## Dissolve Oxygen Sensor:

Dissolved oxygen is one of the important parameters to reflect the water quality. Low dissolved oxygen level in water will lead to difficulty in breathing of aquatic organisms. This sensor measures the dissolved oxygen in water, to reflect the water quality.

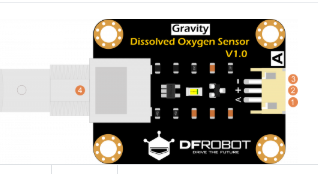
* The probe is a galvanic probe
* No need for polarization time
* The filling solution and membrane cap is replaceable
* Low maintenance cost
* Signal converter board is plug and play
* Has the good compatibility

**Note: Filling solution is 0.5 mol/L NaOH solution. We need to pour it in the membrane cap before use. We have to be caution with the operation because the solution is corrosive. So should use gloves while using it.**

**The oxygen permeable membrane in the membrane cap is sensitive and fragile. Be caution when handling it. Fingernail and other sharp objects should be avoided**

**DO sensor will consume a little oxygen. Please gently stir the solution and let the oxygen to be distributed evenly in the water.**

## Specification

* **Dissolved Oxygen Probe**
  + Type: Galvanic Probe
  + Detection Range: 0~20 mg/L
  + Temperature Range: 0~40 ℃
  + Response Time: Up to 98% full response, within 90 seconds (25℃)
  + Pressure Range: 0~50 PSI
  + Electrode Service Life: 1 year (normal use)
  + Maintenance Period:
    - Membrane Cap Replacement Period:
      * 1~2 months (in muddy water);
      * 4~5 months (in clean water)
    - Filling Solution Replacement Period: Once every month
  + Cable Length: 2 meters
  + Probe Connector: BNC
* **Signal Converter Board**
  + Supply Voltage: 3.3~5.5V
  + Output Signal: 0~3.0V
  + Cable Connector: BNC
  + Signal Connector: Gravity Analog Interface (PH2.0-3P)
  + Dimension: 42mm \* 32mm/1.65 \* 1.26 inches****

|  |  |  |
| --- | --- | --- |
| No | Label | Description |
| 1 | A | Analog Signal Output (0~3.0V) |
| 2 | + | VCC |
| 3 | - | GND |
| 4 | BNC | Probe Cable Connector |

**Note: First need to add 0.5 mol/L NaOH solution into the membrane cap. As it is highly corrosive we should use protective gloves. Wash the skin with plenty of waters immediately if any accident occurs**

### Requirements

* **Hardware**
  + Dissolved Oxygen Probe (With Membrane Cap) x 1
  + 0.5mol/L NaOH Solution x 1
  + [DFRduino UNO R3](https://www.dfrobot.com/product-838.html) (or similar) x 1
  + Dissolved Oxygen Signal Converter Board x 1
  + Analog Cable (3Pin) x 1