



StoxPro

Smart Gas Sensor Device

Manual

General Information

This manual applies to StoxPro Smart Gas Sensor Device.

Safety

Be sure to read and understand this instruction manual before power on and operation of this product. Use it in accordance with the relevant industry standards. In the event of an unrecoverable malfunction, the instrument must be taken out of service and prevented from accidental commissioning.

Failure to follow these instructions may result in equipment damage to the instrument, abnormal detection, or system failure.

The product can be used in most environmental conditions. However, during storage, assembly and operation, due to the principles and characteristics of solid-state polymer electrochemical sensors, users should strictly follow this article and the general type of gas detector application to ensure normal use. Illegal application will not be covered under warranty. Although our products are very reliable, we recommend checking the module's response to the target gas before use to ensure field use.

Before undertaking any work, be sure to follow local regulations and procedures.

Do not disassemble any circuit components or the sensor in any way.

Do not expose the sensor to temperatures outside the recommended range.

To prevent the sensor's air inlet from being blocked by dust in the environment, keep the air inlet facing down during installation.

At the end of the product's service life, do not dispose of any product components in household waste, but in accordance with local government e-waste recycling regulations. Electrochemical sensors should not be incinerated, as this action may cause the battery to release toxic substances and smoke.

Warning

- ❶ The product must be operated and used by appropriately trained personnel.
- ❷ If, after the first use, an error that cannot be resolved is detected, send the product back to the manufacturer for repair or replacement. Permanent damage to the sensor caused by forced opening is not within the warranty range.
- ❸ It is strictly prohibited to open this product in dangerous environments.
- ❹ It is strictly forbidden to change the model, specifications and parameters of the product circuit and related components.
- ❺ The company's accessories must be used for key components concerning the safety performance. The use of components other than provided by AQ Sense is strictly prohibited.
- ❻ Do not paint the sensor unit or the detector.
- ❼ Regular calibration is recommended once every 3-6 months.
- ❽ No use of the instrument in high concentrations of volatile fuel or chemical environments.
- ❾ Prolonged exposure to toxic gases may require recalibration of the sensor.

» Product Overview

The StoxPro Gas Sensor Device is an intelligent gas sensor device from AQ Sense with a two-wire 4-20 mA and RS485 Modbus-RTU output signal, where one of the two signals can be selected. The device utilizes a smart microprocess with high-reliability Solid Polymer Electrochemical Gas Sensing Technology and intelligent algorithm calculation. The StoxPro is a smart solution that combines temperature and humidity in one Sensor Device for industrial safety applications.

The StoxPro Gas Sensor Device is suitable for indoor and outdoor environments. It detects gas, temperature and humidity and easily receives all data simultaneously. The changing state of gas is closely related to temperature and humidity, for which this combination of the StoxPro Gas Sensor Device provides a professional solution with a RS485 and temperature and humidity signal output.

The intelligent Gas Sensor Device provides a self-test which evaluates the sensor performance without a gas measurement. Therefore, it is the perfect solution for smart home and IoT applications. The data is put out through the output signal or RS485 transmission command, which makes it easy and convenient to determine the right time to perform maintenance and replacement.

Each StoxPro Sensor Device has been professionally calibrated with the gas. It can be instantly used without prior warm-up time and the calibration information is stored in the flash chip. There is a calibration software from AQ Sense in case a recalibration with the RS485 output is required or the 4-20 mA output signal needs to be corrected.

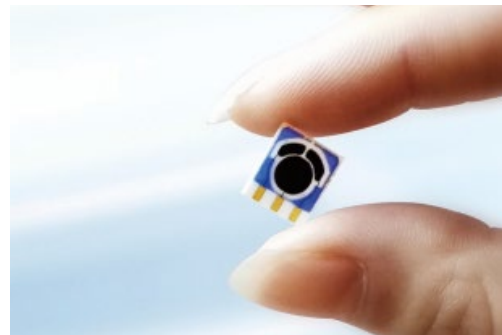
The front cover of the StoxPro is designed with three different structural forms: Diffusion Cover, Flow Cover, Duct Mounting Cover. The Diffusion Cover is suitable for gas detection in open spaces, where the gas reaches the sensor by diffusion and convection. The Flow Cover is suitable for detecting gas that is actively pumped to the sensor by a gas sampling pump, or for the gas that is under positive pressure (or at a flow rate) in the vicinity of the detected gas to reaching the sensor by flow. The Duct Mounting Cover is suitable for installations that measure gas concentrations in confined spaces and are sealed with threads or flanges.

The StoxPro Gas Sensor Device has the standard 4-20 mA two-wire or RS485 Modbus-RTU output signal that allows for quick instrument and system setup or connection to display, DCS, PLC and other systems.

» Detection Principle

The StoxPro Sensor Device is a durable product. It converts the original small current signals of the gas sensors into a standard 4-20mA or RS485 Modbus-RTU output through a digital circuit.

The Sensor Device uses the Solid Polymer Electrochemical Sensing Technology. It employs a three-electrode arrangement - the working, the counter and the reference electrodes - in which concentration measurements can be performed continuously and the sensor operates at a fixed potential. The gas of interest (target gas) diffuses through a diffusion barrier, like a capillary, into the cell to the working electrode, where an electrochemical reaction takes place. There are oxidation and reduction reactions. The current flowing through the cell is direct proportional to the concentration of the target gas. A reference electrode keeps the potential constant together with a potentiostat.



» Technology Specifications

Gas Sensor Specifications

Principle	Solid Polymer Electrochemical Sensing Technology / Electrochemical Sensing Technology
Accuracy	± 5% (Measurement value)
Repeatability	< 2 %
Long-Term Drift	< 5%/year
Sensor Life Expectancy	> 3 years
Warranty	12 months

Temperature & Relative Humidity Sensor Specification (Inside housing)

Parameters	Range	Resolution	Accuracy	Response Time	Long-Term Drift
Temperature	-40 °C to +85 °C	0.01 °C	± 0.2 °C	< 5s to 30s @ t63%	< 0.02 °C/year
Humidity	0-100% RH	0.01% RH	± 2% RH	8s @ t63%	< 0.25% RH/year

Note: The temperature and humidity sensor is located inside the StoxPro housing. If the temperature parameters are to be used for external environmental measurements, please calibrate the measured value. The ambient gas cannot be exchanged with the gas inside the StoxPro housing, so the humidity is only used for the measurement inside the enclosure. This parameter cannot be obtained when the 4-20 mA output is selected. It is only applicable to the RS485 output.

Electrical Parameters

Output Signal Interface	4-20 mA two-wires (Only gas sensor output, without Temperature and Humidity) Or RS485 Modbus-RTU (Gas, with temperature and humidity sensor signal output)
Fault Output	3.5 mA Fault Signal: Sensor signal is weak 3 mA Fault Signal: Sensor failure or sensor disconnection RS485 Modbus-RTU output with sensor life and performance detection and early sensor failure warning
Supply Voltage	12 to 24V DC
Supply Current	3 to 22 mA
Power Consumption	< 0.6 W
Maximum Loop Resistance	< 500R @ 24V DC

Environmental Parameters

Operating Temperature	Sensor can work from -40 °C to +55 °C
Operating Humidity	15-95% RH non-condensing
Working Pressure	Air pressure ± 10 %
Storage Temperature	0 °C to 20 °C

Mechanical Parameters

Size	Please see "Mechanical Diagram"			
Power Cable Length	1 m			
Warranty	12 months			
Package Size	185 x 150 x 108 mm			

Certification

Ex ia IIC Ga Intrinsic safety (certificated Temperature T6 -40 °C to + 55 °C)

CE Certificated EN61326-1:2013, EMC, 2014/30/EU

» Mechanical Diagram

Diffusion Cover



Duct Mounting Cover

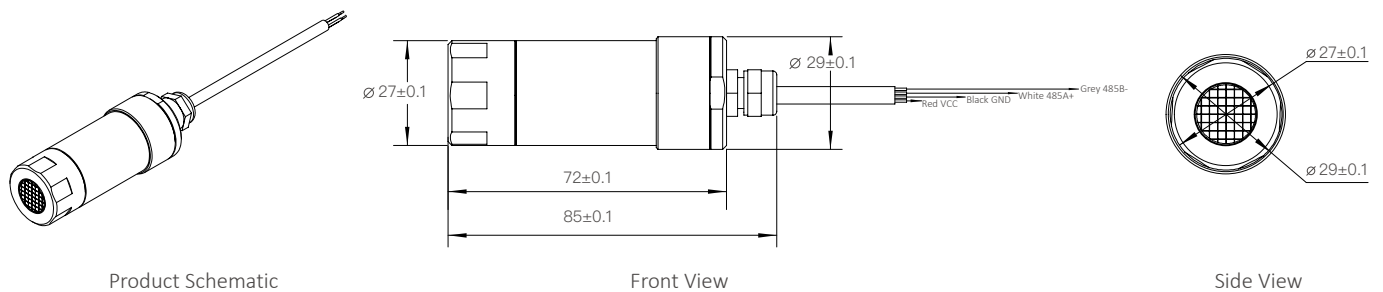


Flow Cover

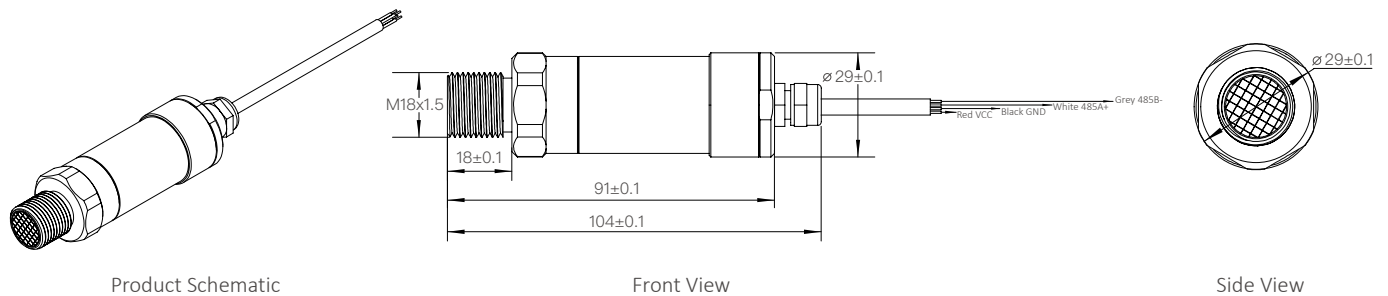


» Mechanical Diagram

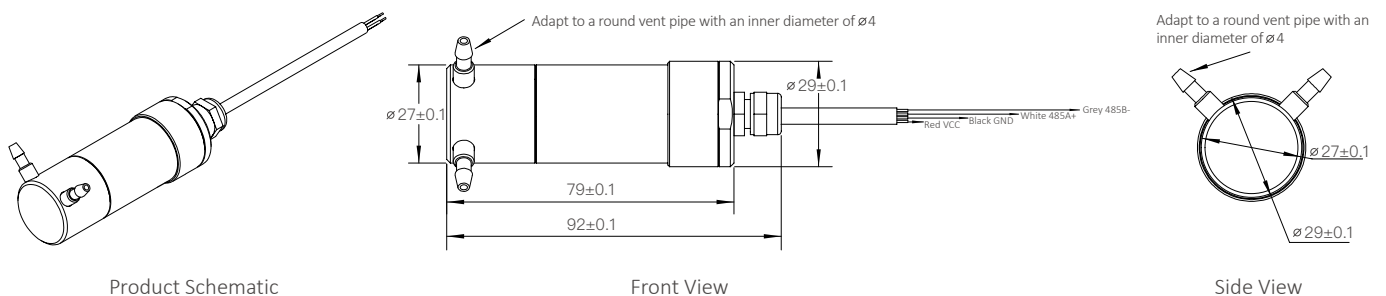
Structural schematic diagram of the StoxPro series intelligent gas sensor device (Diffusion Cover) unit: mm



Structural schematic diagram of the StoxPro series intelligent gas sensor device (Duct Mounting Cover) unit: mm



Structural schematic diagram of the StoxPro series intelligent gas sensor device (Flow Cover) unit: mm



» Installation

1 Location Selection

Diffusion-Type Detection

Diffusion Devices are usually used for gas detection in an open space or in a specific room. Their working environment is characterized by indoor or outdoor areas. The measured gas diffuses naturally in the room and there is no high velocity air flow across the device. The installation position of the diffusion device can be selected as follows:

- The sensor opening of the device should be facing down and it is overall preferred for the device to be perpendicular to the ground, maximizing the protection from water and dust. If this is impossible due to field conditions, the device can be tilted down or mounted horizontally. Both positions provide the most efficient detection. Mounting the sensor device upwards is not recommended. Possible liquid splashes should be considered, e.g. the device can be covered with a gas diffusion foil to prevent mud splashes from blocking the air inlet when mounted close to the ground.
- The installation position of the device should be as close as possible to the source of leakage.
- If the device is installed and a natural wind or fan is present, the device should be installed in the lower air outlet or in the area of possible gas accumulation. Installation should consider not only the best location for the device due to potential leak points, gas properties and ventilation related to a potential gas leak, but also the potential mechanical damage and how to avoid or reduce it.
- The installation position of the device must be determined according to the density of the target gas. Outdoors, it is recommended to install the device about 30 cm above the level of the potential gas leak. For gases heavier than air, it is recommended to install the device at 30 cm below the leak point. For the gas equal to the air density, the device is installed 1.5 meters vertically from the ground. Indoors, in addition to the above installation locations, the device can also be installed on the wall closest to the leakage source. According to the above three situations, the device can be installed 30 cm from the top of the building, 30 cm from the floor and 1.5 meters from the floor.
- Do not install the sensor in direct sunlight.

Closed / Semi-Closed Environment Detection

- The Duct Mounting Device is used in gas detection in a pipeline or in enclosed spaces. The working environment characteristics are: in the pipeline, in the warehouse, in the tank, the measured gas or flow state or diffusion state. Duct Mounting Devices should be installed so that the sensor surface is located as far as possible on or near the main flow or diffusion channel of the gas under test.
- When installing sensors in a fast-flowing air stream (e.g. in pipes), care should be taken to ensure that all exposed metal products in the air stream are properly grounded to prevent electrostatic build-up and discharge.
- Flow Cover Devices are usually used for gas detection that guides the measured gas through the air pump to the installation position of the device. The working environment characteristics are: dust, temperature, humidity and other environmental conditions.

2 Installation Precautions

Diffusion Detector:

Avoid installing devices directly above water, solvents, reagents and other liquids.
Do not use wire to hang the detector.

Duct Mounting Detector:

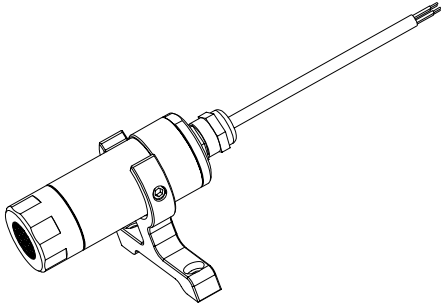
The connection between the installation hole and the device should be well sealed.

Flow Detector:

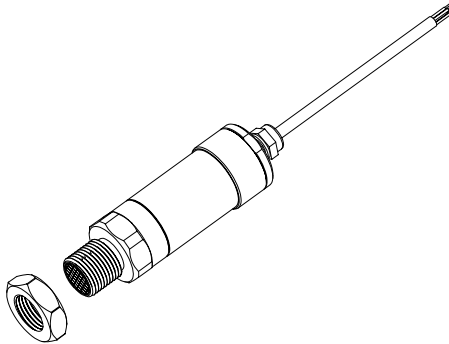
The piping material without adsorption of the measured gas should be selected.
The gas inflow and outflow channels of the device must be kept unblocked.
The flow range of the gas flowing into the device must be regulated to 100 ml/min (except for special gas).

③ Mounting

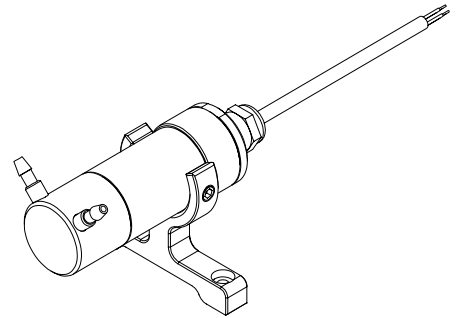
Diffusion Cover:



Duct Mounting Cover:

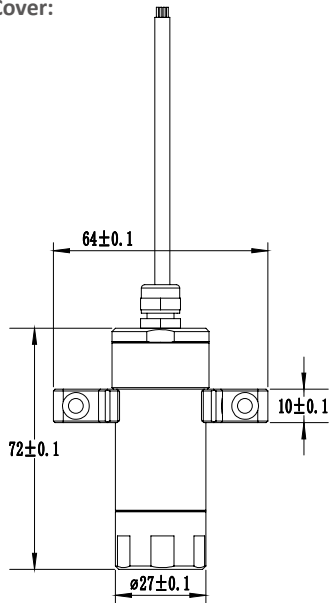


Flow Cover:

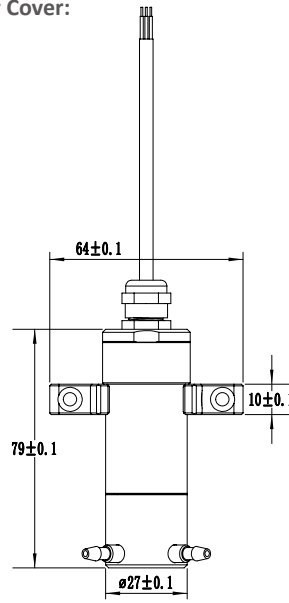


④ Dimension Drawing of Fixing Bracket

Diffusion Cover:



Flow Cover:



» Electrical Wiring

Installation must be carried out by qualified personnel with the power supply disconnected.

① Cable

Two-wire 4-20 mA output: It is recommended to use the 2 x 1.0 mm² RVVP cable

Four-wire RS485 signal output: It is recommended to use the 4 x 1.0 mm² RVVP cable

② Cable Description

The sensor device is supplied with a one meter four-wire cable for power and output.

Red: Connection to the power supply is positive

White: RS485 A+

Black: Connection to the power supply is negative

Grey: RS485 B-

WARNINGS

- Since the inner case is accurately connected to the circuit board, please avoid opening the gas sensor device housing. Use the 1-meter shielded cable connected to the outside of the product, disconnect the device from the power supply circuit before wiring and choose the original safety power supply..
- Follow local or national regulations for on-site installation and instrumentation.

The StoxPro Gas Sensor Device has a two-wire loop and a power supply of 12-24V DC (24V DC is recommended). The output and the power supply use the same wires. Since the magnitude of the power supply voltage affects the total loop resistance of the external circuit, the voltage drop caused by the supply voltage should be considered when selecting the power supply voltage. Make sure that at least 12V DC is measured at the StoxPro Smart Gas Sensor Device.

The two-wire line of the gas sensor device does not distinguish between positive and negative V+, V-.

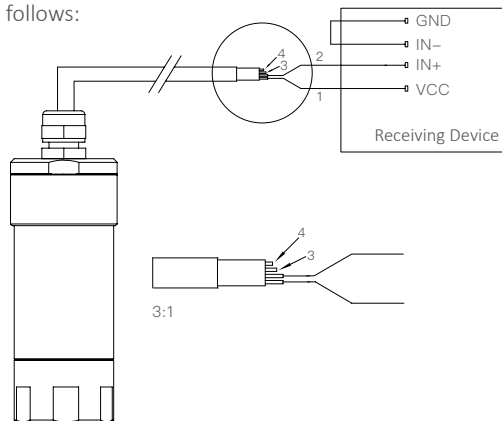
Cabling

It is recommended to use industrial grade cables as they are corrosion resistant.

③ Wires Connection Diagram

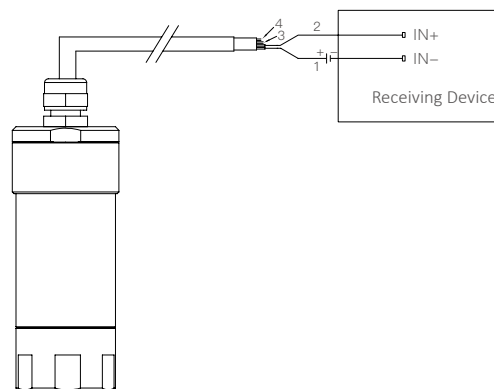
4-20 mA Output Wiring

For the signal receiving instrument with the external power supply interface of the device, the wiring method is as follows:



Number	Name	Pigment	Access Terminal
1	VCC	Red	DC 24V
2	GND	Black	IN+
3	485 A+	White	No
4	485 B-	Grey	No

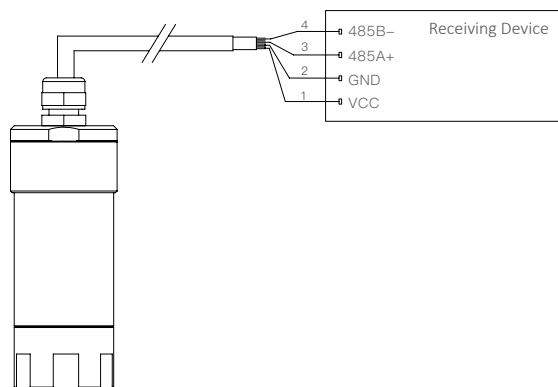
For the signal receiving instrument without the external power supply interface of the device, an additional power supply is required and the wiring method is as follows:



Number	Name	Pigment	Access Terminal
1	VCC	Red	IN-
2	lout	Black	IN+
3	485 A+	White	No
4	485 B-	Grey	No

Four-wire RS485 Output Wiring

For controllers or other devices that support a two-wire 4-20 mA input, connect the wiring method as follows:



Number	Name	Pigment	Access Terminal
1	VCC	Red	DC 24V
2	GND	Black	GND
3	485 A+	White	485 A+
4	485 B-	Grey	485 B-

» First Power On

1 Re-Checking Power and Output Signal

Re-Checking Power

Check that all electrical connections are properly disconnected. Switch on the external power supply of the gas sensor device in the safe area of the gas measurement. Control/PLC, check the supply voltage with a digital multimeter if it is 24V DC. The supply voltage should be at least 9V DC.

Re-Checking Output Signal

This operation is required when the two-wire 4-20 mA output is selected. It is not required when the RS485 output is selected.

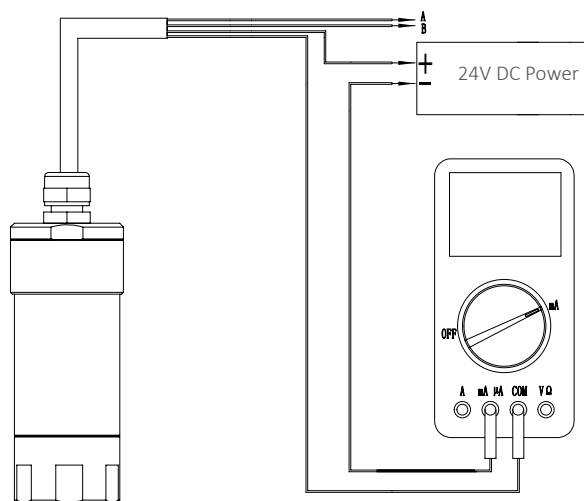
A multimeter can be used to input the 4-20 mA signal output. The output value of the gas sensor device signal should be kept at 4mA in the absence of the gas to be measured. The current output signal will be higher than 4mA when there is a gas to be measured in the environment.

Before turning on the gas sensor device for the first time, make sure that the wiring is correct and the grounding is reliable. When the sensor is switched on for the first time, the stable output of the sensor is usually very short. Since the sensor is designed with a plug-and-play function, the internal circuit always keeps the sensor in the working state, which avoids the problem of long stabilization time of the gas sensor based on the traditional electrochemical principle. However, the sensors and electronics still require a short startup and equilibration time.

If the concentration of the contaminated gas is high during storage, transportation or in the work area, the stabilization time will be increased, and the higher the contamination concentration, the longer the stabilization time is required.

If the ambient air convection on site is large, the data fluctuation will also change from time to time, especially when detecting low concentrations in ppb range. Please pay close attention to the ambient conditions on site. If the environmental conditions are stable, there is no strong convection and no air exchange, such as by: Open windows, doors, fans, air conditioners, air purification systems, etc. After the output signal is stable, the sign will enter normal detection mode.

Oxygen has a longer settling time than other gases, about 5-10 minutes, mainly due to the sensor's -500 mV bias voltage and the time required for the sensor and electronics to equalize.



2 Gas Test

If the device is stored in a warehouse or installed on site for longer than 3 months, it is recommended to operate it only after a ventilation test.

The smart gas sensor device has been calibrated by the factory gas. If gas response verification is required, special standard gas should be used, and the concentration range of 20~80% of the maximum inspection range of the sensing detector is allowed.

Gas Concentration

It is recommended to use a target gas concentration of 50% of the range for testing.

For example, the carbon monoxide range is 0-1000 ppm, the test gas concentration is then 500 ppm.

Oxygen can be placed in 20.9% vol. of the atmosphere or fed in to 99.99% vol. of nitrogen.

Operation

The conventional gas should be subjected to continuous ventilation for 3 minutes.

The adsorption gas is used for 5 minutes.

The gas should be at a range below 10 ppm and continuously ventilated for 10 minutes.

Note: Strong adsorption gas, such as hydrogen chloride, chlorine, hydrogen fluoride, fluorine and other gases, should be discharged on the pipeline for at least 30 minutes (preferably 60 minutes) before ventilation to make the pipeline adsorption reach saturation, the detector cannot be exposed to the measured gas at this time.

Gas Flow Rate

The gas flow rate should be maintained at 100 ml/min and the flow should be kept stable.

Output Current Value Calculation

When using the current mA file of the multimeter to measure the output current value directly, place the red pin of the multimeter on the terminal "V- " and connect the black pin of the multimeter to the signal line to measure the 4-20mA output signal current value.

The current calculation formula is: $A = 4 + (20 - 4) \times (C_x \div C_f)$ mA

Note: V: The theoretical current value corresponds to the currently detected gas

Cx: Current gas concentration

Cf: Full-scale gas concentration

4: Indicates 4mA (4mA = 0 ppm of detection concentration)

20: Indicates 20mA (20mA = full-scale value of detected concentration)

For example: The range of the gas sensor device is 0-100 ppm, the standard gas concentration of 10 ppm is passed in and the output current value is: $5.6\text{mA} = 4 + (20 - 4) \times (10 \div 100)$ mA

If the detection signal output is abnormal, please check whether the electrical wiring is correct. If the error cannot be corrected, please contact us for support.

» Calibration

The instrument has been calibrated and reinspected before leaving the factory, it can be directly installed and used. The sensor device should be recalibrated in the following circumstances.

- The sensor device has been used continuously for more than 12 months.
- The sensor device value and the true value have a deviation beyond the normal error range.

Calibration Description:

- Use the calibration software from AQ Sense.
- Use the data correction on PLC, DCS or HMI system.
- When using the RS485 output communication protocol, commands can be used for calibration, the steps can be performed according to the "Calibration Software Manual".

Note: If you do not have any experience in the calibration operation of similar products or if you still have any questions about some functions of the supporting calibration software, please operate it carefully or contact us for support.

» Servicing

Calibrate the device regularly.

Cleaning of the device is limited to the surface of the housing and the sensor filter. It is prohibited to disassemble the sensor device and to touch the internal circuit board.

Use a dry, soft brush to remove dust on the sensor filter screen. It is prohibited to use high pressure air to directly clean the filter screen or sensor surface.

The waterproof measure of the detector is for the outlet end and the housing structure connection, it is prohibited to immerse the sensor device completely in liquid.

During any construction operation on site, avoid exposing the sensor device to fog solvent (such as fog paint), and stay away from heat and vibration source.

Avoid cleaning with alcohol.

» Storage and Transportation

The detector should be stored in a room with 0°C ~25°C , dry ventilation and clean air, and the stacking height should not exceed 1 meter.

Before transport and during storage until installation, the detector should always be placed in a special packaging box to avoid strong vibrations or damage to the sensor device.

Avoid alcohol or ketone gases in the storage environment.

» Order Information

05–StoxPro– **A** – **B** – **C** –01

Gas	Range	Housing Material
O ₂	25%	SS
H ₂ S	5	
SMELL	500	
CH ₄ S	5000	
.....	

Gas: Gas Type

O₂: Oxygen
H₂S: Hydrogen Sulfide
SMELL: Odor Gas
CH₄S: Methyl Mercaptan

Range: Measurement Range in ppm/% vol./ppb

25: 0-25% vol.
5: 0-5 ppm
500: 0-500 ppm
5000: 0-5000 ppm

Housing Material

SS: Stainless Steel

Example Part Number1

05-StoxPro-H₂S-1000-SS-01
05-StoxPro: Smart Gas Sensor Device
H₂S: Detects Hydrogen Sulfide (H₂S)
1000: Measurement range is 0-1000 ppm
SS: Stainless Steel

Example Part Number2

05-StoxPro-O₂-25%-SS-01
05-StoxPro: Smart Gas Sensor Device
O₂: Detects Oxygen (O₂)
25%: Measurement range is 0-25% vol.
SS: Stainless Steel

Housing Cover

Item	Cover Type
1	Diffusion Cover (standard)
2	Duct Mounting Cover
3	Flow Cover

» Gas List

Gas	Gas Formula	Range	Resolution	Response Time
Arsine	AsH ₃	0-1 ppm	0.001 ppm	< 3 s (T90 < 80 s)
Diborane	B ₂ H ₆	0-1 ppm	0.001 ppm	< 3 s (T90 < 80 s)
Bromine	Br ₂	0-1 ppm	0.001 ppm	T90 < 60 s
Methyl Mercaptan	CH ₄ S	0-10 ppm	0.001 ppm	< 3 s (T90 < 80 s)
		0-100 ppm	0.01 ppm	< 3 s (T90 < 80 s)
		0-5000 ppm	0.1 ppm	< 3 s (T90 < 80 s)
Chlorine	Cl ₂	0-5 ppm	0.001 ppm	T90 < 60 s
		0-50 ppm	0.01 ppm	T90 < 60 s
		0-100 ppm	0.01 ppm	< 3 s (T90 < 30 s)
Chlorine Dioxide	ClO ₂	0-5 ppm	0.001 ppm	T90 < 60 s
Carbon Monoxide	CO	0-10 ppm	0.001 ppm	< 3 s (T90 < 80 s)
		0-100 ppm	0.01 ppm	< 3 s (T90 < 30 s)
		0-1000 ppm	0.1 ppm	< 3 s (T90 < 30 s)
		0-2% vol.	0.001% vol.	< 3 s (T90 < 30 s)

Gas	Gas Formula	Range	Resolution	Response Time
Ethylene Oxide	ETO (C ₂ H ₄ O)	0-10 ppm	0.001 ppm	< 3 s (T90 < 30 s)
		0-200 ppm	0.1 ppm	< 3 s (T90 < 30 s)
		0-1000 ppm	0.1 ppm	< 3 s (T90 < 30 s)
Fluorine	F ₂	0-5 ppm	0.001 ppm	T90 < 60 s
Germane	GeH ₄	0-5 ppm	0.01 ppm	< 3 s (T90 < 80 s)
Hydrogen	H ₂	0-1000 ppm	0.1 ppm	< 3 s (T90 < 30 s)
		0-5000 ppm	0.1 ppm	< 3 s (T90 < 30 s)
		0-5% vol.	0.001% vol.	< 35 s (T90 < 90 s)
Hydrogen Sulfide	H ₂ S	0-5 ppm	0.001 ppm	< 3 s (T90 < 30 s)
		0-10 ppm	0.001 ppm	< 3 s (T90 < 30 s)
		0-100 ppm	0.01 ppm	< 3 s (T90 < 30 s)
		0-1000 ppm	0.1 ppm	< 3 s (T90 < 30 s)
		0-5000 ppm	0.1 ppm	< 3 s (T90 < 30 s)
Formaldehyde	HCHO	0-5 ppm	0.001 ppm	< 3 s (T90 < 80 s)
		0-100 ppm	0.01 ppm	< 3 s (T90 < 60 s)
Hydrogen Chloride	HCl	0-30 ppm	0.001 ppm	T90 < 60 s
Hydrogen Cyanide	HCN	0-50 ppm	0.01 ppm	< 3 s (T90 < 30 s)
Hydrogen Fluoride	HF	0-10 ppm	0.001 ppm	T90 < 60 s
Ammonia (Long lifetime)	NH ₃	0-10 ppm	0.001 ppm	< 3 s, no T90
		0-100 ppm	0.01 ppm	< 3 s, no T90
Ammonia (Fast response)	NH ₃	0-100 ppm	0.01 ppm	T90 < 60 s
		0-500 ppm	0.1 ppm	T90 < 60 s
		0-1000 ppm	0.1 ppm	T90 < 60 s
Nitrogen Dioxide	NO ₂	0-5 ppm	0.001 ppm	< 3 s (T90 < 80 s)
		0-50 ppm	0.01 ppm	< 3 s (T90 < 30 s)
		0-100 ppm	0.01 ppm	< 3 s (T90 < 30 s)
		0-1000 ppm	0.1 ppm	< 3 s (T90 < 30 s)
		0-2000 ppm	0.1 ppm	< 3 s (T90 < 30 s)
Oxygen	O ₂	0-25% vol.	0.01% vol.	< 3 s (T90 < 30 s)
Ozone	O ₃	0-5 ppm	0.001 ppm	< 3 s (T90 < 80 s)
		0-50 ppm	0.01 ppm	< 3 s (T90 < 30 s)
		0-100 ppm	0.01 ppm	< 3 s (T90 < 30 s)

» Gas List

Product	Gas Formula	Range	Resolution	Response Time
Phosphine	PH ₃	0-5 ppm	0.001 ppm	< 3 s (T90 < 80 s)
		0-20 ppm	0.01 ppm	< 3 s (T90 < 80 s)
		0-100 ppm	0.01 ppm	< 3 s (T90 < 80 s)
		0-2000 ppm	0.1 ppm	< 3 s (T90 < 80 s)
Silane	SiH ₄	0-10 ppm	0.001 ppm	< 3 s (T90 < 80 s)
Odor	SMELL	0-5 ppm	0.001 ppm	< 3 s (T90 < 30 s)
		0-10 ppm	0.001 ppm	< 3 s (T90 < 30 s)
		0-200 ppm	0.01 ppm	< 3 s (T90 < 30 s)
		0-500 ppm	0.01 ppm	< 3 s (T90 < 30 s)
Sulfur Dioxide	SO ₂	0-5 ppm	0.001 ppm	< 3 s (T90 < 30 s)
		0-50 ppm	0.01 ppm	< 3 s (T90 < 30 s)
		0-100 ppm	0.01 ppm	< 3 s (T90 < 30 s)
		0-1000 ppm	0.1 ppm	< 3 s (T90 < 30 s)
		0-2000 ppm	0.1 ppm	< 3 s (T90 < 30 s)
Volatile Organic Compounds	TVOC	0-10 ppm	0.001 ppm	< 3 s (T90 < 30 s)
		0-200 ppm	0.1 ppm	< 3 s (T90 < 30 s)
		0-1000 ppm	0.1 ppm	< 3 s (T90 < 30 s)
		0-2000 ppm	0.1 ppm	< 3 s (T90 < 30 s)

Disclaimer

The AQ Sense performance data stated above is based on data obtained under test conditions using the AQ Sense gas distribution system and AQ Sense test software. In the interest of continuous product improvement, AQ Sense reserves the right to change design features and specifications without notice. We are not responsible for any loss, injury or damage caused by this. AQ Sense assumes no responsibility for any indirect loss, injury or damage resulting from the use of this document, the information contained therein or any omissions or errors herein. This document does not constitute an offer to sell. The data it contains are for informational purposes only and cannot be considered a guarantee. Any use of the given data must be evaluated and determined by the user to comply with federal, state and local laws and regulations. All specifications outlined are subject to change without notice.

Warning

AQ Sense devices are designed for use in a variety of environmental conditions. However, due to the principles and characteristics of sensors and to ensure normal use, users must strictly follow this article during storage, assembly and operation of the device. Although our products are highly reliable, we recommend checking the device's response to the target gas prior to utilization to ensure on-site use. At the end of the products service life, please do not discard any electronics in the domestic waste, instead follow the local governments electronic waste recycling regulations for disposal.



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