## FSM-T-04A- Pre-calibrated module for combustible gas

### **Features:**

- \* Linear analog output proportional to gas concentration
- \* Maintenance free
- \* Compact size
- \* Meets RoHS requirements

## **Applications:**

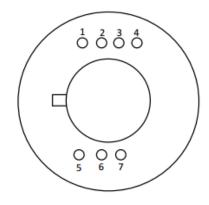
- \* Gas leak detection in fuel cell systems
- \* Hydrogen & combustible gas leak detectors

The **FSM-T-04A** combustible gas sensor module is a new unit which utilizes **TGS6812**, catalytic pellistor type gas sensor which features durability and stability. This module provides analog output voltage proportional to hydrogen gas concentration.(There is a memory in module, where factory calibration data has been store). **FSM-T-04A** has conformal coatings for moisture proofing and electrical insulation purposes, and is also capable of detecting sensor wire breakage. The unit has a wide range of operating temperature from -10° to +70°C.



Furthermore, the unit can detect CH4, LPG, H2. It is less sensitivity to VOCs gas, it immunes poison by silicon compounds, it suits to work at rugged environment.

#### Pins and connection:



| Pins | Name | Description           |  |
|------|------|-----------------------|--|
| 1    | WP   | I2C write protection  |  |
| 2    | SCK  | I2C Clock             |  |
| 3    | SDA  | I2C Data              |  |
| 4    | 5V   | Input voltage         |  |
| 5    | 3V   | Input voltage         |  |
| 6    | GND  | Ground                |  |
| 7    | Vout | Analog Voltage Output |  |

# **Specification:**

| Product name             | Combustible gas sensor module  |                                 |  |
|--------------------------|--|---------------------------------|--|
| Model No.                | FSM-T-04A  |                                 |  |
| Gas sensor               | TGS6812 (catalytic type)   |                                 |  |
| Detection range          | 0 $^{\sim}$ 50,000ppm CH4 (also can detect methane, iso-butane, and propane) |                                 |  |
| Error                    | ± 3%LEL  |                                 |  |
| Output voltage           | 0.5~4.5V DC(Max 5V)  |                                 |  |
| (Vconc)                  | Trouble  | $V$ conc= $0\sim0.1V$           |  |
| Factory setting output   | Vconc in air   | 0.5 <sup>~</sup> 1.5V           |  |
| Response time (T90)      | ≤30S   |                                 |  |
| Operating conditions     | -10°C ~+70°C, 20~95%RH (No condensing)                                       |                                 |  |
| Storage conditions       | −10°C ~+80°C, 20~95%RH   |                                 |  |
| Input voltage (VIN)      | $5.0\pm0.2$ V DC , $3.0\pm0.1$ V DC  |                                 |  |
| Power consumption        | ≤1.5W  |                                 |  |
| Weight                   | 15g or less  |                                 |  |
| Dimensions               | φ 23.6mm H:23.2mm  |                                 |  |
|                          | Ambient conditions   | $20 \pm 2$ °C, $65 \pm 5$ %RH   |  |
| Standard test conditions | Circuit conditions   | $5.0\pm0.2$ V、 $3.0\pm0.1$ V DC |  |
| Standard test conditions | Conditioning period prior to test  | ≥10 minutes                     |  |

## **Dimensions:**

