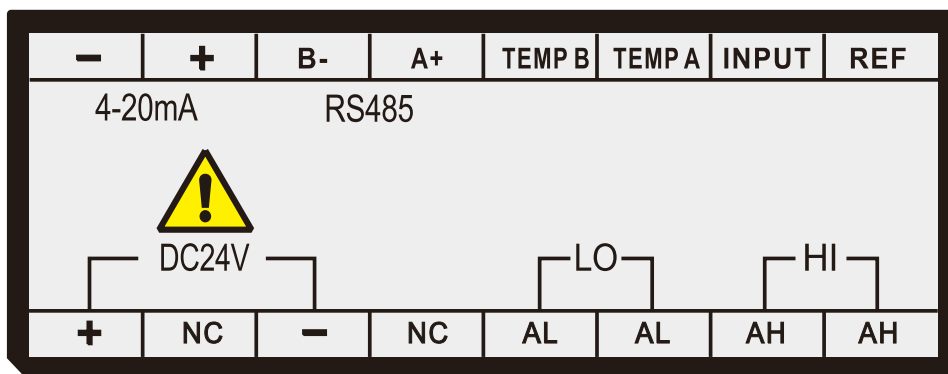
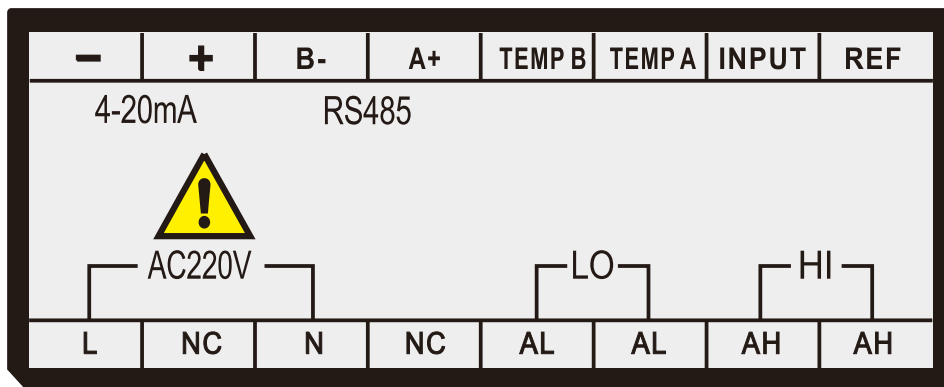


**pH 160S pH controller**

Sign	Name of the key	Function description
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	MUNU	Enter the menu under "Monitoring Interface" Exit menu under "Menu interface"
	EXIT	View related alarm status under "Monitoring Interface" Return to the upper layer between the relevant upper and lower layers of the interface under the "menu interface"
	RIGHT	Circularly select the digit of the parameter and switch the monitoring interface
	DOWN	Select the relevant menu under the "menu interface", and modify the relevant values in the configuration state
	ENTER	Press and hold under "Monitoring Interface" to enter the mode of holding the current measured value output In hold/fixed output mode, short press to return to "monitoring interface" Enter the submenu under "Menu interface" or confirm the modification
	Key combination	Long press to enter the "Temperature Compensation" interface
	Key combination	Long press to enter the "Online Calibration" interface
	Key combination	Long press to enter the "Alarm Settings" interface

## Wiring



Identification of terminal:

REF: Reference terminal of the electrode

INPUT: Measuring terminal of the electrode

TEMPA: Temperature Compensation Terminal A

TEMPB: Temperature Compensation Terminal B

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(AL): low alarm normally open relay

HI(AH): High alarm normally open relay

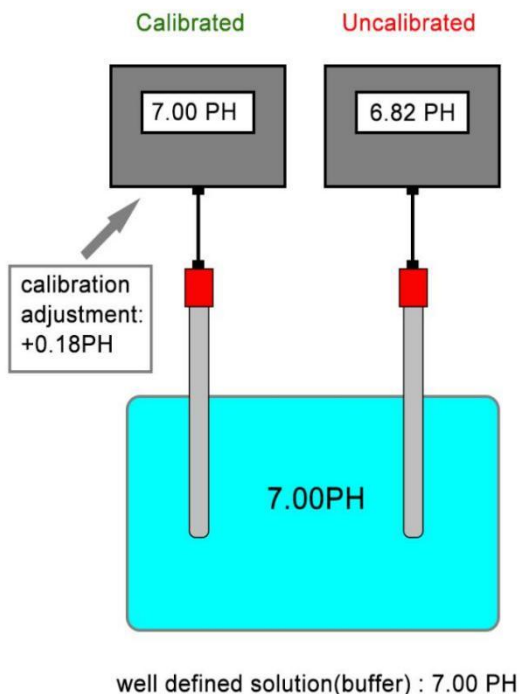
DC24V+: 24VDC +

DC24V-: 24VDC -

## 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.

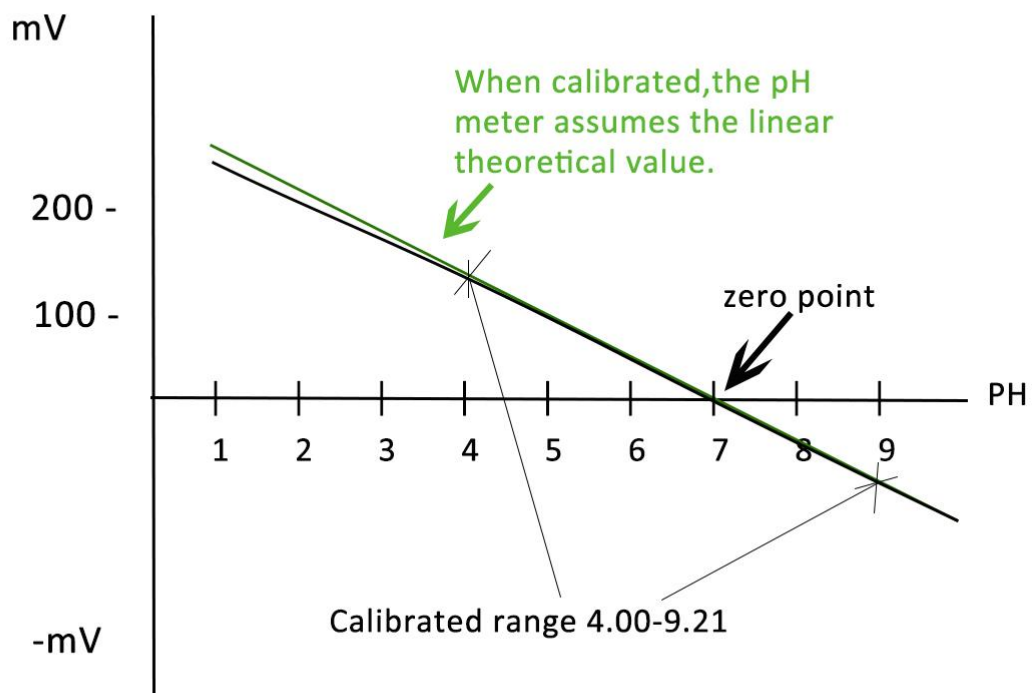
In practice the response of a real pH sensor does not exactly follow the Nernst equation. This difference between the theoretical and actual behavior of a pH electrode must be compensated for. A calibration is required to match the pH meter to the current characteristics of the used pH sensor.

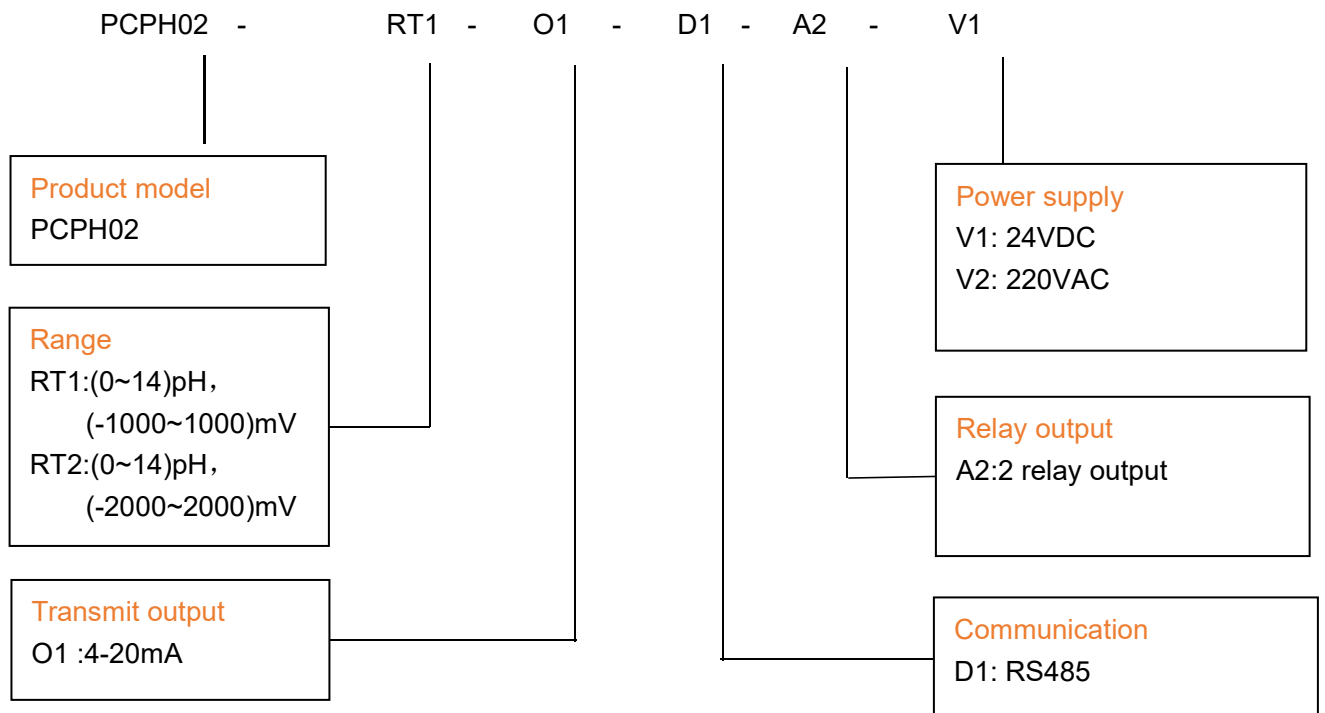
## Multi-point calibration

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 re-calibrating.

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





**Example:** PCPH02 RT1 O1 D1 A2 V1

Product model:PCPH02. RT1: Range(0~14),pH(-1000~1000)mV. O1:Transmit output 4-20mA .  
D1:RS485. A2: Relay output 2 relay output. V1: Power supply 24VDC.

Wotian reserves the right to make any change in this publication without notice. The information provided is believed to be accurate and reliable as of this product sheet.

## Contact us

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