

# EM08 - Evaluation Module for TGS8-series Sensors

### Features:

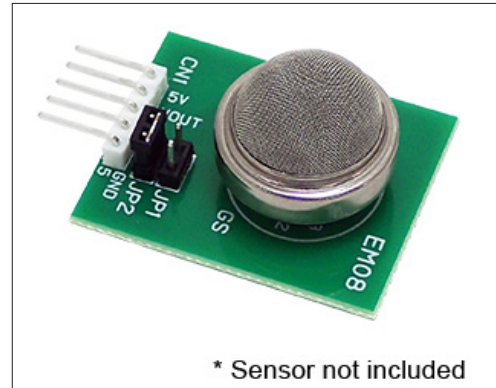
- \* Measures output voltage of TGS8-series MOS gas sensors
- \* Selectable from two types of load resistors (RL) according to detected gas and its concentration

### Description:

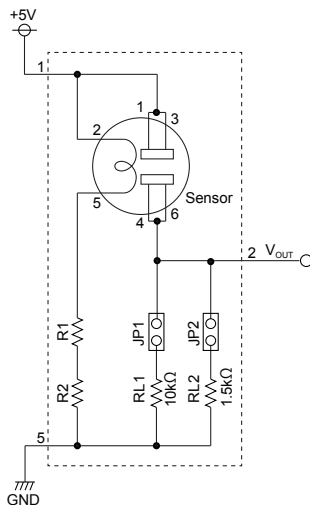
This module conveniently facilitates the evaluation of the characteristics of the MOS gas sensor TGS8-series. When evaluating sensor characteristics, it is recommended to convert the output voltage ( $V_{out}$ ) of this module into the sensor resistance value ( $R_s$ ) and the rate of change of the sensor resistance value.

\* For the characteristics of TGS8-series sensors, please refer to the *Product Information* document for each sensor.

\* This module will output the resistance value of the TGS8-series sensor as a voltage change. Temperature compensation for sensor output is not a feature provided by this module.



### Circuit Diagram:



### Pin Connections:

Pin No.	Name	Description
1	Vc	Input voltage
2	VOUT	Output voltage
3	NC	No connection
4	NC	No connection
5	GND	Ground

### RL Setting (Jumper Pin Connection):

Recommended Load Resistor (*1)		Jumper
RL1	10kΩ	JP1
RL2	1.5kΩ	JP2

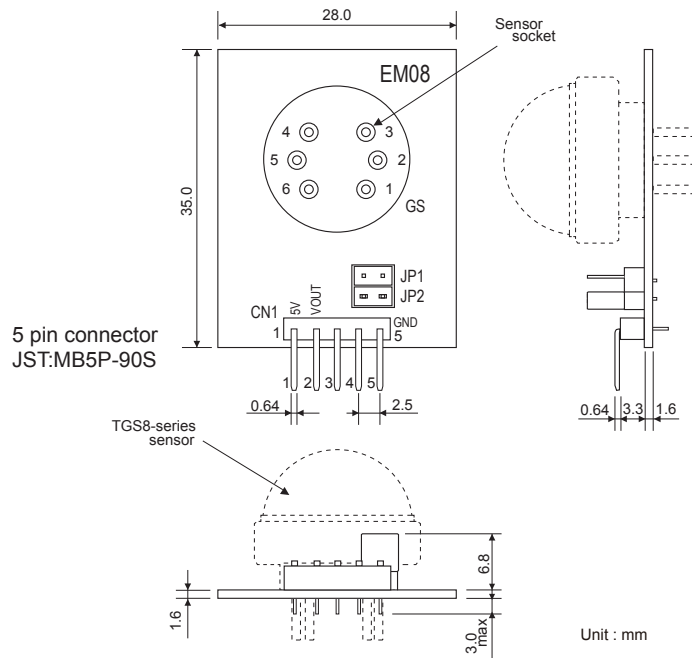
\*1 Jumper pin is connected to JP2 at time of factory setting.

\*2 If sensor output is too small to measure for your application, please select Jumper pin JP1.

Sensor resistance is calculated using the following formula:

$$R_s = (V_c / V_{out} - 1) \times R_L$$

## Structure and Dimensions:



- \*TGS8 sensor is not included. Insert sensor in the sensor socket as shown in the above drawing.
- \* Suggested female connectors mating to the 5 pin connector (JST MB5P-90S): JST XHP-5P or 05JQ-BT
- \* Ensure that the connectors are inserted properly as designed.
- \* Ensure that pin 2 is inserted so that the white dot of pin 2 of TGS826 matches with the socket number on the sensor base.

## Specifications:

Item	Specification
Product Name	Evaluation module for TGS8-series
Model No.	EM08
Applicable sensor	TGS8-series
Operating conditions	-10~+50°C/<95%RH (no condensation)
Output voltage (V <sub>OUT</sub> )	up to 5.00V max.
Circuit voltage	5.00 ± 0.2V DC

### NOTE:

This module is designed for the evaluation of TGS8-series sensors only. If this module is to be considered for commercial product application, please contact Figaro.

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