

# EM26 - Evaluation Module for TGS26-series Sensors

### Features:

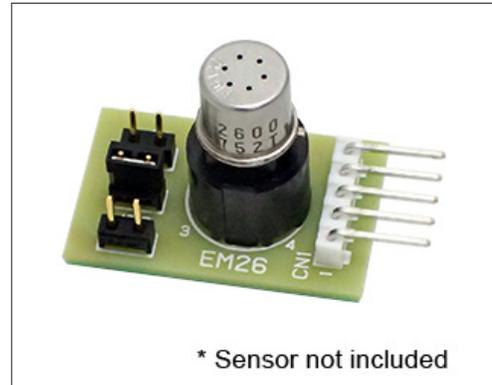
- \* Measures output voltage of TGS26-series MOS gas sensors
- \* Selectable from three types of load resistors (RL) according to detected gas and its concentration

### Description:

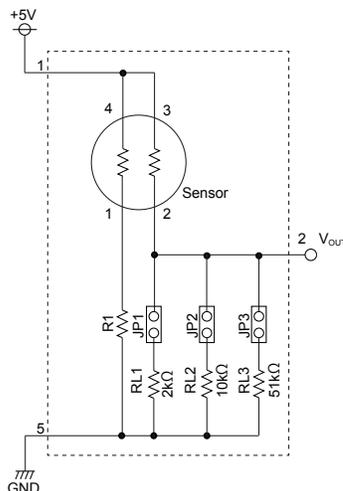
This module conveniently facilitates the evaluation of the characteristics of the MOS gas sensor TGS26-series. When evaluating sensor characteristics, it is recommended to convert the output voltage (Vout) of this module into the sensor resistance value (Rs) and the rate of change of the sensor resistance value.

\* For the characteristics of TGS26-series sensors, please refer to the *Product Information* document for each sensor.

\* This module will output the resistance value of the TGS26-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	Applicable Sensor Model	
RL1	2kΩ	JP1	TGS2610, 2611, 2612, 2630
RL2	10kΩ	JP2	TGS2600, 2602, 2603, 2620
RL3	51kΩ	JP3	*2

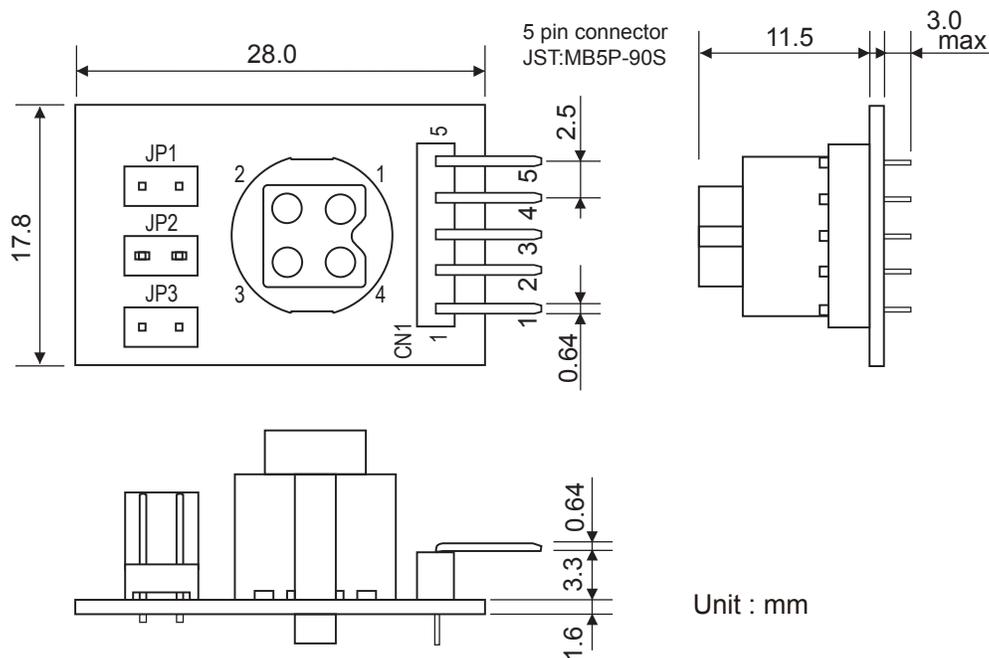
\*1 Jumper pin is connected to JP2 at time of factory setting.

\*2 If sensor output is too small to measure for your application, select a load resistor which is larger than originally recommended.

Sensor resistance is calculated using the following formula:

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

## Structure and Dimensions:



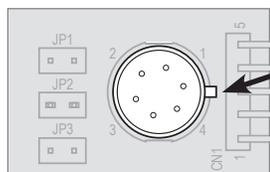
\*TGS26 sensor is not included. Insert sensor in the sensor socket as shown in the above drawing.

\* When the sensor is to be inserted into the socket, please make sure that the position of the protrusion is correct. (Please refer to the drawing below)

\* Suggested female connectors mating to the 5 pin connector (JST MB5P-90S): JST XHP-5P or 05JQ-BT

\* Please make sure that the connectors are inserted properly as designed.

### How to insert sensor into module:



Ensure that the sensor is inserted so that the protrusion on the sensor base is facing the connector.

## Specifications:

Item	Specification
Product Name	Evaluation module for TGS26-series
Model No.	EM26
Applicable sensor	TGS26-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 TGS26-series sensors only. If this module is to be considered for commercial product application, please contact Figaro.

### FIGARO GROUP

#### HEAD OFFICE

**Figaro Engineering Inc.**  
 1-5-11 Senba-nishi  
 Mino, Osaka 562-8505 JAPAN  
 Tel.: (81) 72-728-2561  
 Fax: (81) 72-728-0467  
 email: figaro@figaro.co.jp

#### OVERSEAS

**Figaro USA Inc.**  
 121 S. Wilke Rd. Suite 300  
 Arlington Heights, IL 60005 USA  
 Tel.: (1) 847-832-1701  
 Fax.: (1) 847-832-1705  
 email: figarousa@figarosensor.com