TECHNICAL SHEET

O2 SENSOR

CODE:
10267A73

MANUFACTURER:
GINEVRI

GINEVRI
neo-tech for life

O2 Sensor

DESCRIPTION

The Oxygen Sensor is a type of galvanic cell that provides relative linear output voltage of the percentage signal of oxygen present in a particular atmosphere. The sensor features long chemical life expectancy, excellent durability, and is unaffected by CO2, making it ideal for oxygen monitoring.

INTENDED USE

The oxygen sensor is used in the oxygen probe:

- the incubators model OGB Polytrend, OGB Polycare and Baby Shuttle produced by GINEVRI
- in the pneumatic block of the Giulia respirator manufactured by GINEVRI.

TECHNICAL DATA

- Measurement range: 0-100% O2
- Accuracy: ± 1% of full scale
- Response time: 14 ± 2 s
- Initial output voltage under standard conditions:
  10.0 -15.5mV
- Operating conditions
  Atmospheric pressure: 811-1216 hPa
  Temperature: 5-40 ° C
  Relative humidity: 10-90%
- Offset voltage V0: ≤0.5 Mv
- Nominal duration: 5 years
- Linearity (Va-V0) / (V100-V0): 0.21 ± 0.02

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PRECAUTIONARY STANDARDS

Effects of pressure

Below the lower limit of operating atmospheric pressure, the life expectancy of the sensor may be reduced due to excessive evaporation of the electrolyte liquid. Instead, using it above the upper pressure limit, the sensor output can become unstable due to excess air.

Effects of temperature

Below -20 ° C the electrolyte freezes and therefore the sensor does not work. However, the sensor is not damaged in any way by freezing the electrolyte and it is sufficient to return the electrolyte to the liquid state to restore the correct functioning of the sensor. On the other hand, with excess temperatures, the ABS resin casing that makes up the sensor body could deteriorate. The sensor could also show variable characteristics if the ambient temperature were to change very quickly and over a very wide range. A rapid increase in the ambient temperature causes a momentary increase in the output voltage, while the exact opposite occurs for a rapid decrease in the same temperature. These temporary drift disappears as soon as the sensor temperature reaches equilibrium with the ambient temperature

Effects of humidity

If used for a long time in an extremely dry environment, the life expectancy of the sensor may be reduced due to excessive evaporation of the electrolyte liquid

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INSTRUCTIONS FOR USE AND STORAGE

The sensor consumes a small amount of oxygen during the detection process. It is recommended to use these sensors in conditions in which the air exchange is greater than 2-3 ml per minute, to compensate for the oxygen consumption of the sensor.

Mechanical stresses and vibrations can affect the sensitivity characteristics of the sensor, therefore they should be avoided when using it. If the mechanical strain or vibration is very large, an irreversible change in the output signal may occur due to structural damage to the sensor. In this regard, stress absorbing measures are required to protect the sensor during transportation or when used in applications where stress or vibration is frequent.

To extend the life of the sensor, it is recommended to store it at a low temperature (in the refrigerator) and at a low oxygen concentration.