

FECS43-20 - for the Detection of Sulfur Dioxide

Features:

- * High sensitivity/selectivity to SO₂
- * Quick response to SO₂
- * Linear output
- * Long life
- * Stable output signal at high-temperature
- * Unique leak-proof structure

The FECS43-20 is a unique electrochemical-type sulfur dioxide sensor. Its most notable features are stable output signal at high-temperature and a unique leak-proof structure. These features make the sensor ideal for SO₂ monitors and detectors in various fields.

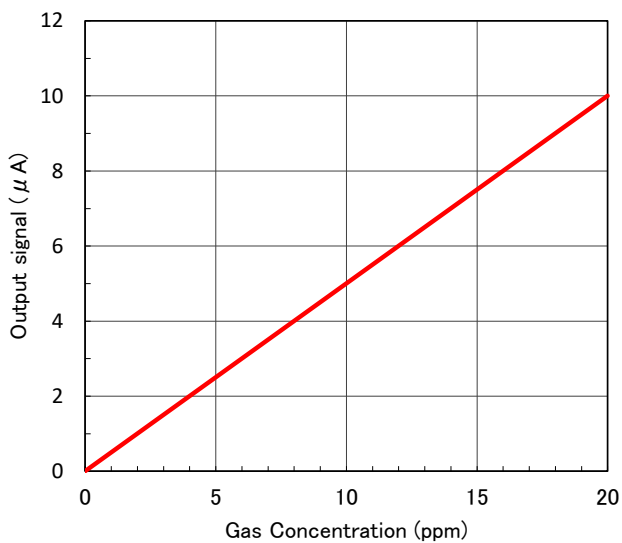
Applications:

- * Portable and fixed installation SO₂ monitors
- * SO₂ detectors



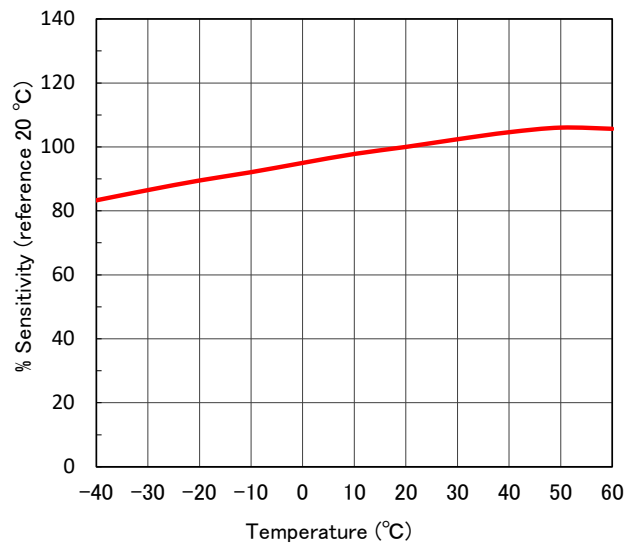
Sensitivity Characteristics:

Typical characteristics (linearity) of FECS43-20 (25°C) are shown below.



Temperature Dependency:

Typical characteristics (temperature dependency) of FECS43-20 are shown below.



Specifications:

Detection Gas	Sulfur Dioxide
Detection Range	0 ~ 20 ppm
Maximum Overload	150 ppm
Output Signal	500 ± 100 nA/ppm (*1)
Repeatability	±2% (*1)
Resolution	0.1 ppm (*1)
Baseline Range (Clean air)	-0.2 ~ +0.5 ppm (*1)
Response Time (t ₉₀)	< 25 sec (*1)
Baseline Shift (-20 ~ 40°C)	-0.2 ~ +0.2 ppm (*1)
Long Term Output Drift	< 2% /month (*1)
Expected Life Time	> 2 years (*1,*2)
Operating Temperature	-30 ~ 50°C
Operating Humidity	15 ~ 90% RH
Operating Pressure Range	1013 hPa ±10%
Recommended Load Resistor	10Ω
Bias Voltage	Not required
Position Sensitivity	None
Recommended Storage Temp.	0 ~ 20°C
Cap Color	Green
Weight	4.5g (approx.)

*1 Factory test data conditions: 20°C, 50%RH and 1013 hPa.

*2 Life expectancy in normal air under the factory test conditions is defined as the period until sensor output drops to 60% of its original value.

Cross Sensitivity Data :

Table1 shows the typical response of FECS43-20 to interference gases.

Table1 Cross Sensitivity of FECS43-20 (25°C)

Gas	Concentration (ppm)	Typical Sulfur Dioxide Concentration(ppm)Equivalent
Sulfur Dioxide	10	10
Carbon Monoxide	300	< 1
Carbon Dioxide	5,000	0
Hydrogen	400	< 1
Hydrogen Sulfide	15	0
Nitric Oxide	50	1
Nitrogen Dioxide	10	-10
Ammonia	20	0
Chlorine	5	-1

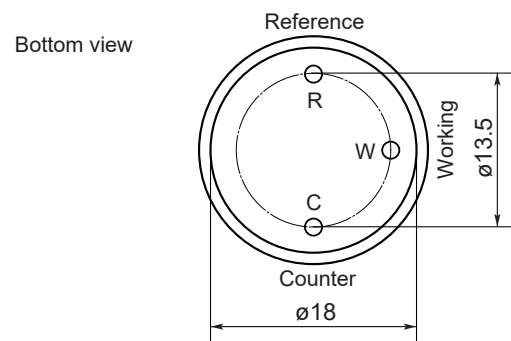
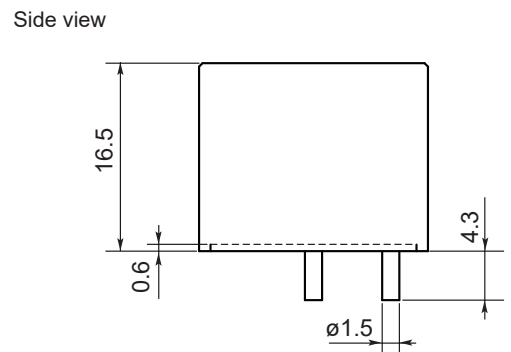
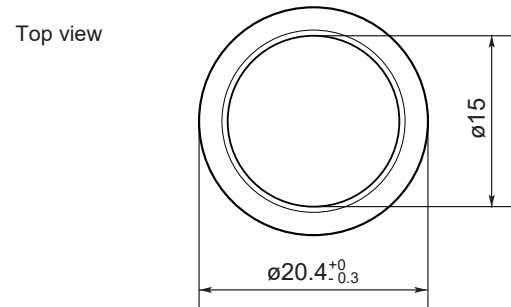
For information on warranty, please refer to Standard Terms and Conditions of Sale of Figaro USA Inc. All sensor characteristics shown in this brochure represent typical characteristics. Actual characteristics vary from sensor to sensor. The only characteristics warranted are those in the Specification table above.

Before purchasing this product, please read the Warranty Statements shown in our webpage by scanning this QR code.



https://figarosensor.com/pdf/Figaro_USA_Sales_T&C.pdf

Dimensions:



Unit: mm

All tolerance ± 0.1mm unless otherwise stated.

The following are the recommended socket pins of FECS-series gas sensors:

Recommended specifications:

- Basically fitting male pin diameter is φ1.5 mm
- Male pin insertion depth is 4.3 mm or more

Socket pins (example):

S.E.R. Corporation: SS 6000-00

Mac Eight Co., Ltd: PD-152

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