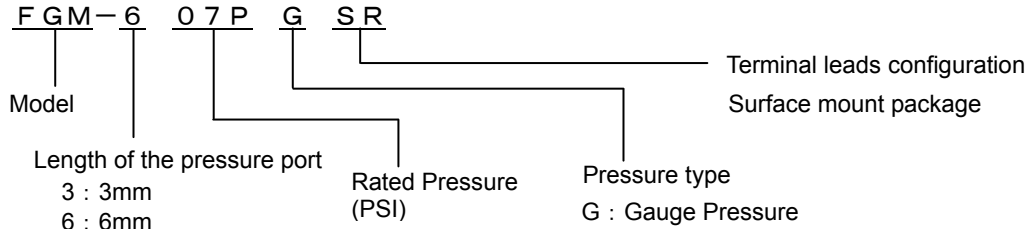


■Features

Surface mount package

■Ordering Information



	Weight (grams)		Weight (grams)
	0.3		0.35

Measurable pressure range(kPa)	Part number	
	3mm pressure port	6mm pressure port
-13.79 to 13.79	FGM-302PGSR	FGM-602PGSR
-34.47 to 34.47	FGM-305PGSR	FGM-605PGSR
-48.26 to 48.26	FGM-307PGSR	FGM-607PGSR
-98.07 to 103.4	FGM-315PGSR	FGM-615PGSR
-98.07 to 206.8	FGM-330PGSR	FGM-630PGSR
-98.07 to 344.7	FGM-350PGSR	FGM-650PGSR
-98.07 to 482.6	FGM-370PGSR	FGM-670PGSR
-98.07 to 827.4	FGM-3120PGSR	FGM-6120PGSR

RoHS compliance

■Specifications

Model	02PG	05PG	07PG	15PG	30PG	50PG	70PG	120PG	Unit	
Recommended operating conditions										
Pressure type	Gauge pressure									-
Rated pressure	13.79	34.47	48.26	103.4	206.8	344.7	482.6	827.4	kPa	
Measurable pressure range	-13.79 to 13.79	-34.47 to 34.47	-48.26 to 48.26	-98.07 to 103.4	-98.07 to 206.8	-98.07 to 344.7	-98.07 to 482.6	-98.07 to 827.4	kPa	
Temperature range	0 to 50									deg.C
Pressure media	Non-corrosive gases only (No liquid)									-
Excitation current (Constant)	1.5									mADC
Absolute maximum rating										
Maximum load pressure	Twice of rated pressure								1.5 times of rating pressure	-
Maximum excitation current	3.0									mADC
Operating temperature	-20 to 100									deg.C
Storage temperature	-40 to 120									deg.C
Operating humidity	30 to 80 (Non dew condition)									%RH
Electric characteristics (Drive Current 1.5mA constant ,ambient temperature Ta=25deg.C)										
Output span voltage	60 to 140 (at 0kPa to rated pressure)									mV
Offset voltage	+/-20 (at 0kPa)									mV
Bridge resistance	4000 to 6000									Ω
Response time	2 (for the reference)									msec.
Accuracy	TSO*	+/-5								%FS/0-50deg.C
	TCS*	2.5								
	Linearity	+/-0.5	+/-0.3					+/-0.5	+/-0.6	%FS
	Pressure hysteresis	+/-0.4	+/-0.2					+/-0.4		%FS

*TSO : Temperature sensitivity of offset voltage(Temperature range from 0-50 deg.C)

*TCS : Temperature coefficient of output span voltage(Temperature range from 0-50 deg.C)

$P1 = 0 \text{ kPa}$ $T1 = 0 \text{ deg.C}$
 $P2 = 1/2 \times P3 \text{ (kPa)}$ $T2 = 25 \text{ deg.C}$
 $P3 = \text{rated pressure (kPa)}$ $T3 = 50 \text{ deg.C}$

Offset voltage (mV)

$$V_{\text{off}} = V(P1, T)$$

$$V_{\text{off}}(0) = V(P1, T1)$$

$$V_{\text{off}}(25) = V(P1, T2)$$

$$V_{\text{off}}(50) = V(P1, T3)$$

Output voltage at full scale (mV)

$$V_{\text{fs}} = V(P3, T)$$

$$V_{\text{fs}}(0) = V(P3, T1)$$

$$V_{\text{fs}}(25) = V(P3, T2)$$

$$V_{\text{fs}}(50) = V(P3, T3)$$

Output span voltage (mV)

$$SV = V_{\text{fs}} - V_{\text{off}}$$

$$SV(0) = V_{\text{fs}}(0) - V_{\text{off}}(0)$$

$$SV(25) = V_{\text{fs}}(25) - V_{\text{off}}(25)$$

$$SV(50) = V_{\text{fs}}(50) - V_{\text{off}}(50)$$

Temperature sensitivity of offset voltage (%FS)

$$TSO = \{ \text{LARGER ONE} \} / SV(25) \times 100$$

LARGER ONE = larger absolute value which of $\{V_{\text{off}}(0) - V_{\text{off}}(25)\}$ and $\{V_{\text{off}}(50) - V_{\text{off}}(25)\}$

Temperature coefficient of output span voltage (%FS)

$$TCS = \{ \max[SV(0), SV(25), SV(50)] - \min[SV(0), SV(25), SV(50)] \} / SV(25) \times 100$$

Linearity (%FS)

$$NL = \{ V(P2, T2) - [V_{\text{off}}(25) + V_{\text{fs}}(25)] / 2 \} / SV(25) \times 100$$

Pressure hysteresis (%FS)

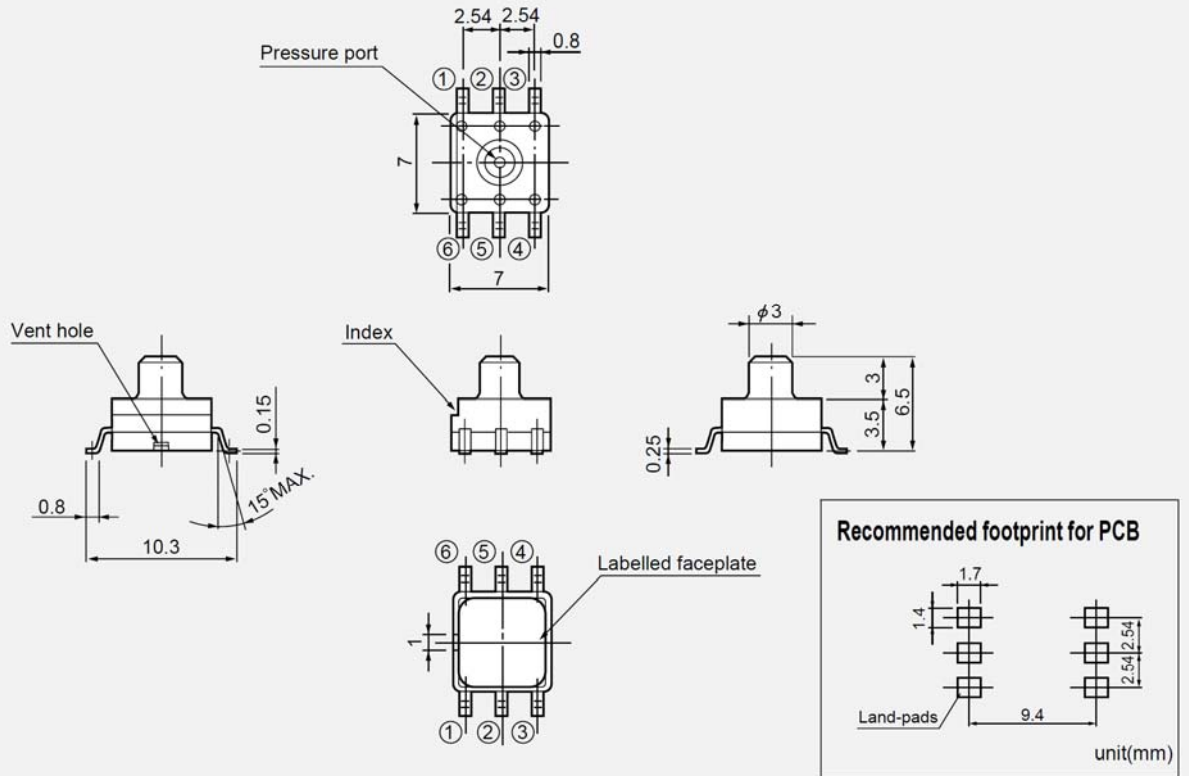
$$\text{Phys} = \{ V_{\text{off}}'(25) - V_{\text{off}}(25) \} / SV(25) \times 100$$

$V_{\text{off}}'(25)$: Output voltage against P1 after stressing by P3 pressure.

■ Outline dimensions ■

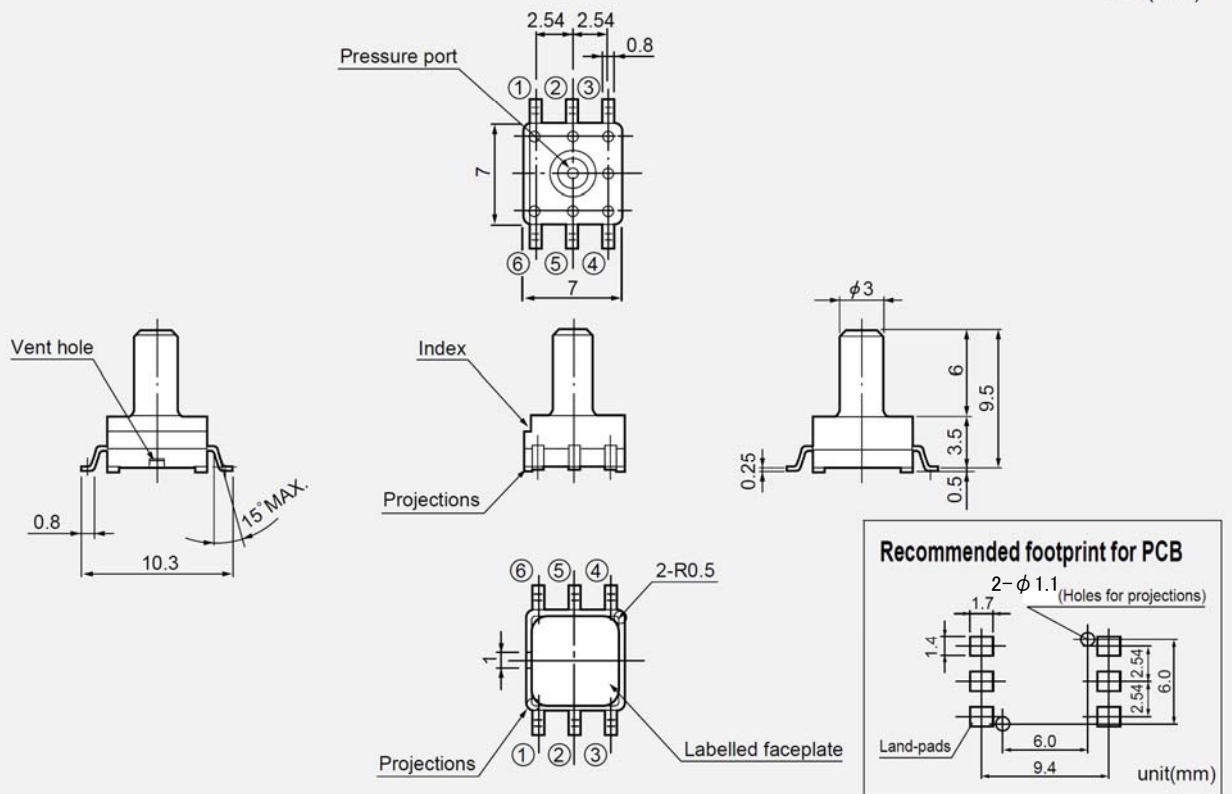
FGM-3

unit(mm)

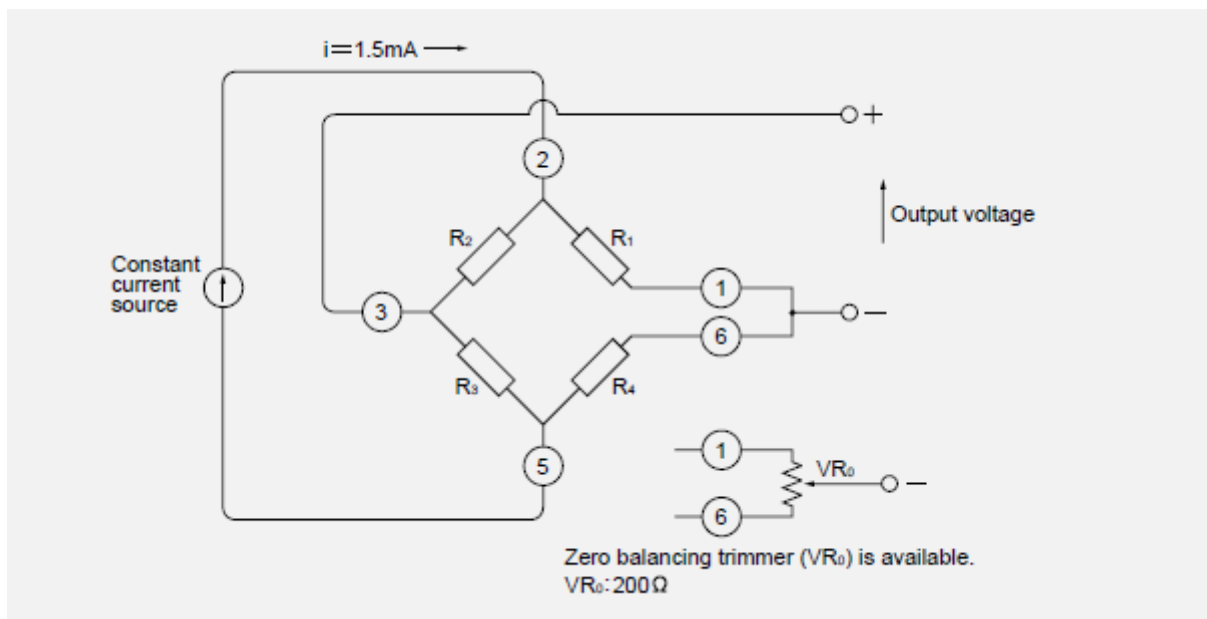


FGM-6

unit(mm)



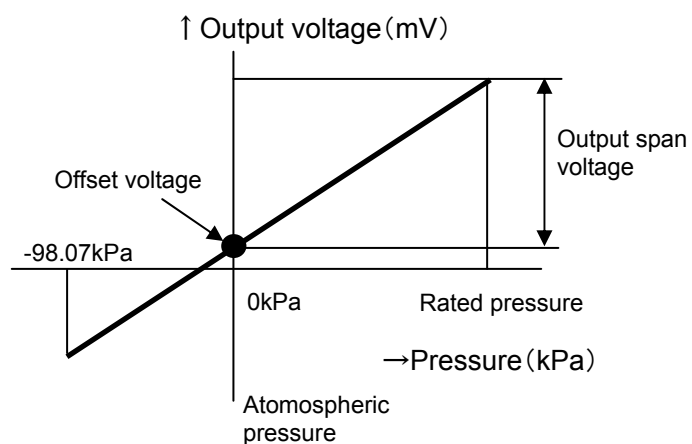
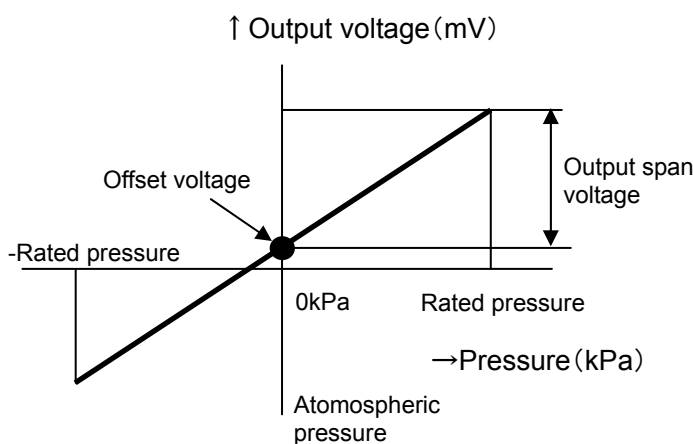
■ Connection diagram ■



■ Output characteristics ■

<302PG~307PG>
<602PG~607PG>

<315PG~3120PG>
<615PG~6120PG>

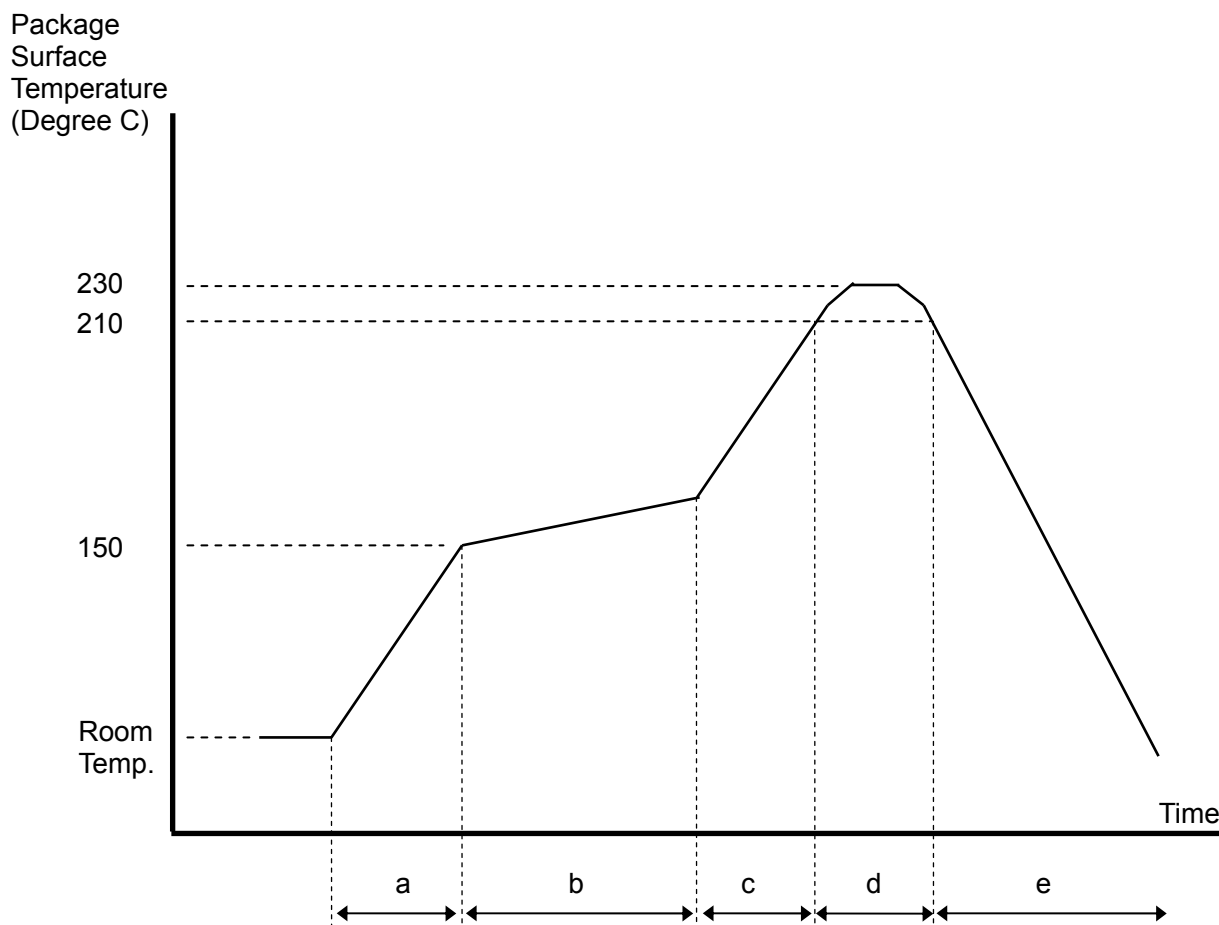


Note ; Please read instruction "Notes" before using the sensor.
Fujikura reserves the right to change specifications without notice.

Please keep the sensors sealed using static shielding bags on storage. The pins of the sensor are plated by Ag. If the sensors expose to an atmosphere, the pins will be black by sulfuration.

Please set Zero-calibration function up your products. The offset voltage may be shifted some mechanical stress such as mounting, installation and etc. over longtime using.

Reflow Soldering process recommendation profile



- | | |
|-------------------|--|
| a: Ramp up rate | 1 or 2 deg.C/sec. |
| b: Pre-heating | 150 to 180 deg.C, within 60 to 120sec. |
| c: Ramp up rate | 1 to 2 deg.C/sec. |
| d: Heating | max. 230 deg.C, max. 10sec. 210 deg.C, within 30sec. |
| e: Rump down rate | 1 or 2 deg.C/sec. |

- Note ;
- 1) Temperature means Surface temperature of the sensor package.
 - 2) Reflow process max. 2 times.
 - 3) Do not wash the sensor.
 - 4) Do not put the solder and flux on the sensor package.

If you have any questions regarding technical issues or specifications, please contact us.
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