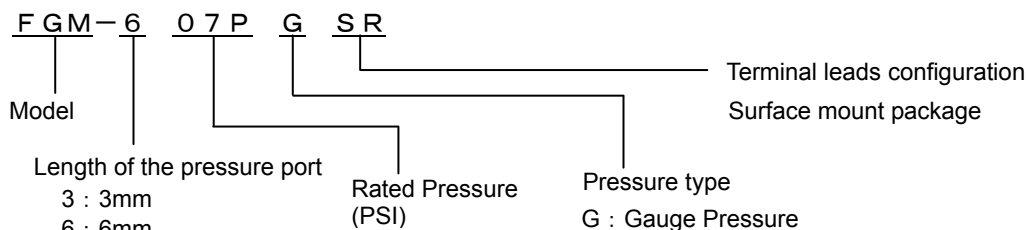


■Features

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)

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

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)

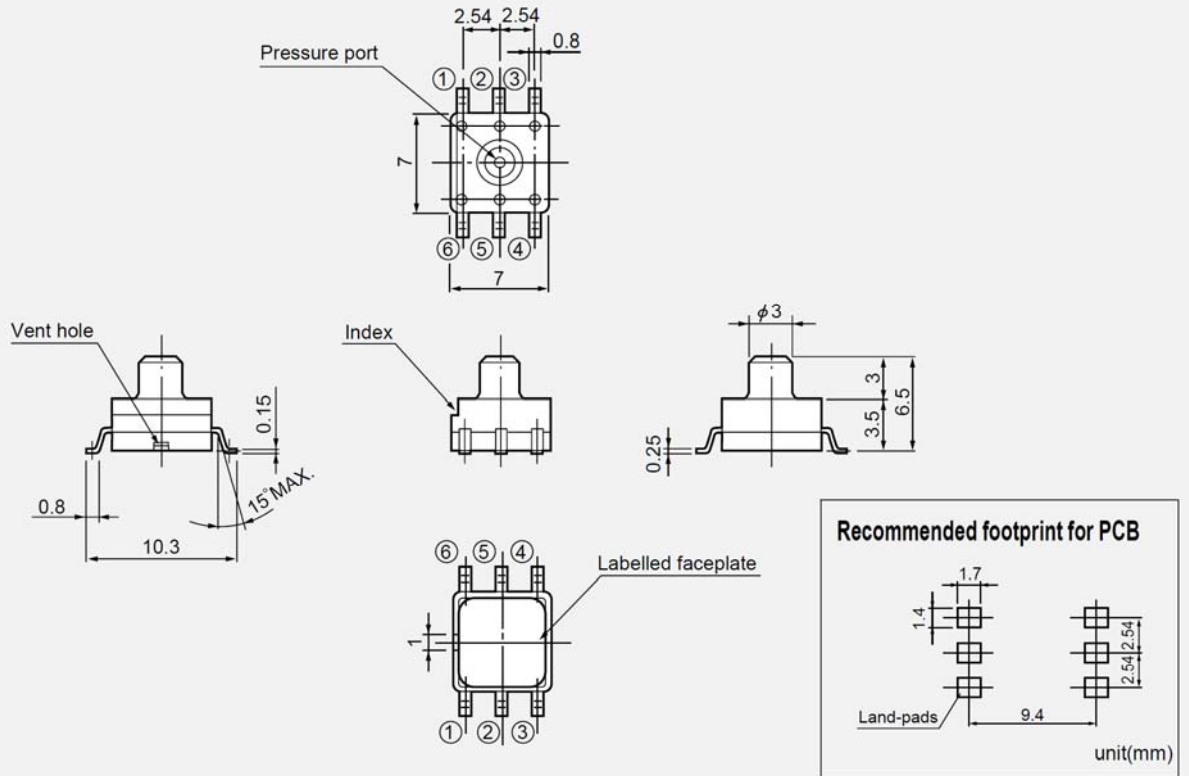
$$\text{Phys} = \{ V_{\text{off}}'(25) - V_{\text{off}}(25) \} / SV(25) \times 100$$

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

■ Outline dimensions ■

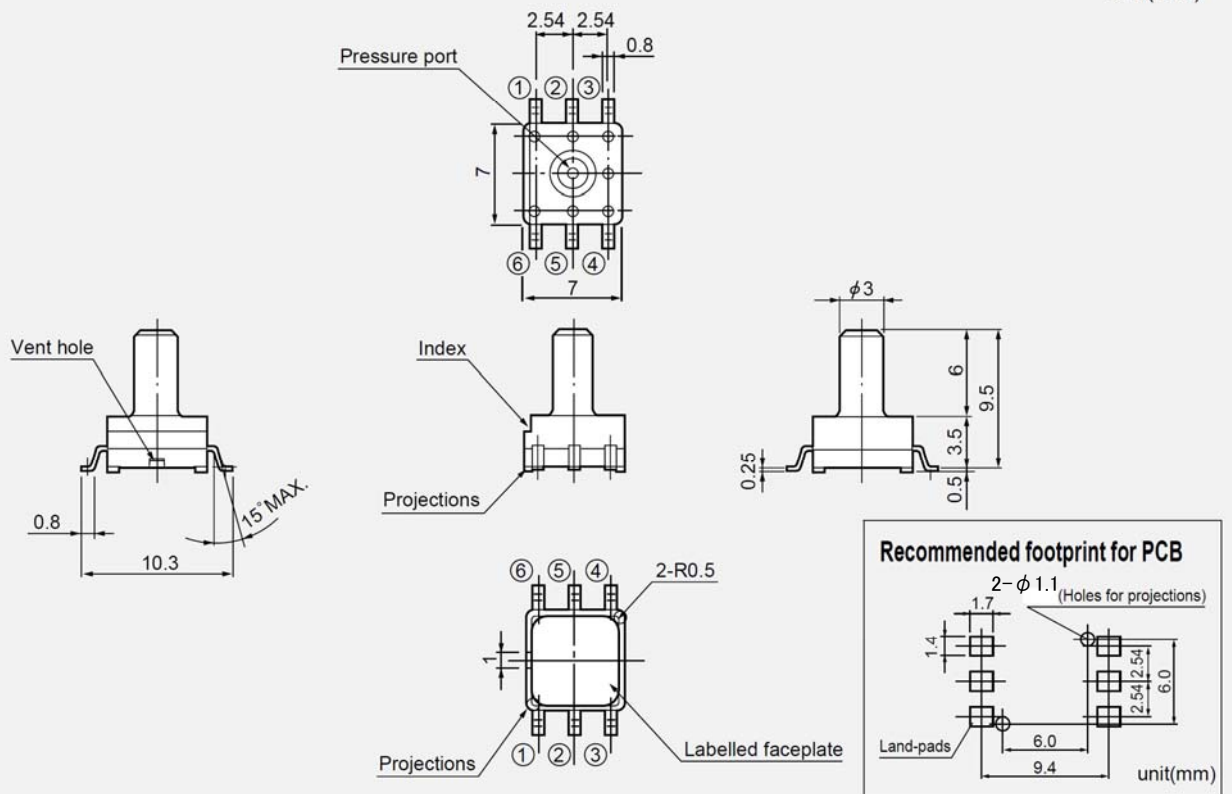
FGM-3

unit(mm)

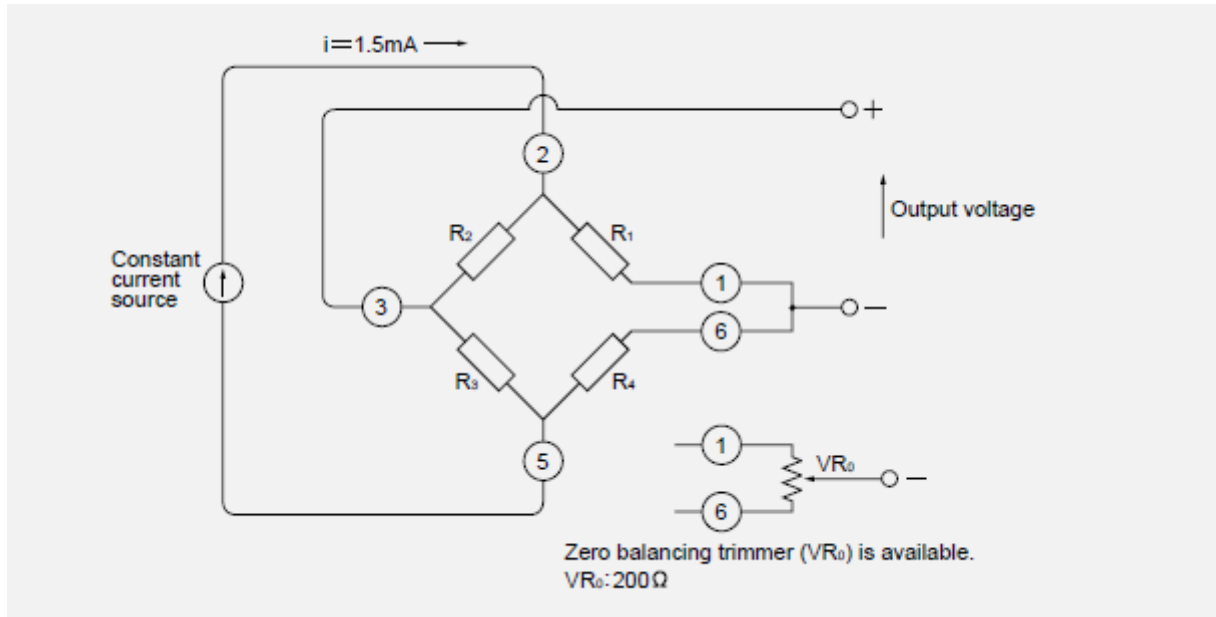


FGM-6

unit(mm)



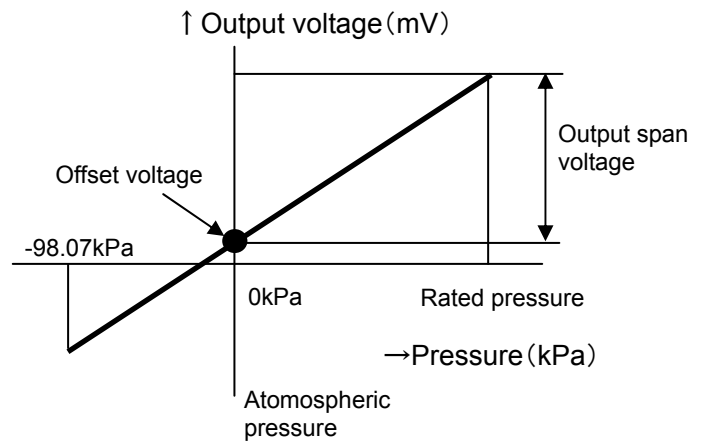
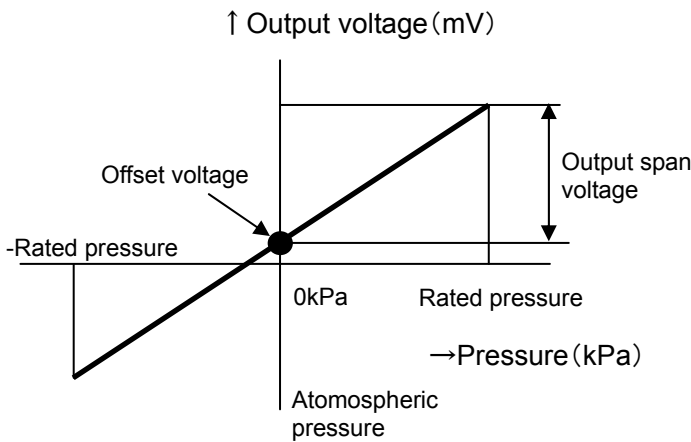
■Connection diagram■



■Output characteristics■

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

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

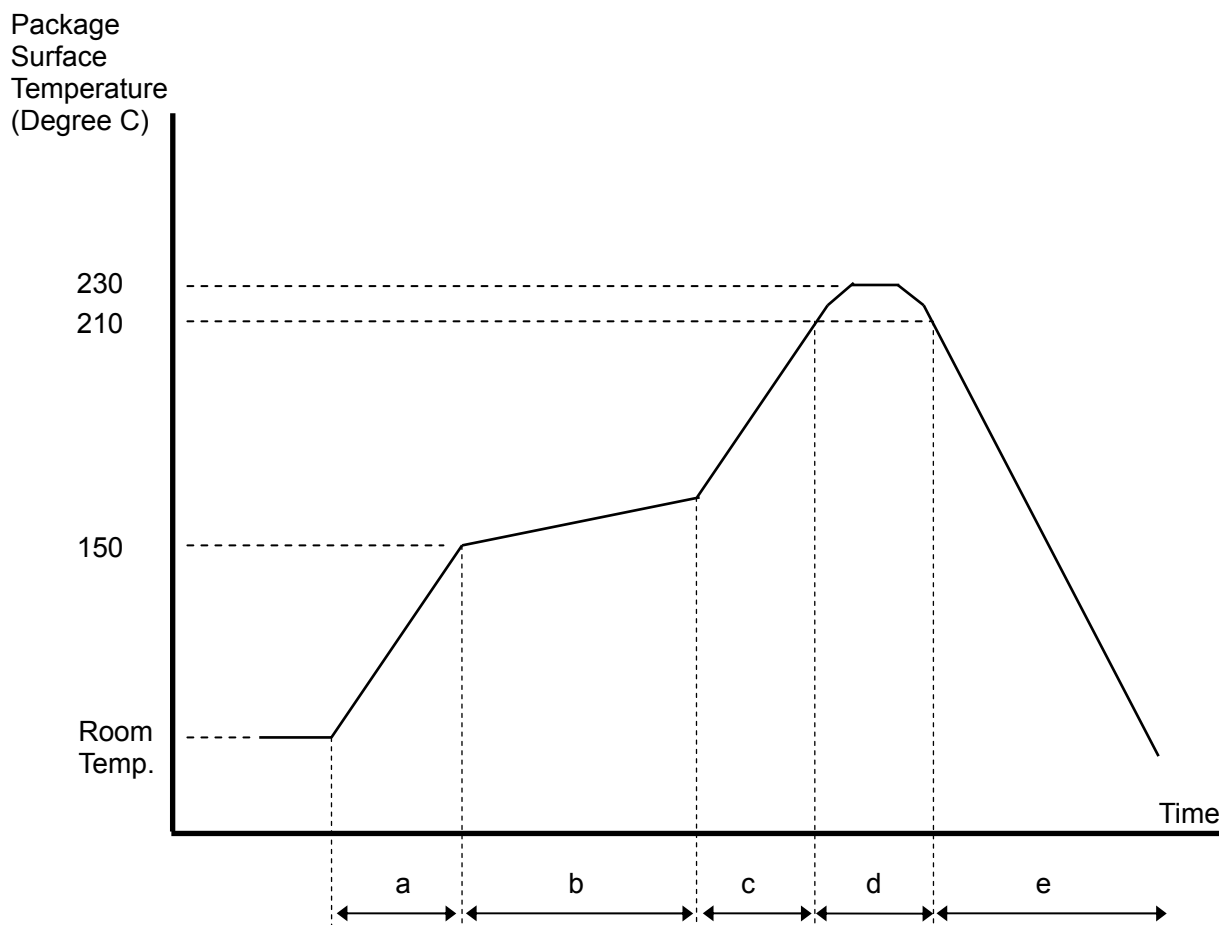


Note ; Please read instruction "Notes" before using the sensor.
Fujikura reserves the right to change specifications without notice.

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: Rump up rate | 1 or 2 deg.C/sec. |
| b: Pre-heating | 150 to 180 deg.C, within 60 to 120sec. |
| c: Rump 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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