

## FECS43-20 - for the Detection of Sulfur Dioxide

### Features:

- \* High sensitivity/selectivity to SO<sub>2</sub>
- \* Quick response to SO<sub>2</sub>
- \* 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 SO<sub>2</sub> monitors and detectors in various fields.

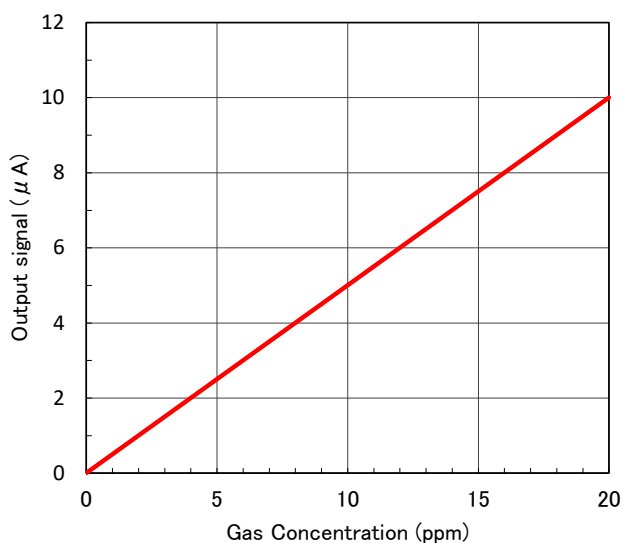
### Applications:

- \* Portable and fixed installation SO<sub>2</sub> monitors
- \* SO<sub>2</sub> detectors



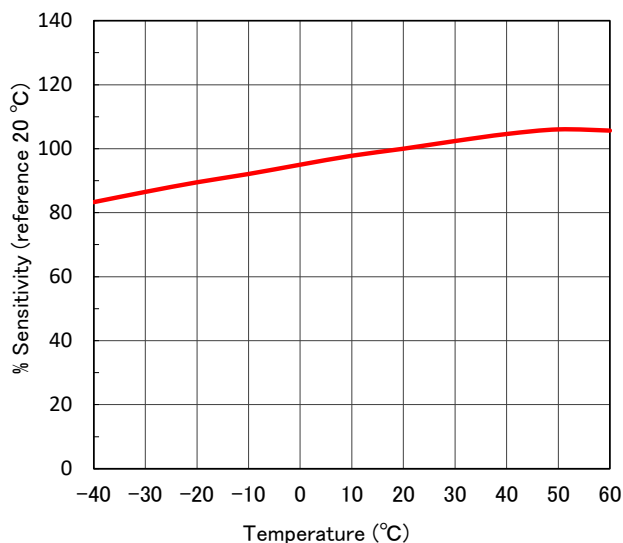
### Sensitivity Characteristics:

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



### Temperature Dependency:

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



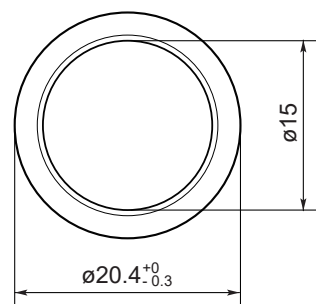
### Specifications:

Detection Gas	Sulfur Dioxide
Detection Range	0 ~ 20 ppm
Maximum Overload	150 ppm
Output Signal	500 ± 100 nA/ppm (*)
Repeatability	±2% (*)
Resolution	0.1 ppm (*)
Baseline Range (Pure air)	-0.2 ppm to +0.5 ppm equivalent (*)
Typical Response Time (t <sub>90</sub> )	< 25 sec (*)
Baseline Shift (-20 ~ 40°C)	< ±0.2 ppm equivalent(*)
Long Term Output Drift	< 2% /month (*)
Expected Life Time	> 2 years (*)
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.)

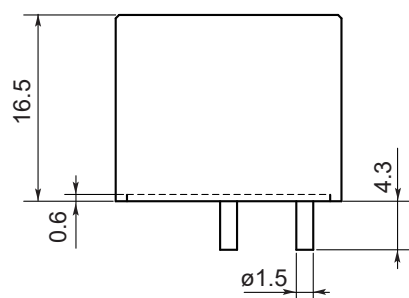
(\*) Performance data conditions: 20°C, 50%RH and 1013 hPa.

### Dimensions:

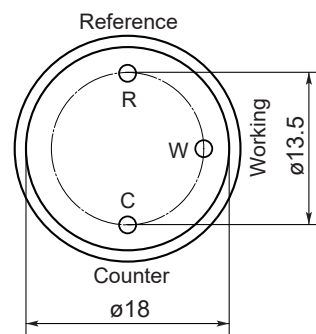
Top view



Side view



Bottom view



All dimensions in mm.

All tolerance ± 0.1mm unless otherwise stated.

### 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

#### FIGARO ENGINEERING INC.

1-5-11 Senba-nishi  
Mino, Osaka 562 JAPAN  
Phone: (81)-72-728-2561  
Fax: (81)-72-728-0467  
www.figaro.co.jp  
email: figaro@figaro.co.jp