

# FECS44-100 / -200

## - for the Detection of Low Concentration Ammonia

### Features:

- \* High selectivity to NH<sub>3</sub>
- \* Small influence by H<sub>2</sub>S
- \* Excellent durability to NH<sub>3</sub> exposure
- \* Linear output
- \* Long life
- \* Stable baseline
- \* Unique leak-proof structure

Figaro's Ammonia Sensor FECS44 is a unique electrochemical-type ammonia sensor. Its most notable features are small influence by H<sub>2</sub>S, excellent durability to NH<sub>3</sub> exposure, and a unique leak-proof structure. These features make the sensor ideal for NH<sub>3</sub> monitors and detectors in various fields.

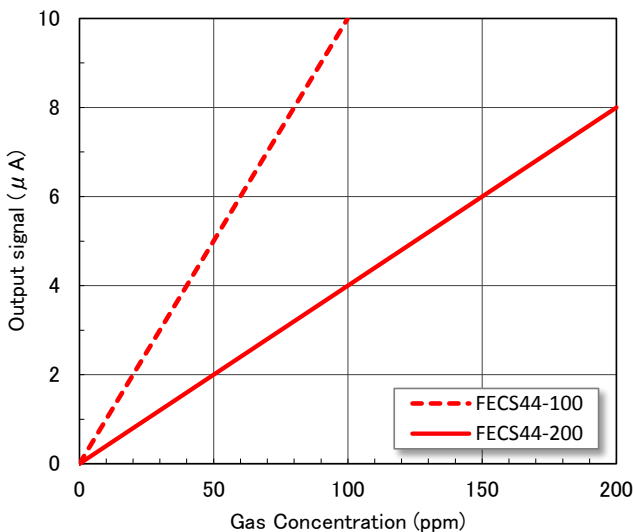
### Applications:

- \* Portable and fixed installation NH<sub>3</sub> monitors
- \* NH<sub>3</sub> detectors
- \* Ammonia leak detection in refrigerators



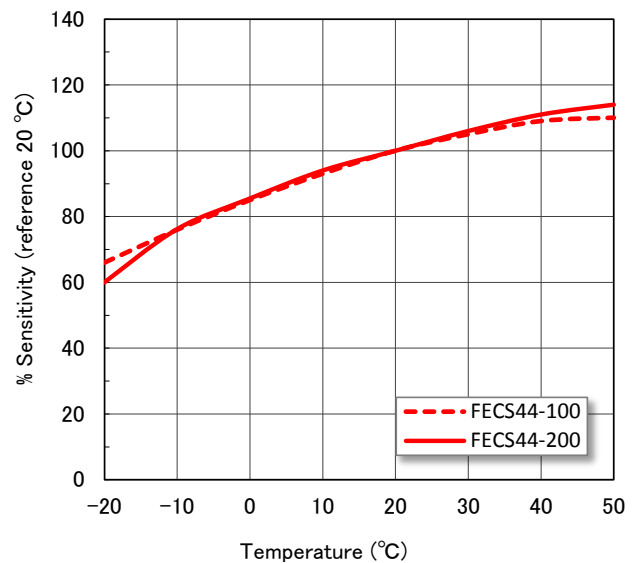
### Sensitivity Characteristics:

Typical characteristics (linearity) of FECS44-100 / -200 (20°C) are shown below.



### Temperature Dependency:

Typical characteristics (temperature dependency) of FECS44-100 / -200 are shown below.

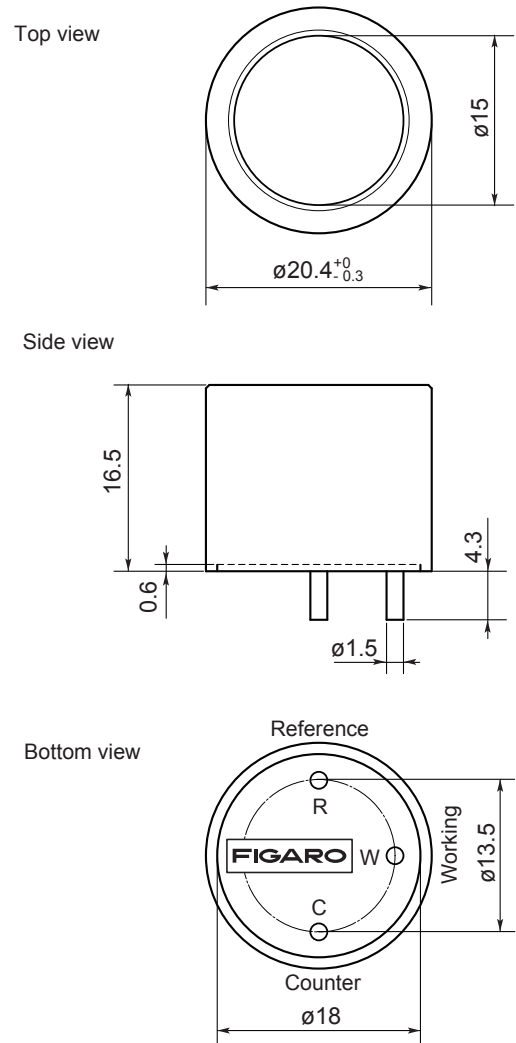


### Specifications:

Model Number	FECS44-100	FECS44-200
Detection Gas	Ammonia	
Detection Range	0 ~ 100 ppm	0 ~ 200 ppm
Maximum Overload	200 ppm	500 ppm
Output Signal	100 ± 30 nA/ppm (*)	40 ± 12 nA/ppm (*)
Repeatability	±10% (*)	±10% (*)
Resolution	1 ppm (*)	2 ppm (*)
Baseline Range (Pure air)	< ±2 ppm (*)	< ±4 ppm (*)
Typical Response Time (t <sub>90</sub> )	60 sec (*)	90 sec (*)
Baseline Shift (-30 ~ 50°C)	< 3 ppm(*)	< 6 ppm(*)
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	33Ω	
Bias Voltage	Not required	
Position Sensitivity	None	
Recommended Storage Temp.	0 ~ 20°C	
Storage Life	Less than 6 months	
Cap Color	Purple	
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 FECS44-100 / -200 to interference gases.

Table1 Cross Sensitivity of FECS44-100 / -200 (20°C)

Model Number	FECS44-100		FECS44-200	
	Concentration (ppm)	Typical Ammonia Concentration(ppm) Equivalent	Concentration (ppm)	Typical Ammonia Concentration(ppm) Equivalent
Ammonia	100	100	100	100
Hydrogen Sulfide	10	-1.5 ~ 0	10	-1.5 ~ 0
Sulphur Dioxide	10	-3	10	-2
Carbon Dioxide	5,000	0	5,000	0
Carbon Monoxide	300	0	300	0
Hydrogen	1,000	0	1,000	0
Nitrogen Dioxide	20	-1.5 ~ 0	20	0
Nitric Oxide	30	0	30	0
Ethanol	100	0	100	0

#### 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