

## FECS50-100 - for the Detection of Hydrogen Sulfide

### Features:

- \* High sensitivity/selectivity to H<sub>2</sub>S
- \* Quick response to H<sub>2</sub>S
- \* Small influence by CO
- \* Linear output
- \* Long life
- \* Stable baseline
- \* Unique leak-proof structure

Figaro's Hydrogen Sulfide Sensor FECS50-100 is a unique electrochemical-type hydrogen sulfide sensor. Its most notable features are small influence by CO and a unique leak-proof structure. These features make the sensor ideal for H<sub>2</sub>S monitors and detectors in various fields.

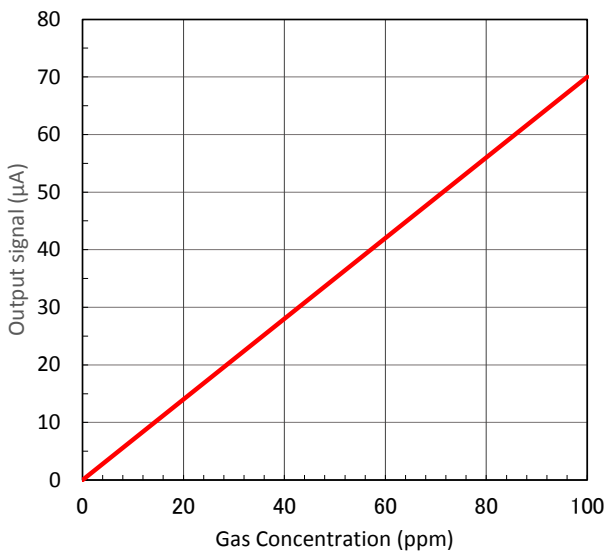
### Applications:

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



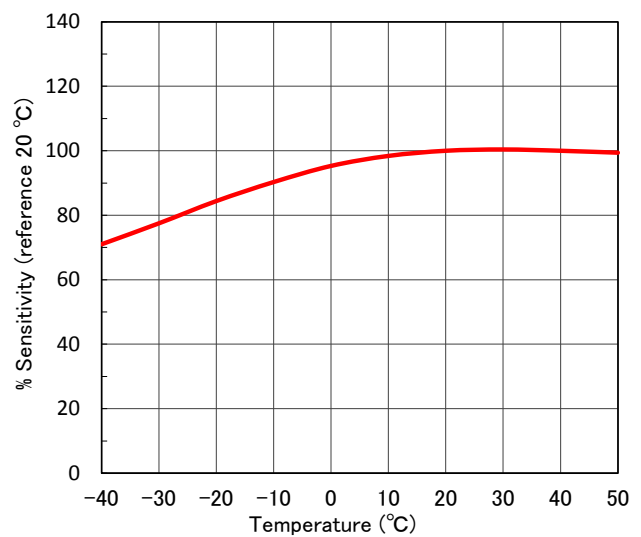
### Sensitivity Characteristics:

Typical characteristics (linearity) of FECS50-100 (20°C) are shown below.



### Temperature Dependency:

Typical characteristics (temperature dependency) of FECS50-100 are shown below.

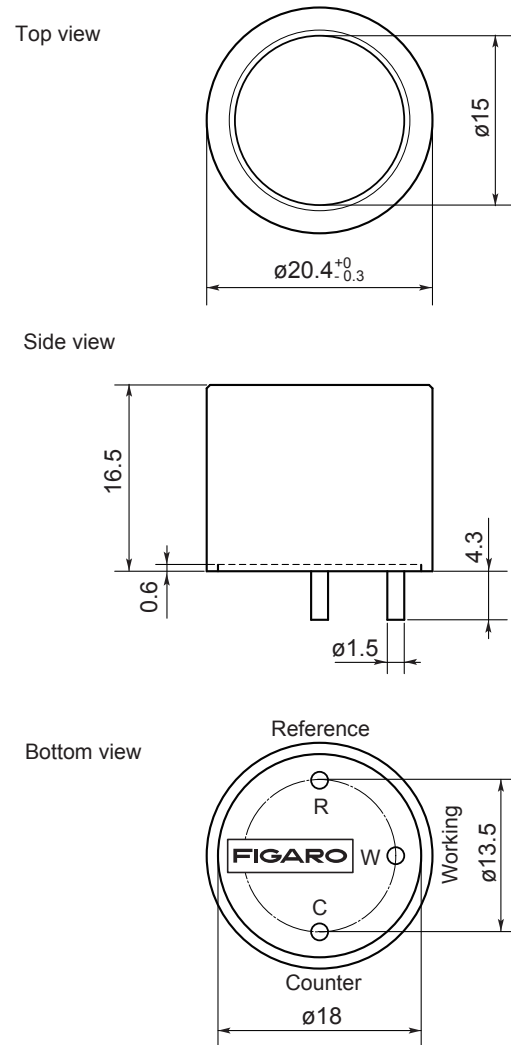


### Specifications:

|  |                         |
|--|-------------------------|
| Detection Gas                            | Hydrogen Sulfide        |
| Detection Range                          | 0 ~ 100 ppm             |
| Maximum Overload                         | 500 ppm                 |
| Output Signal                            | 700 ± 150 nA/ppm (*)    |
| Repeatability                            | ±2% (*)                 |
| Resolution                               | 0.1 ppm (*)             |
| Typical Baseline Range (Pure air)        | -0.1ppm to +0.4 ppm (*) |
| Typical Response Time (t <sub>90</sub> ) | < 30 sec (*)            |
| Baseline Shift (-20 ~ 40°C)              | < 0.5 ppm(*)            |
| Long Term Output Drift                   | < 2% /month (*)         |
| Expected Life Time                       | > 2 years (*)           |
| Operating Temperature                    | -40 ~ 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                |
| Storage Life                             | Less than 6 months      |
| Cap Color                                | Dark Blue               |
| Weight                                   | 4.5g (approx.)          |

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

### Dimensions:



All dimensions in mm.  
All tolerance ± 0.1mm unless otherwise stated.

### Cross Sensitivity Data :

Table1 shows the typical response of FECS50-100 to interference gases.

Table1 Cross Sensitivity of FECS50-100 (20°C)

| Gas              | Concentration (ppm) | Typical Hydrogen Sulfide Concentration(ppm)Equivalent |
|------------------|---------------------|---|
| Hydrogen Sulfide | 10                  | 10  |
| Carbon Monoxide  | 300                 | < 2   |
| Carbon Dioxide   | 5,000               | 0   |
| Hydrogen         | 1,000               | < 3   |
| Sulphur Dioxide  | 5                   | 0.5   |
| Nitric Oxide     | 30                  | 0.3   |
| Nitrogen Dioxide | 5                   | -1  |
| Ammonia          | 100                 | 0   |
| Ethanol          | 1,000               | < 2   |

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