



# Oxygen Gas Sensor (Model No. MED-O2-LA) Manual

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If users disobey the terms or remove, disassemble, change the components inside of the sensor, we shall not be responsible for the loss.

The specific such as color, appearance, sizes &etc, please in kind prevail.

We are devoting ourselves to products development and technical innovation, so we reserve the right to improve the products without notice. Please confirm it is the valid version before using this manual.

At the same time, users' comments on optimized using way are welcome.

Please keep the manual properly, in order to get help if you have questions during the usage in the future.

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## MED-O2-LA Oxygen Gas Sensor

MED-O2-LA Oxygen sensor is fuel-cell type electrochemical sensor. The reduction action of oxygen occurs on the working electrode and oxidation reaction of anode materials occurs, release charge to form current. The current generated is proportional to the partial pressure of oxygen and follows Faradi's law. The partial pressure of oxygen could be obtained by measuring value of current.

### 1. Features

- \* Low consumption
- \* High precision
- \* Wide linear range
- \* Excellent repeatability and stability



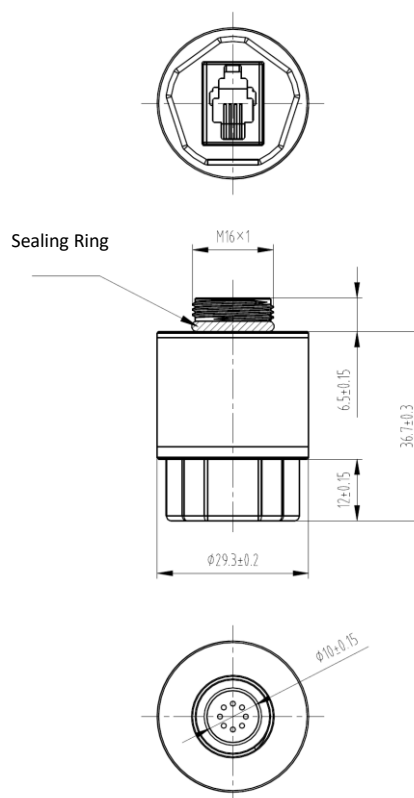
### 2. Application

Suitable for oxygen monitoring in oxygen machine, respiration and anesthesia etc. medical equipment.

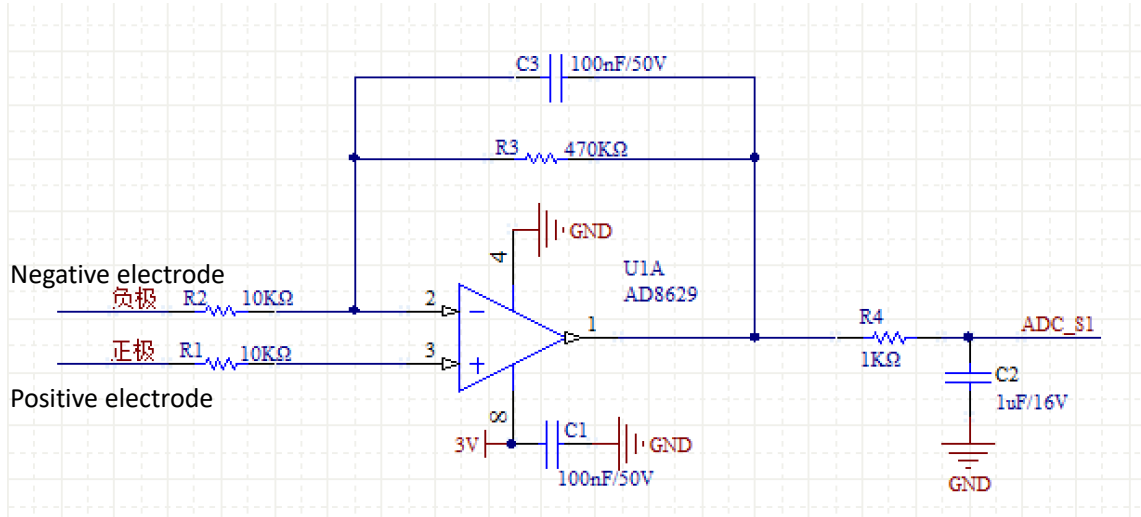
### 3. Technical Parameter

Item	Parameter
Detection gas	O <sub>2</sub>
Measurement Range	0 -100%VOL O <sub>2</sub>
Sensitivity	8-15mV (in air)
Response time (T <sub>90</sub> )	<15 s
Repeatability	<2% output value
Output Linearity	Linear in full scale
Interface	P/N 5520257-2
Temperature Range	-20°C~ 50°C
Humidity Range	0%~ 90%RH (No Condensation)
Pressure range	0.5 Bar - 2.0 Bar
Anticipated using life	1.5x10 <sup>6</sup> %O <sub>2</sub> hours (20°C) 0.8x10 <sup>6</sup> %O <sub>2</sub> hours (40°C)

### 4. External dimension

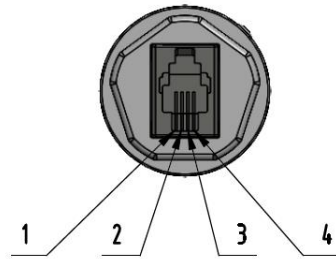


**5. Basic circuit**



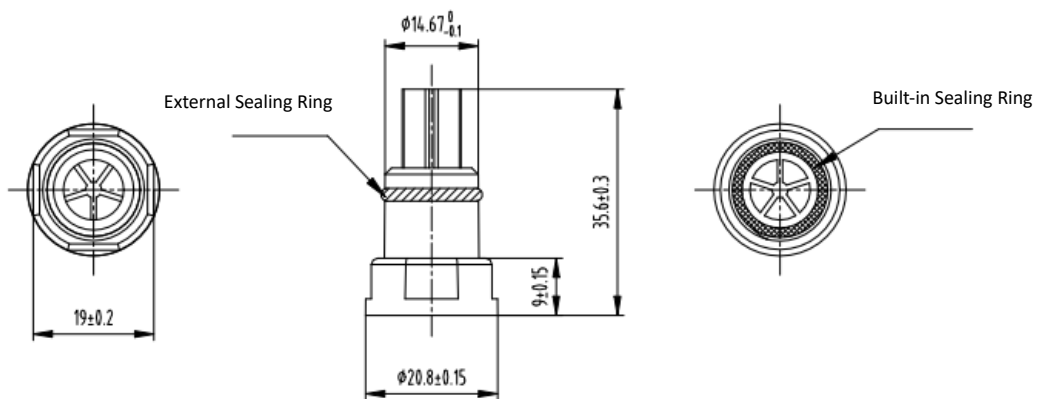
**5. PIN Definition**

PIN name	Definition
Pin1	Negative
Pin2	No connection
Pin3	Positive
Pin4	No connection



**6. Adapter:**

MED-O2-LA provides an adapter that can be mounted to the sensor thread to allow gas to react directly inside the sensor. The specific structure and size are as follows



## 7. Installation requirements

- During installing, tighten the sensor with the hand, and ensure the air tight seal. Do not use wrenches and other similar mechanical auxiliary procedures, to prevent excessive force resulting in damage to sensor thread.
- Sensor can only be connected through the components, which match the interface, and do not install sensors by welding, otherwise it will cause the sensor damage or failure.

## 8. Application note

- Avoid contacting organic solvent (including Silicone rubber and other adhesive), coatings, medicine, oil and high concentration gases.
- Don't disassemble the sensor to avoid the damage caused by electrolyte leakage.
- Don't use the hot cement or sealant of which the curing temperature is higher than 80°C to make the capsulation for the sensor.
- The air intake surface of the sensor shall not be blocked and polluted. If the sensor housing is polluted, the housing can be cleaned and dried with distilled water. Do not steam sterilize the sensor or expose the sensor to chemicals such as ethylene oxide and hydrogen peroxide for a long time.
- All the electrochemical sensors shall not be encapsulated completely by resin materials, and shall not immerse in non-oxygen environment, otherwise, it will damage the function of sensor.
- Excessive impact or vibration should be avoided.

**Note: To keep continual product development, we reserve right to change design features without prior notice !**

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