# 4-20mA Dissolved Oxygen Module

Model:BD200 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

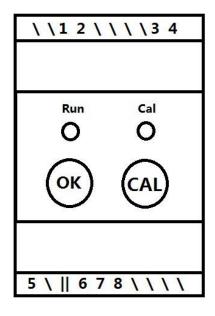
terminal 5---DO- port, with transparent sheath

### Temperature and sensor port

Terminal 6---DO+ 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

A: One point calibration (100%) One point calibration in air saturated with water vapor

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:

B: Two point calibration (zero oxygen solution)

Refer to A to complete one point calibration, press "CAL" again to enter the Two point calibration (zero oxygen

solution calibration), 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.

Note: Generally, one point calibration is enough for common working site;

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 Cal indicator light is not flashing, it is under Dissolved Oxygen (mg/L)

measurement mode, if Cal indicator light is flashing, then it is saturation (%) measurement mode.

3.3. Conversion relationship

DO: 0.0 - 20.0mg/L corresponding to 4-20mA

Saturation: 0.0-300.0% corresponding to 4-20mA

3

#### 4. Technical Indexes

	0.00-20.0mg/L / 1%FS
Dissolved oxygen	0.0 - 200% / 1%FS
Temperature compensation	NTC22K
4-20mA	4.00-20.00mA/±0.1mA
Power supply	24VDC (20-36VDC no positive and negative)
Calibration	Two point
Installation model	35mm standard rail installation
Working condition	0-60°C, related humidity <85% (without condensation)

### **DO** sensor selection

By virtue of a dissolved oxygen electrode field accumulated years of experience, BOQU almost for all process analysis application types provide advanced solutions.

The measurement of dissolved oxygen: In biotechnology, drug development, food and beverage, chemical manufacturing mainly deal with the field of many processes, the suitable content of oxygen is very important in the dissolved oxygen control to ensure the quality of the products

### **Electrochemical oxygen Electrode:**

Fully equipped with a variety of sensors to meet the highest requirements of the industry in terms of performance, which is almost suitable for all areas, they are using the company's unique technology.

#### DOG-208FA/KA12

Polarographic measurement of high oxygen concentration, accurate and reliable. high accuracy, low drift, fast

response, short polarization time, long maintenance period and lower cost.

Operate range:

6ppb~20ppm

Temperature: 0~130°C

Pressure: 0~6Bar

Temperature Compensation:pt1000or 22K

Plug type: VP6orVP8

Size: 12mm\*120mm or 12mm\*225mm

Classic application: Fermenter, Biotechnology, Pharmaceuticals industry, Food and beverage technology, sugaring, starch paste etc.

#### **DOG-208FA/KA25**

Polarographic measurement of high oxygen concentration, accurate and reliable. high accuracy, low drift, fast

response, short polarization time, long maintenance period and lower cost.

Operate range: 6ppb~20ppm

Temperature:  $0\sim130$ °C

Pressure: 0~6Bar

Temperature Compensation: pt1000or 22K

Plug type: VP6orVP8

Size: 25mm\*120mm

Classic application: Fermenter, Biotechnology, Pharmaceuticals industry, Food and beverage technology, sugaring, starch paste etc.

# **DO Cable Assembly Kit**

#### 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

