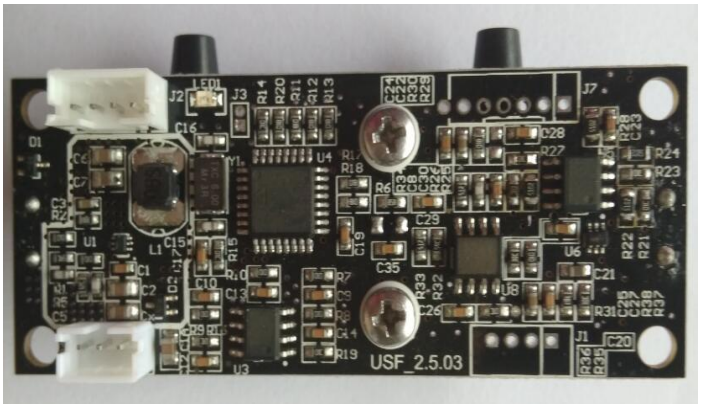
Ultrasonic Oxygen Sensor Module
Gasboard7500C



Brief introduction

Gasboard7500C ultrasonic oxygen sensor is an economical gas sensor used to detect oxygen concentration and flow in binary gases. Adopting ultrasonic detecting technology, Gasboard7500C has better performance than electro-chemical and other oxygen sensors. It has function includes data display, online monitor, status alarming and has been widely used in home and medical oxygen concentrator, large oxygen generator, ventilator. Also, we can offer ODM service as per customer's demand.

Main feature

- ✧ Oxygen concentration measurement, cutting-edge ultrasonic technology adopted
- ✧ Small size, stable, high accuracy, low cost
- ✧ No need of routine calibration
- ✧ Long life span (>5years)
- ✧ Customization available
- ✧ Able to reduce interference and get engineers

Application

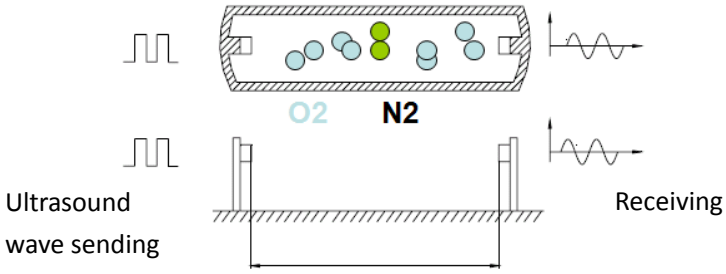
- ✧ PSA oxygen concentrator/ generator
- ✧ Medical ventilator
- ✧ Respiratory devices
- ✧ Anesthetic machine
- ✧ Vaporizer

Gasboard7500C Specification List

Method	Ultrasonic
Measures	O2
Range	0 ~ 100%
Flow	0-10L
Resolution	0.1%
Purity accuracy	±1.8%FS@(10~45)℃
Flow accuracy	0.2L/min
Repeatability	±1%
Response time	3s
Working temperature	10-55℃
Storage temperature	-20℃-60℃
Relative humidity	5-85%RH(non-condensing)
Max pressure	150Kpa
Power supply	5V-12VDC
Working current	< 50mA，Pmax 0.6W, Average and peak current value is influenced by the voltage
Dimensions	70x33x18.4mm (L*W*H)
Weight	18g
Analogue output	0-2.5V, 0-99.9% co-linearity
Communication	UART-TTL
Sample gas	no water vapor(no condensing); no dust(<1 μm)

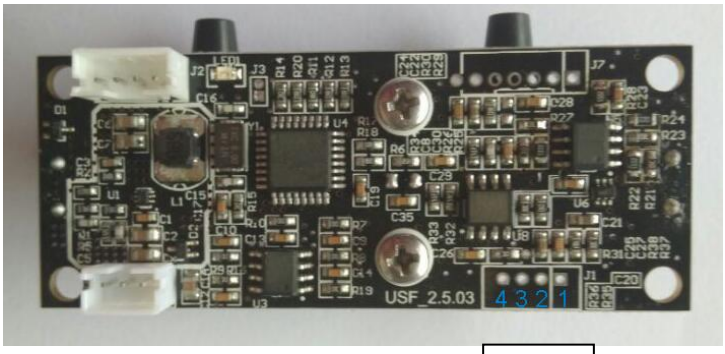
Principle of measurement

Ultrasonic concentration detection theory: when the binary gas mixture composition has molecular weight difference, sound travel speed varies from different gas composition.



I/O definitions

J2



Power supply : J5

J1

Pin	Pin definition	Function description
J5	Pin1：Vcc	5-12VDC，external power supply input pin
	Pin2：no	No definition
	Pin3：GND	Public power supply input pins
J2	Pin1：Vout	+5V/10mA power supply output or 5-12V power supply input
	Pin2：Rx	UART-Rx input pin (5V)
	Pin3：Tx	UART -Tx output pin (5V)
	Pin4：GND	Public power supply output pins
J1(reserved)	Pin1： GND	GND Public power supply output pins
	Pin2： Vout	0-2.5V output, liner to 0-99.9% oxygen concentration
	Pin3： Vout	0-2.5Vout put pin，0-10L/min oxygen flow
	Pin4： Vcc	5-12VDC, external power supply input pin

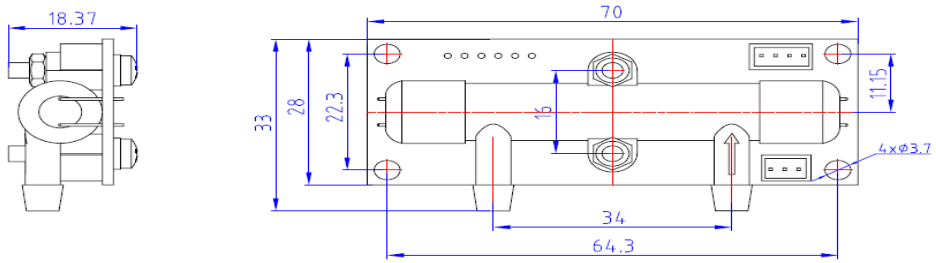
Interface description

Power supply interface J5: external power supply is 5-12 VDC.

Serial port signal pin J2: TTL level (5V) can be connected with the external control panel TTL electrical level serial portal and cannot be connected directly with the computer serial port. If it is connected with computer, then you need to take special serial converter (TTL→RS232). With the serial port, the user can read real-time measurement results (gas concentration and temperature) and do the maintenance.

Dimension（unit: mm, tolerance±0.3mm）

Dimension:70mmx33mmx18.4mm, Weight: around 18g. Dimension and Installation Size:



Instructions

Please confirm before starting to test:
(1)Sample gas needs to be pretreated to make sure that the sensor entrance is clean, no water and no oil.
(2)connect the sensor vent pipe with outside air to ensure the safety of emissions and ensure no blocking phenomenon.
(3)Make sure the sensor power supply is powered on.

Mode selection guide

Ultrasonic oxygen sensor：gasboard7500C has adopted adaptive pattern recognition with analog voltage output.

Note: The OEM version ultrasonic oxygen sensor needs to be confirmed with our product manager.

Adaptive mode recognition means when the sensor was connected with power supply, it is in the receiving state. The sensor will send data as per Blinding mode and the MCU controller only needs to receive the measurement data. In 5 seconds, if the sensor receives serial command, it will respond to the command. Each mode status will detect in 5 seconds as a cycle to do the measurement.

After-sales services and consultancy

TEL：86- 27-81628827 **FAX**：86-27-87401159

ADD： Fenghuang No.3 Road,Fenghuang Industrial Park, Eastlake Hi-tech Development Zone, Wuhan 430205, China

WEB: Http://www.gassensor.com.cn

E-mail: info@gassensor.com.cn