ATO

Methanol Sensor

S_4CH_3OH Sensor Specification

Electrochemical Methanol Sensor

Small size | Low consumption | Long life | Low cost | High precision

1. Product Overview

S4CH_3OH methanol gas detection sensor is a kind of 3 electrodes electrochemical sensor. Methanol is oxidized on working electrode and oxygen is reduced on the counter electrode. The reference electrode contacts with the electrolyte to keep working electrode at a stable potential. The redox reaction current is directly proportional to the concentration of methanol.

2. Application Field

(1) Methanol alarm for both portable and fixed gas detection devices.

(2) Methanol emission in all industry.

(3) Intelligent municipal methanol detection

(4) Air quality detection in the car.

3. Product Characteristics

(1) High precision and low cost.

(2) Widely used in all kinds of methanol gas detection industry.

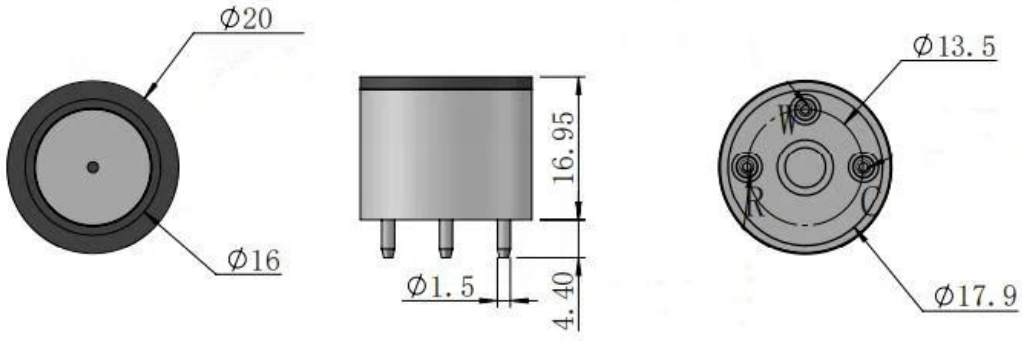
(3) Fast response time and recovery.

(4) Robust environment performance.

(5) Good repeatability and stability.

4. Technical Parameters

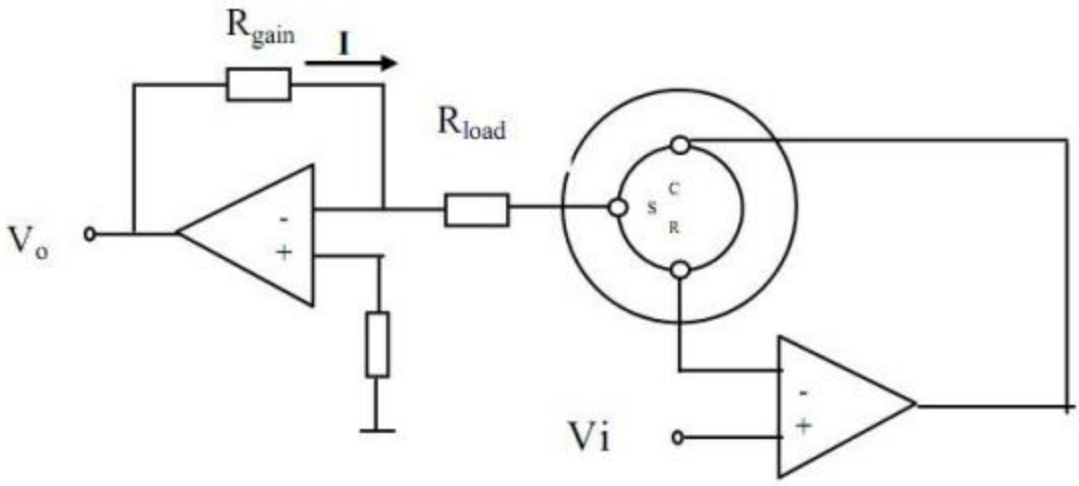
Description	Specification
Product Name	S4CH_3OH-100
Technology	3 Electrodes Electrochemical
Measurement Gas	CH_3OH
Measurement Range	0~100 ppm
Maximum Overload	200 ppm
Output Signal	200±100 nA/ppm
Zero Drift	0~1 ppm
Resolution	0.5 ppm
Response Time	≤30 s
Bias Voltage	+300 mV
Recommended Load Resistor	5~30 Ω
Temperature Range	-30~50 ℃
Humidity Range	15%~ 90% RH (no condensation)
Repeatability	< ±2% output signal
Pressure Range	90 ~ 110 kPa
Long-term Stability	< 2% signal/month
Linearity	Linear
Shelf life	12 months after delivery
Service life	2 years



Product Dimensions in mm

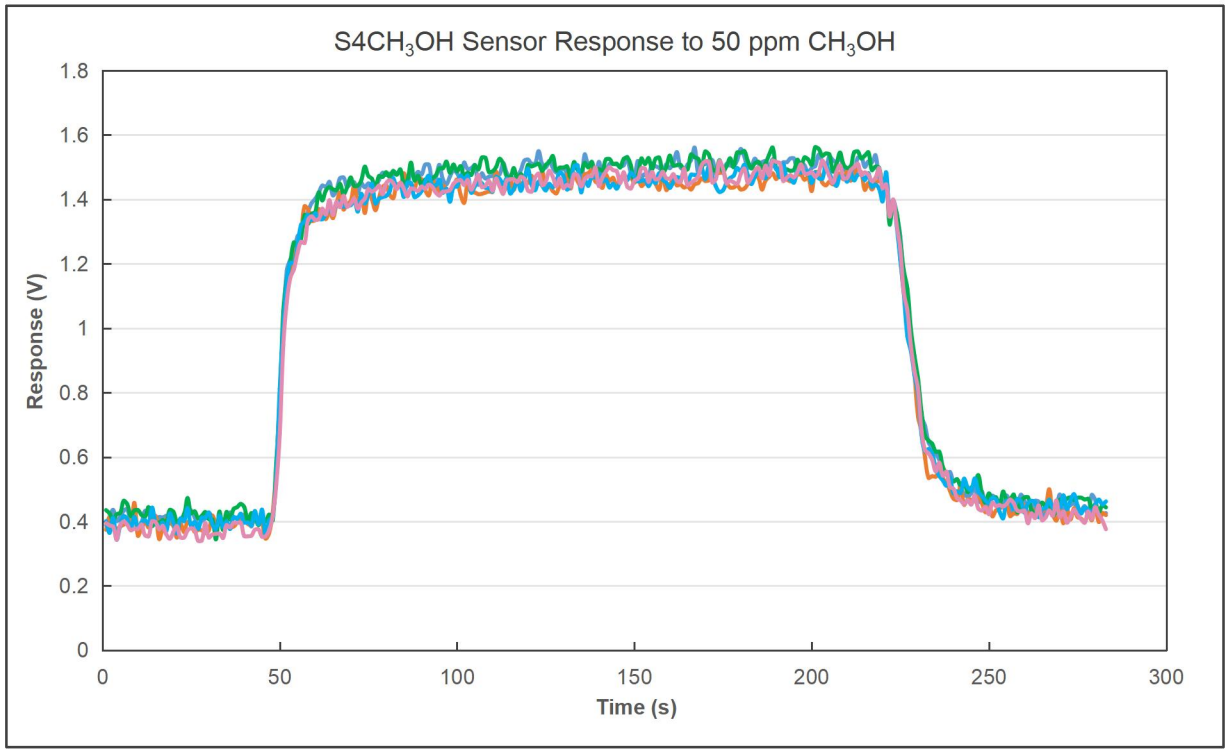
All tolerances ±0.20mm

5. Basic Circuit

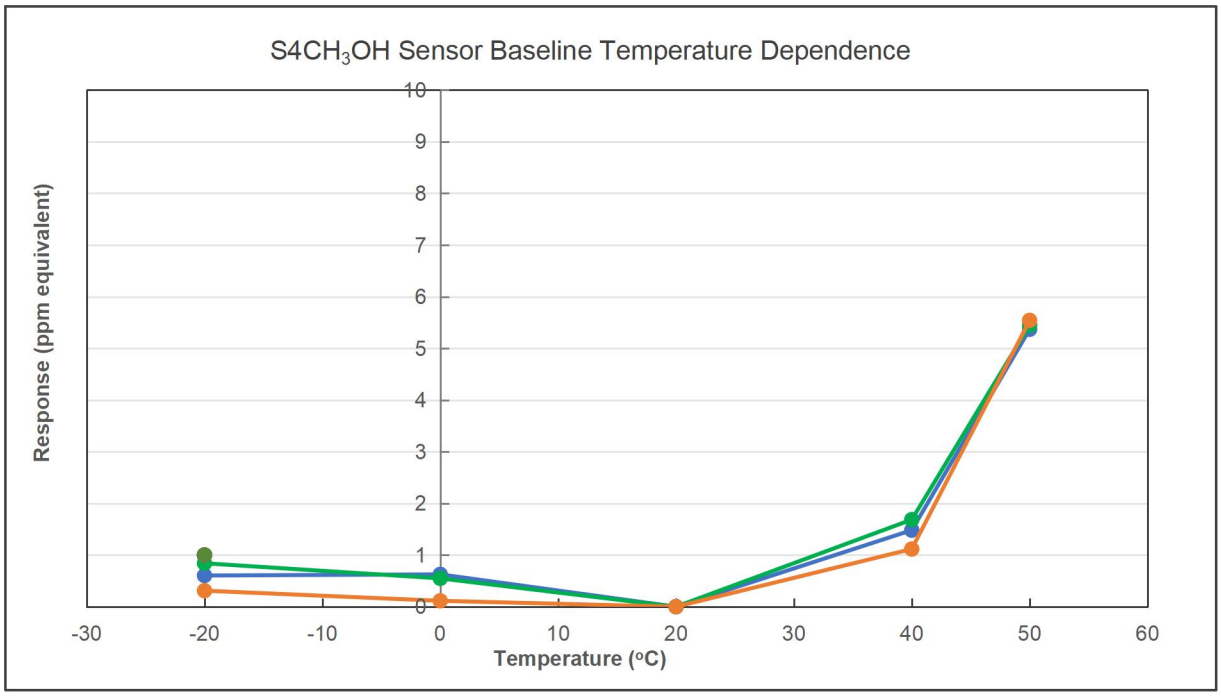


Note: Above picture shows the basic test circuit of the S4CH_3OH sensor.

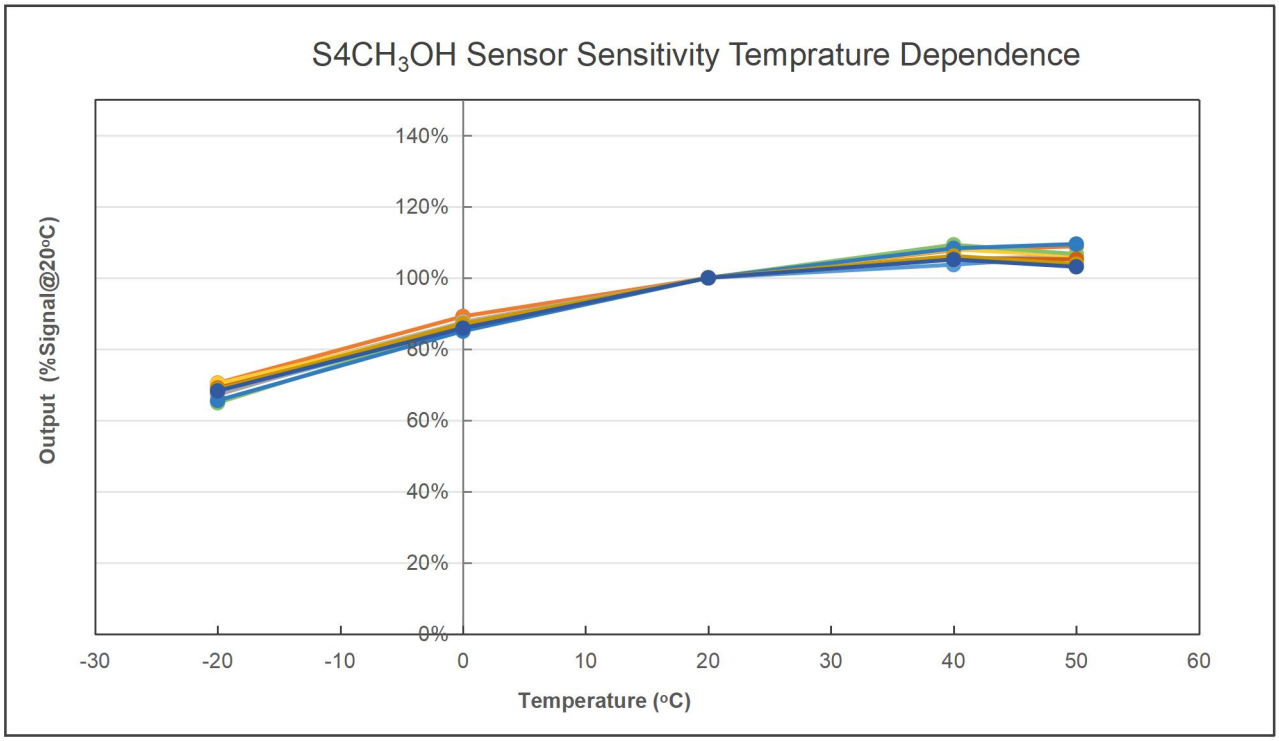
6. Sensor Performance



S4CH$_3$OH sensor response to CH$_3$OH gas



S4CH$_3$OH sensor baseline temperature dependence



S4CH_3OH sensor sensitivity temperature dependence

7. Cross Sensitivity

Interfering gas	Concentration（ppm）	Displayed（ppm CH_3OH）
NO	10	5.86
H_2	1000	50.75
H2S	20	24.17
CO	20	6.95
NH_3	50	0.05
NO_2	10	1.48
SO_2	20	5.21