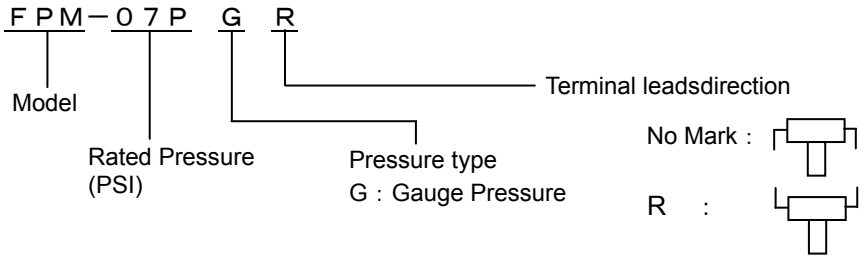
Sensing element／Gauge

FPM Data sheet

■Features

Dual-in-line package (DIP)

■Ordering Information



Weight (grams)
1.1

RoHS compliance

Measurable pressure range(kPa)	Part number	
-13.79 to 13.79	FPM-02PG	FPM-02PGR
-34.47 to 34.47	FPM-05PG	FPM-05PGR
-48.26 to 48.26	FPM-07PG	FPM-07PGR
-98.07 to 103.4	FPM-15PG	FPM-15PGR
-98.07 to 206.8	FPM-30PG	FPM-30PGR
-98.07 to 344.7	FPM-50PG	FPM-50PGR
-98.07 to 482.6	FPM-70PG	FPM-70PGR
-98.07 to 827.4	FPM-120PG	FPM-120PGR

■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)

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P1= 0 kPa T1= 0 deg.C
P2= 1/2 x P3 (kPa) T2= 25 deg.C
P3= reted pressure (kPa) T3= 50 deg.C

Offset voltage (mV)
Voff = V(P1,T)
Voff(0) = V(P1,T1)
Voff(25) = V(P1,T2)
Voff(50) = V(P1,T3)

Output voltage at full scale (mV)
Vfs = V(P3,T)
Vfs(0) = V(P3,T1)
Vfs(25) = V(P3,T2)
Vfs(50) = V(P3,T3)

Output span voltage (mV)
SV = Vfs - Voff
SV(0) = Vfs(0) - Voff(0)
SV(25) = Vfs(25) - Voff(25)
SV(50) = Vfs(50) - Voff(50)

Temperature sensitivity of offset voltage (%FS)
TSO = {LARGER ONE} / SV(25) x 100
LARGER ONE = larger absolute value which of {Voff(0)-Voff(25)} and {Voff(50)-Voff(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) x 100

Linearity (%FS)
NL = {V(P2,T2) - [Voff(25)+Vfs(25)]/2 } / SV(25) x 100

Pressure hysteresis (%FS)
Phys = {Voff'(25) - Voff(25) } / SV(25) x 100
Voff'(25) : Output voltage against P1 after stressing by P3 pressure.

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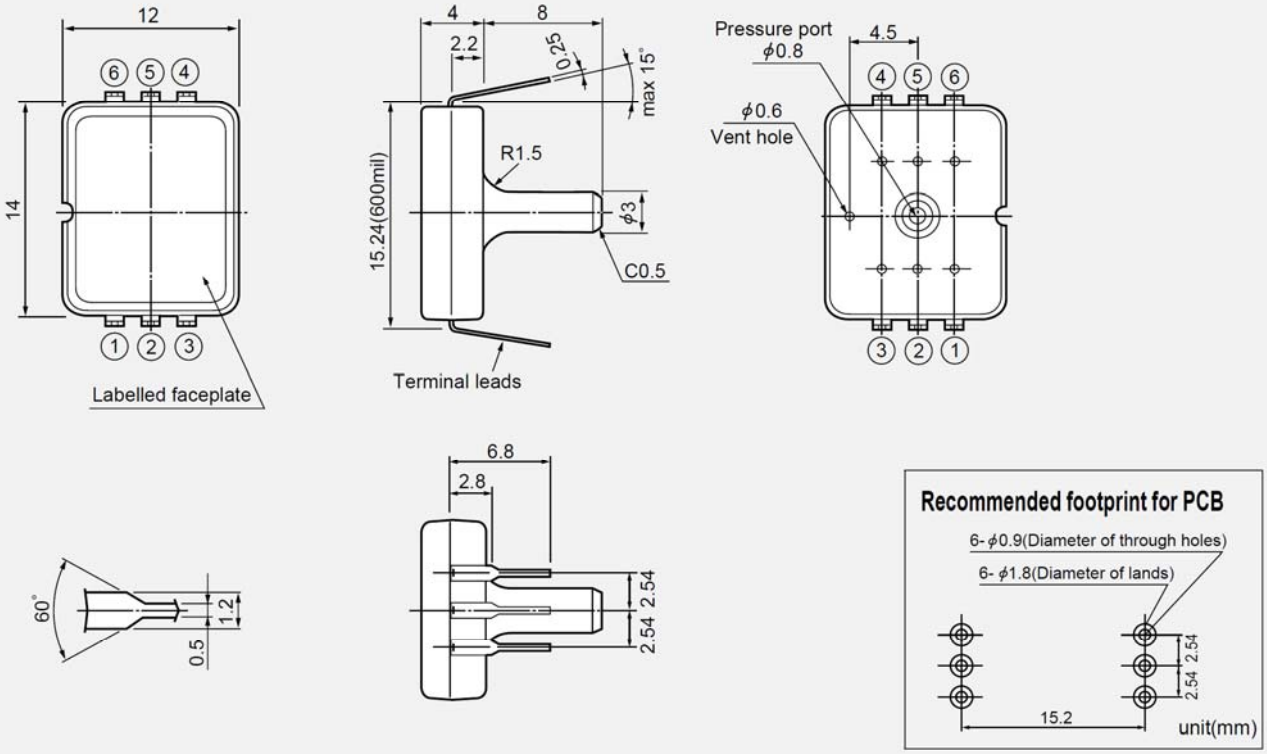
■Outline dimensions■

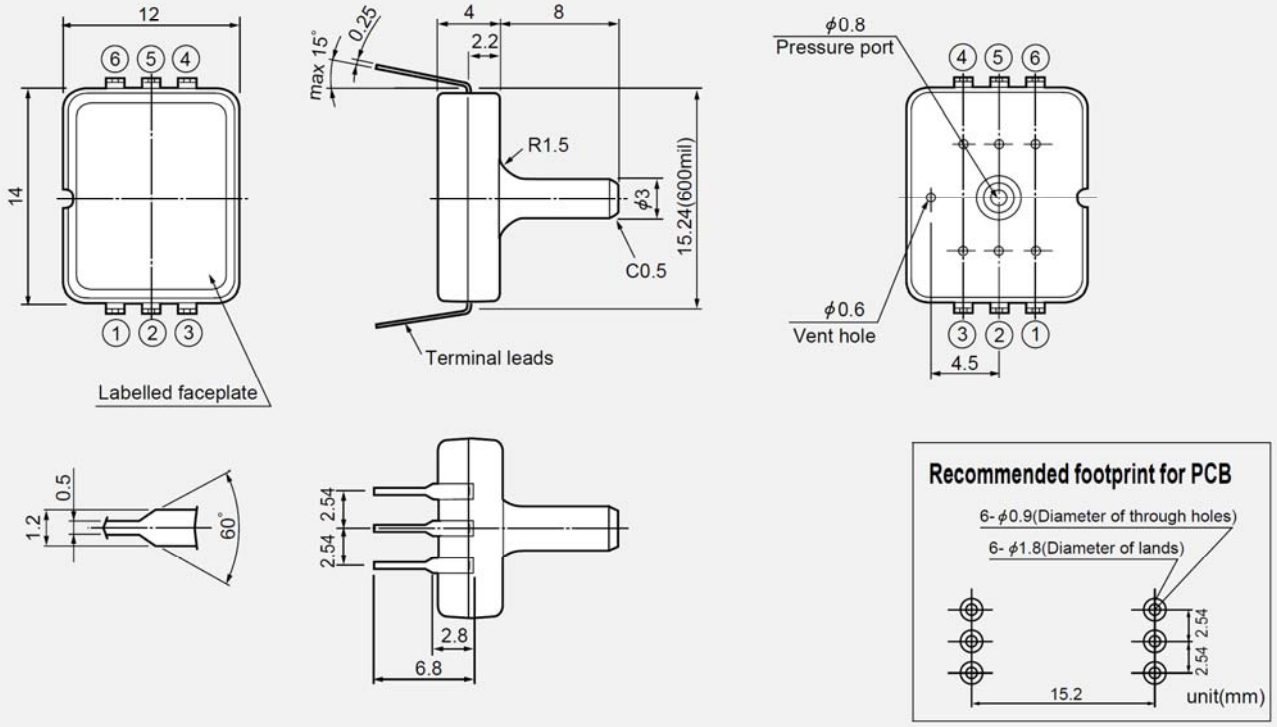
unit(mm)

FPM



unit(mm)

FPM-R



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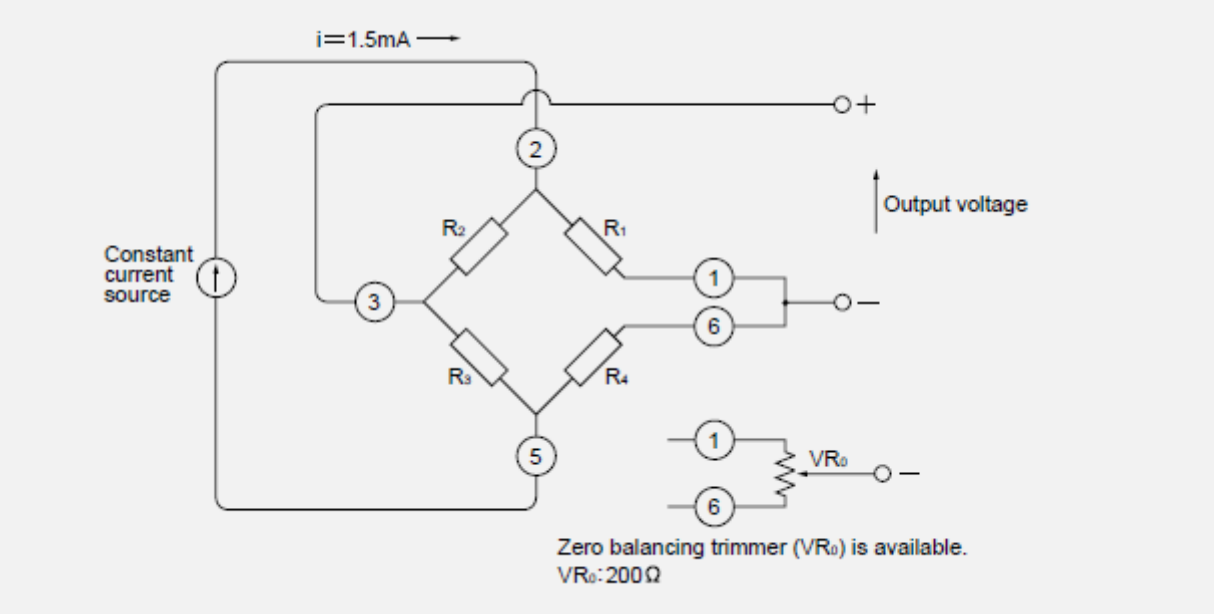
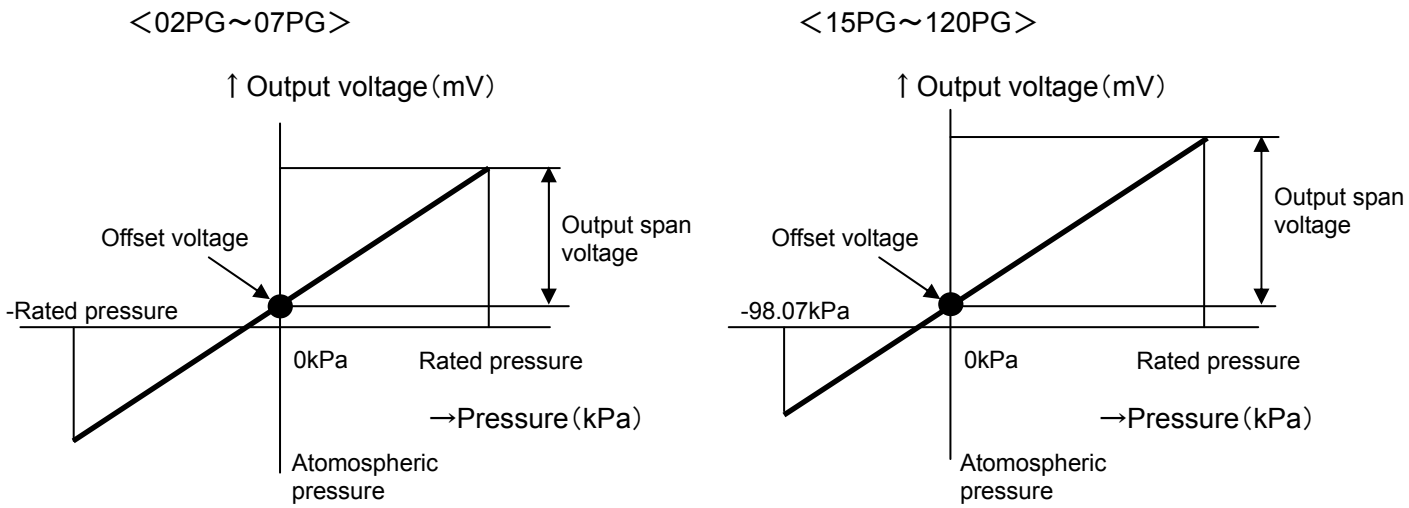
■Connection diagram■



■Output characteristics■



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.

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