

# Gas sensor module

## FIS3001-99NC-03/50

## FIS3001-99C4-03/50

FIS3001-99\*\*-03/50 gas sensor module is a product that incorporates a semiconductor gas sensor into the control circuit. The drive control of gas sensor and output signal processing are performed by the microcomputer program.



Without case (NC type)



With case (C4 type)

### Features

- **High quality and high reliability**  
The mounted semiconductor SB-type gas sensor developed by our company features high sensitivity, quick response, and excellent durability.
- **No need for calibration**  
The calibration with detection gas is already carried out at our factory. Therefore, you can use it as soon as the module is delivered to you.
- **Easy installation in your device**  
Our module is compact, lightweight, and easy to take out the output signal. You can incorporate our module into your device easily.
- **Can be used under severe environment/condition**  
You can choose module with or without case. Module with case has water-proof function, so that you can use under severe environment e.g. outside, inside of refrigerator etc.
- **Various output specifications**
  - Alarm output : 1 or 2 point(s) can be set.
  - Concentration output is included within serial signal.
  - Malfunction output : Sensor failure, circuit failure, various gas or silicone poisoning can be detected.

| Item                        | Specifications  |                     |
|-----------------------------|---|---------------------|
|                             | Without case (NC type)                                  | With case (C4 type) |
| Part No.                    | FIS3001-00NC-03/50                                      | FIS3001-00C4-03/50  |
| Mounted gas sensor          | SB-95-12  |                     |
| Target gas                  | CO, LNG(Methane)  |                     |
| Alarm response              | Within 30 seconds                                       |                     |
| Power supply                | 5.0V DC $\pm$ 5%  |                     |
| Alarm output                | CMOS, LED   | Open collector, LED |
| Alarm concentration         | CO:300 ppm CH <sub>4</sub> :0.500 % (Hysteresis : 70 %) |                     |
| Malfunction output          | CMOS, LED   | Open collector, LED |
| Concentration output        | Not included  |                     |
| Average power consumption   | 35 mA   |                     |
| Operating temperature range | -10~50 °C (no condensation)                             |                     |
| Storage temperature range   | -40~60 °C (no condensation)                             |                     |
| Dimension                   | 28 x 41 x 20(H) mm                                      | 31 x 44 x 20(H) mm  |
| Weight                      | 5 g   | 19 g                |

| Connector pins specifications |   |   |
|-------------------------------|---|---|
| PIN #                         | Specification   | <p>■ <b>Evaluation method</b></p> <ol style="list-style-type: none"> <li>1. Apply the power supply voltage with pin 1 as DC5V and pin 2 as GND.</li> <li>2. Wait for about 7 seconds until the initial warm-up operation is completed.<br/>(Green LED blinks)</li> <li>3. When the gas concentration exceeds the alarm level, the alarm output turns ON (LED blinks) and automatically canceled when the gas concentration gets decreased.</li> <li>4. When you finish the measurement, turn off the input voltage.</li> </ol> <p>■ <b>Notes on evaluation</b></p> <ul style="list-style-type: none"> <li>● During operation, the sensor failure is always observed. In case of failure, the LED (red) and LED (green) will blink alternately at 0.25 second intervals, and if the sensor returns to normal, LED will switch itself off automatically.</li> <li>● There is no regulation on the mounting direction of the product.</li> <li>● Do not spray high-concentrated gas directly on the gas sensor.</li> <li>● Avoid storage or use near silicon or organic solvents.</li> </ul> |
| 1                             | DC5.0 V $\pm$ 5 %   |   |
| 2                             | GND   |   |
| 3                             | Malfunction output<br>NC type : CMOS output<br>C4 type : Open collector           |   |
| 4                             | CO alarm output<br>NC type : CMOS output<br>C4 type : Open collector              |   |
| 5                             | CH <sub>4</sub> alarm output<br>NC type : CMOS output<br>C4 type : Open collector |   |
| 6                             | Concentration output<br>(Serial signal)   |   |
| 7-10                          | —   |   |

Please contact

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In the interest of continued product improvement, we reserve the right to change design features without prior notice.