4-20mmA pH / ORP Module
Model:BD100　User Manual

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1. Terminal definition
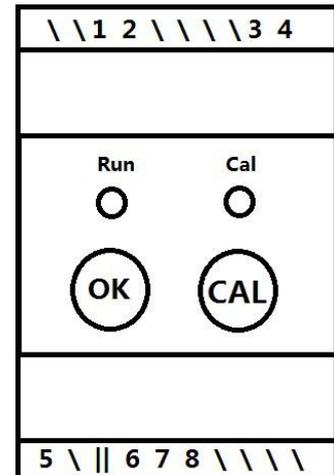
Power supply and 4-20mA output port

    Terminal 1---4-20mA output -

    Terminal 2---4-20mA output +

    Terminal 3,4---DC 24V power supply (no positive and negative)

Sensor port

    terminal 5---pH/ORP sensor "measurement" port, with transparent sheath

Temperature and sensor port

    Terminal 6---pH/ORP sensor "reference" port

    Terminal 7, 8---temperature compensation port

    \ : spare port

2. Button and indicator light

Button	Press shortly	Press for a long while
OK	Confirm	Change measurement mode
CAL	Calibrate	----

Indicator light:

Run: working condition

Cal: calibration, measurement condition

3. Operation

3.1 Calibration (ORP no need calibration)

A: One point calibration

    Press "CAL" enter into calibration mode. At this time Cal indicator light is always lit, Run indicator light flashes, to be measured after the stability, the indicator lighting at the same time;

    Press "OK" to save the calibration result, complete the calibration, return to the measurement state: "Run" indicator flashes, "Cal" indicator is off.

B: Two point calibration

    Refer to A to complete one point calibration, press "CAL" again to enter the Two point calibration, "Cal" indicator light, "Run" light flashes, waiting for measurement stability, "Run" indicator will stop flashing;

    Press "OK" to save the calibration result, complete the two-point calibration, return to the measurement state.

<u>C: Three point calibration</u>

Refer to B to complete the two-point calibration, press "CAL" again to enter the third point calibration, wait for the measurement is stable, the indicator will stop flashing;

Press "OK" to save the calibration result, complete the Three-point calibration, return to the measurement state.

3.2. Measurement mode switch

Turn off the power, keeping press "OK" button and turn on the power until the indicator light flashes to complete the measurement mode switch.

The power is turned on again. If the indicator light is not flashing, the pH measurement mode is in the process of turning on the power. If the Cal indicator flashes, it is the ORP measurement mode.

3.3. Conversion relationship

pH: 0.00 - 14.00pH   corresponding to   4-20mA

ORP: -1000 - +1000mV   corresponding to   4-20mA

4. Technical indexes

pH	0.00-14.00pH /±0.02pH
ORP	-1000-+1000mV/±1mV
Temperature compensation	PT1000
4-20mA	4.00-20.00mA/±0.1mA
Power supply	24VDC (20-36VDC no positive and negative)
Calibration	Three point, automatically distingush（4.00、6.86、9.18）
Installation model	35mm standard rail installation
Working condition	0-60℃, related humidity <85% (without condensation)

PH sensor selection manual

With years of experience in the field of pH sensors, it is possible to provide an advanced solution for almost all process analysis applications.

Functional definition: pH can be described as the relative acidity of the solution measured. Accurate measurement of industrial pH is critical, and each application has unique requirements for chemistry, temperature, pressure and hygienic design etc side. In addition, what is more important is the measure taken in industrial measurement: only monitoring, recording data or process control.

Select pH sensor: the choice of pH sensor, in the choice of pH sensor should be detailed before the specific application information, the following various sensors generally list a variety of sensors and typical applications. You must thoroughly understand the specific process, in order to select the pH sensor.

pH5806/K8S

Set the precision and ease of use in one, the use of high temperature resistant gel and high temperature solid dielectric dual sensor sensor, low maintenance, suitable for demanding online measurement.

pH: 0~14

Temperature :   0~130℃

Pressure: 0~6Bar

Connector: K8S

Temperature compensation: No

Size: 12mmx120、150、225、325mm

Typical application: Fermentation tank、Biotechnology、Pharmaceutical industry、Food and beverage technology, starch paste, etc.

pH5806/S8

Set the precision and ease of use in one, the use of high temperature resistant gel and high temperature solid dielectric dual sensor sensor, low maintenance, suitable for demanding online measurement.

pH: 0~14

Temperature :   0~130℃

Pressure: 0~6Bar

Connector: S8

Temperature compensation: No

Size: 12mmx120、150、225、325mm

Typical application: Fermentation tank、Biotechnology、Pharmaceutical industry、Food and beverage technology, starch paste, etc.

pH5806/VP

Built in temperature electrode of the electrolyte sensor, the use of high temperature resistant gel and high temperature solid dielectric dual sensor sensor, low maintenance, suitable for demanding online measurement.

pH: 0~14

Temperature :   0~130℃

Pressure: 0~6Bar

Connector: VP

Temperature compensation: PT1000

Size: 12mmx120、150、225、325mm

Typical application: Fermentation tank、Biotechnology、Pharmaceutical industry、Food and beverage technology, starch paste, etc.

PH Cable Assembly Kit

AS9 series type

Used to Standard S8 plug's Electrode,transmitter's one side is contact pin.

Length:5m

Length:10m

Length:15m

Diameter:5mm

AK9 series type

Used to Standard K8S plug's Electrode,transmitter's one side is contact pin.

Length:5m

Length:10m

Length:15m

Diameter:5mm

VP6 series type

Used to Standard VP6 plug's Electrode,transmitter's one side is contact pin.

Length:3m

Length:5m

Length:10m

Length:15m

Diameter:7.5mm

Fixed Sheath GWHT/120

12mm diameter of pH, dissolved oxygen sensor. Modular design concept can be adapted to almost all processes, both suitable for sanitary applications and can work in hazardous areas

Fixed Sheath   GWHT/3

The welding base

The rugged solder pad has been repeatedly in the industrial field to prove its value, made of 316L stainless steel, welding angle of 15 degrees

Casing plug

When the shield is removed, the process media may leak, the sleeve plug for you to solve this problem, the sealing and complete reliability.

Nut