

FECS44-1000 / -5000

- for the Detection of High Concentration Ammonia

Features:

- * High selectivity to NH₃
- * Small influence by H₂S
- * Excellent durability to NH₃ exposure
- * Linear output
- * Long life
- * Stable baseline
- * Unique leak-proof structure

The FECS44 is a unique electrochemical-type ammonia sensor. Its most notable features are small influence by H₂S, excellent durability to NH₃ exposure, and a unique leak-proof structure. These features make the sensor ideal for NH₃ monitors and detectors in various fields.

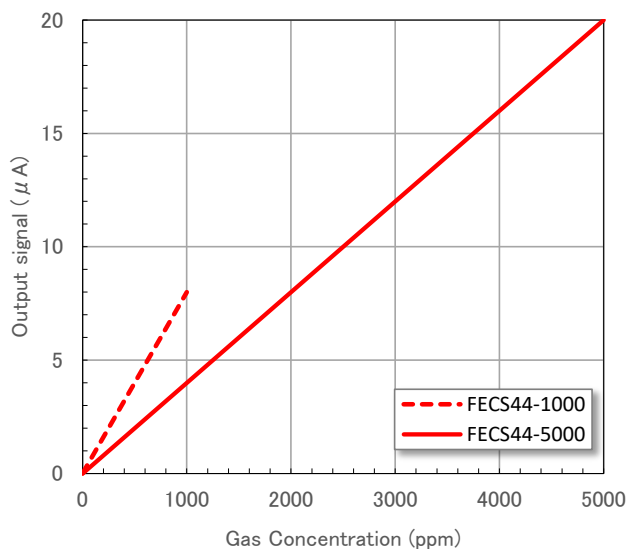
Applications:

- * Portable and fixed installation NH₃ monitors
- * NH₃ detectors
- * Ammonia leak detection in refrigerators



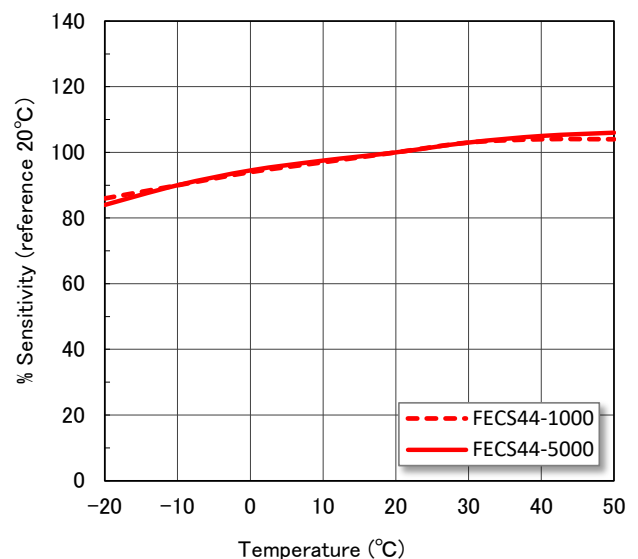
Sensitivity Characteristics:

Typical characteristics (linearity) of FECS44-1000 / -5000 (20°C) are shown below.



Temperature Dependency:

Typical characteristics (temperature dependency) of FECS44-1000 / -5000 are shown below.



Specifications:

Model Number	FECS44-1000	FECS44-5000
Detection Gas	Ammonia	
Detection Range	0 ~ 1000 ppm	0 ~ 5000 ppm
Maximum Overload	2500 ppm	5000 ppm
Output Signal	8 ± 4 nA/ppm (*1)	4 ± 2 nA/ppm (*1)
Repeatability	±10% (*)	
Resolution	10 ppm (*1)	20 ppm (*1)
Baseline Range (Clean air)	±6 ppm (*1)	±10ppm (*1)
Response Time (t ₉₀)	120 sec (typical)(*1)	150 sec (typical)(*1)
Baseline Shift (-30 ~ 40°C)	< 20 ppm(*1)	< 40 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	33Ω	
Bias Voltage	Not required	
Position Sensitivity	None	
Recommended Storage Temp.	0 ~ 20°C	
Cap Color	Purple	
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 FECS44-1000 / -5000 to interference gases.

Table1 Cross Sensitivity of FECS44-1000 / -5000 (20°C)

Gas	Concentration (ppm)	Typical Ammonia Concentration(ppm) Equivalent	
		FECS44-1000	FECS44-5000
Ammonia	100	100	100
Hydrogen Sulfide	20	0	0
Sulphur Dioxide	20	-8	-12
Carbon Dioxide	5,000	0	0
Carbon Monoxide	300	0	0
Hydrogen	1,000	0	0
Nitrogen Dioxide	20	0	0
Nitric Oxide	30	0	0
Ethanol	100	0	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.

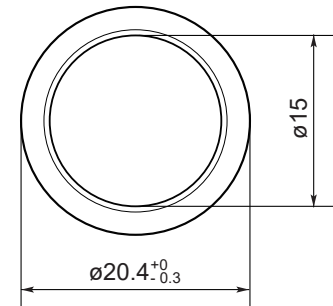
Before purchasing this product, please read the Warranty Statements shown in our webpage by scanning this QR code.



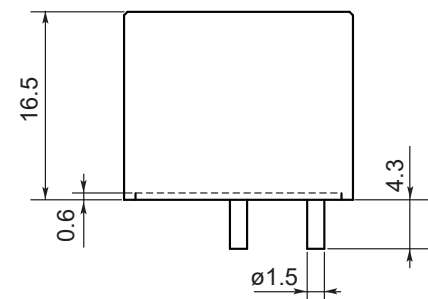
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Dimensions:

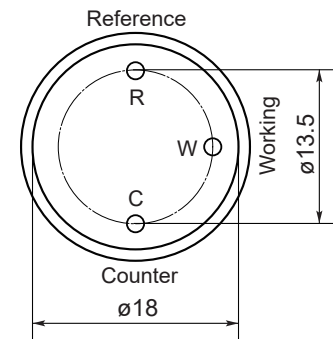
Top view



Side view



Bottom view



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 $\phi 1.5$ 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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