

### FECS45-10 - for the Detection of Chlorine

#### Features:

- \* High sensitivity/selectivity to Cl<sub>2</sub>
- \* Linear output
- \* Long life
- \* Stable baseline
- \* Unique leak-proof structure

The FECS45-10 is a unique electrochemical-type chlorine sensor. Its most notable feature is its unique leak-proof structure, making it ideal for Cl<sub>2</sub> monitors and detectors in various fields.

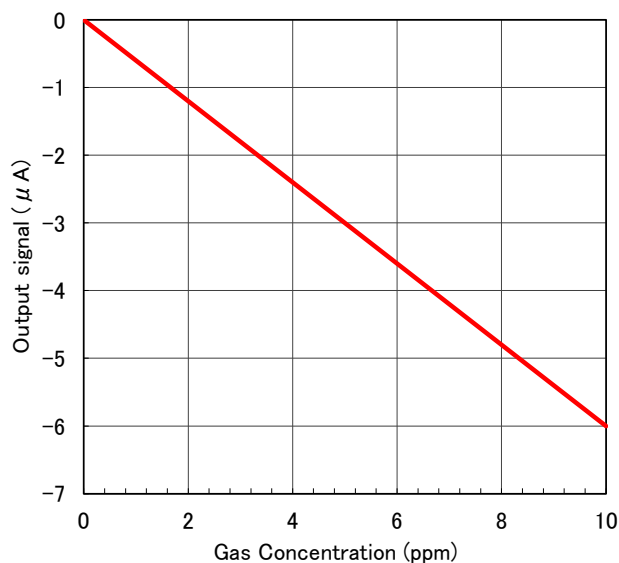
#### Applications:

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



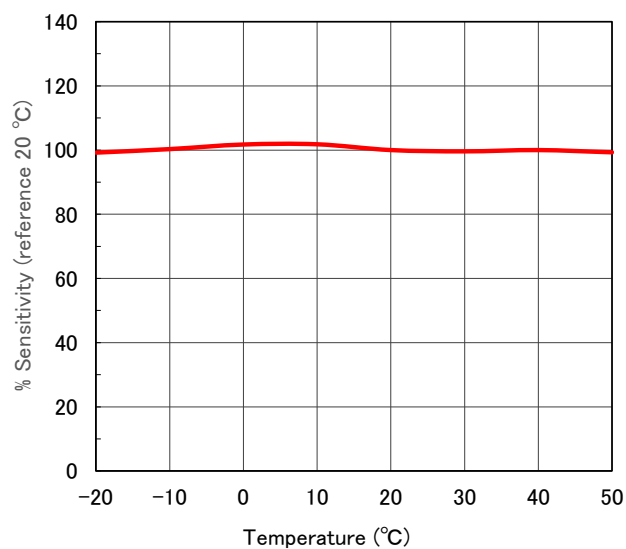
#### Sensitivity Characteristics:

Typical characteristics (linearity) of FECS45-10 (20°C) are shown below.



#### Temperature Dependency:

Typical characteristics (temperature dependency) of FECS45-10 are shown below.



### Specifications:

Detection Gas	Chlorine
Detection Range	0 ~ 10 ppm
Maximum Overload	50 ppm
Output Signal	-600 ± 150 nA/ppm (*1)
Repeatability	±2% (*1)
Resolution	0.1 ppm (*1)
Baseline Range (Clean air)	±0.2 ppm (*1)
Response Time (t <sub>90</sub> )	< 60 seconds (*1)
Baseline Shift (-20 ~ 40°C)	≤ 0.5 ppm (*1)
Long Term Output Drift	< 2% /month (*1)
Expected Life Time	> 2 years (*1,*2)
Operating Temperature	-20 ~ 50°C
Operating Humidity	15 ~ 90% RH
Operating Pressure Range	1013 hPa ±10%
Recommended Load Resistor	33Ω
Bias Voltage	Not required
Position Sensitivity	None
Recommended Storage Temp.	0 ~ 20°C
Cap Color	Brown
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 FECS45-10 to interference gases.

Table1 Cross Sensitivity of FECS45-10 (20°C)

Gas	Concentration (ppm)	Typical Chlorine Concentration(ppm)Equivalent
Chlorine	10	10
Carbon Monoxide	300	0
Carbon Dioxide	5,000	0
Hydrogen	1,000	0
Nitrogen Dioxide	10	10
Nitric Oxide	35	< -0.3
Hydrogen Sulfide	15	< -7.5
Sulphur Dioxide	20	0
Ethanol	100	0

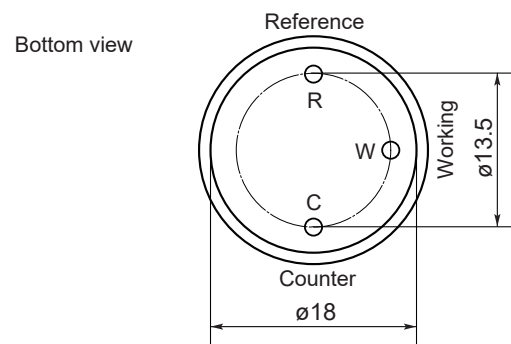
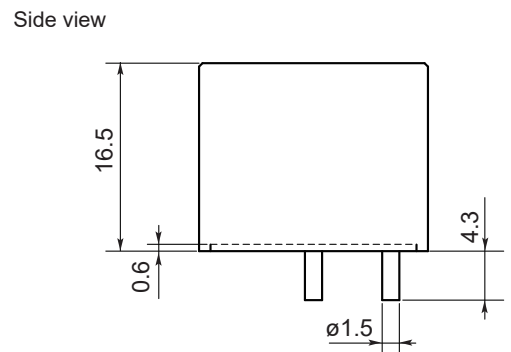
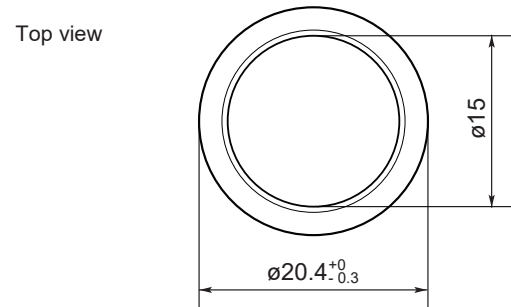
For information on warranty, please refer to Standard Terms and Conditions of Sale of Figaro USA Inc. All sensor characteristics shown in this brochure represent typical characteristics. Actual characteristics vary from sensor to sensor. The only characteristics warranted are those in the Specification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