■Features

　Barometric pressure measurable
　Dual-in-line package (DIP)

■Ordering Information

　　　　　Ｆ Ｐ Ｍ － １ ５ Ｐ　Ａ　Ｒ

Model

Rated Pressure (PSI)

Pressure type
A：Absolute pressure

Terminal leadsdirection

No Mark：

R　：
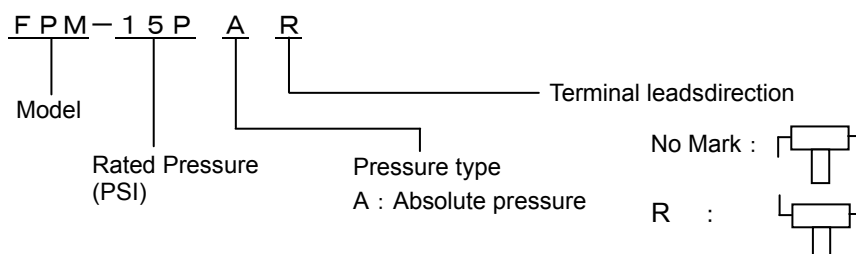
Weight (grams)
1.5

RoHS compliance

Measurable pressure range(kPa.abs)	Part number	
34.66 to 168.0	FPM-15PA	FPM-15PAR

■Specifications

Model		FPM-15PA　/　FPM-15PAR	Unit
Recommended operating conditions			
Pressure type		Absolute pressure	-
Rated pressure		168.0	kPa.abs
Measurable pressure range		34.66 to 168.0	kPa.abs
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	-
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		80 to 160 (at 34.66 to 168.0kPa.abs)	mV
Offset voltage		50 to 130 (at 101.3kPa.abs)	mV
Bridge resistance		4000 to 6000	Ω
Response time		2 (for the reference)	msec.
Accuracy	TSO*	+/-3	%FS/0-50deg.C
	TCS*	2.5	%FS/0-50deg.C
	Linearity	+/-0.3	%FS
	Pressure hysteresis	+/-0.2	%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)

Fujikura

P1= 34.66 kPa.abs   T1= 0 deg.C

P2= 67.98 kPa.abs   T2= 25 deg.C

P3= 101.3 kPa.abs   T3= 50 deg.C

P4= 168.0 kPa.abs

Offset voltage (mV)

Voff = V(P3,T)   at 101.3kPa.abs

Output voltage at full scale (mV)

V(P1,T)   at 34.66kPa.abs

V(P4,T)   at 168.0kPa.abs

Output span voltage (mV)

SV = V(P4,T) - V(P1,T)

SV(0) = V(P4,T1) - V(P1,T1)

SV(25) = V(P4,T2) - V(P1,T2)

SV(50) = V(P4,T3) - V(P1,T3)

Temperature sensitivity of offset voltage (%FS)

TSO = {LARGER ONE} / SV(25) x 100

LARGER ONE = larger absolute value which of {V(P3,T1)-V(P3,T2)} and {V(P3,T3)-V(P3,T2)}

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) - [V(P1,T2)+V(P3,T2)]/2 } / SV(25) x 100

Pressure hysteresis (%FS)

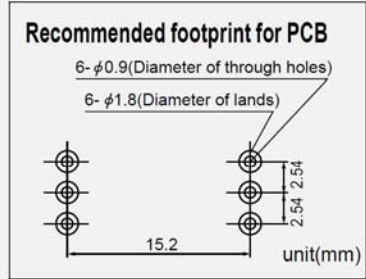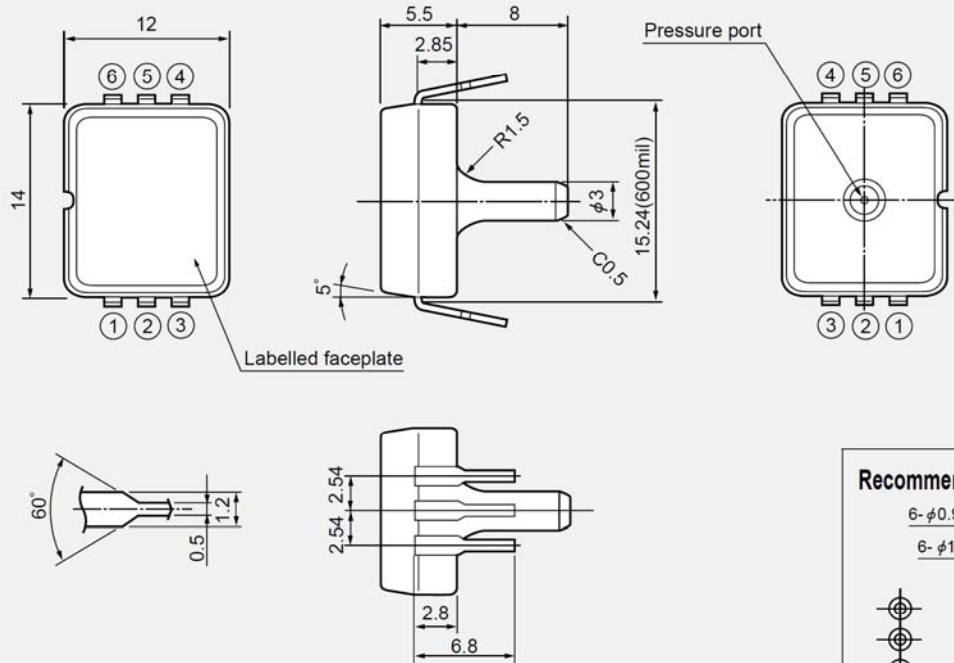Phys = {V'(P3,T2) - V(P3,T2) } / SV(25) x 100

V'(P3,T2) : Output voltage against P1 after stressing by P3 pressure.

Fujikura

■**Outline dimensions**■
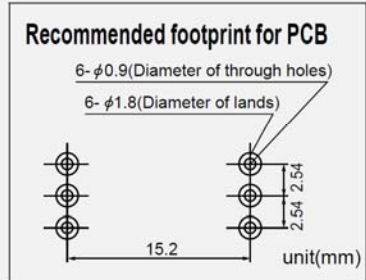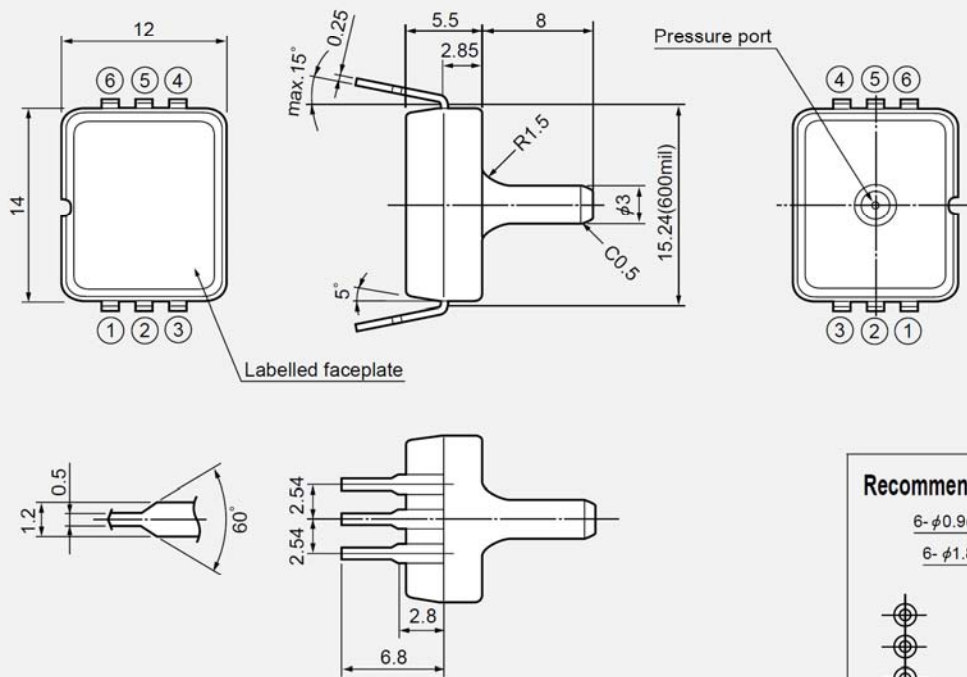
FPM (Absolute pressure)

Unit (mm)

Pressure port

Labelled faceplate

Recommended footprint for PCB
6- φ0.9(Diameter of through holes)
6- φ1.8(Diameter of lands)
15.2
unit(mm)

FPM-R (Absolute pressure)

Unit (mm)

Pressure port

Labelled faceplate

Recommended footprint for PCB
6- φ0.9(Diameter of through holes)
6- φ1.8(Diameter of lands)
15.2
unit(mm)

Fujikura

■Connection diagram■

FPM (Absolute pressure)

i＝1.5mA →

Constant current source

Output voltage

R₂　R₁

R₃　R₄

5

4

6

1

2

6

1

−

+

VR₀

+

Zero balancing trimmer (VR₀) is available.
VR₀：200Ω
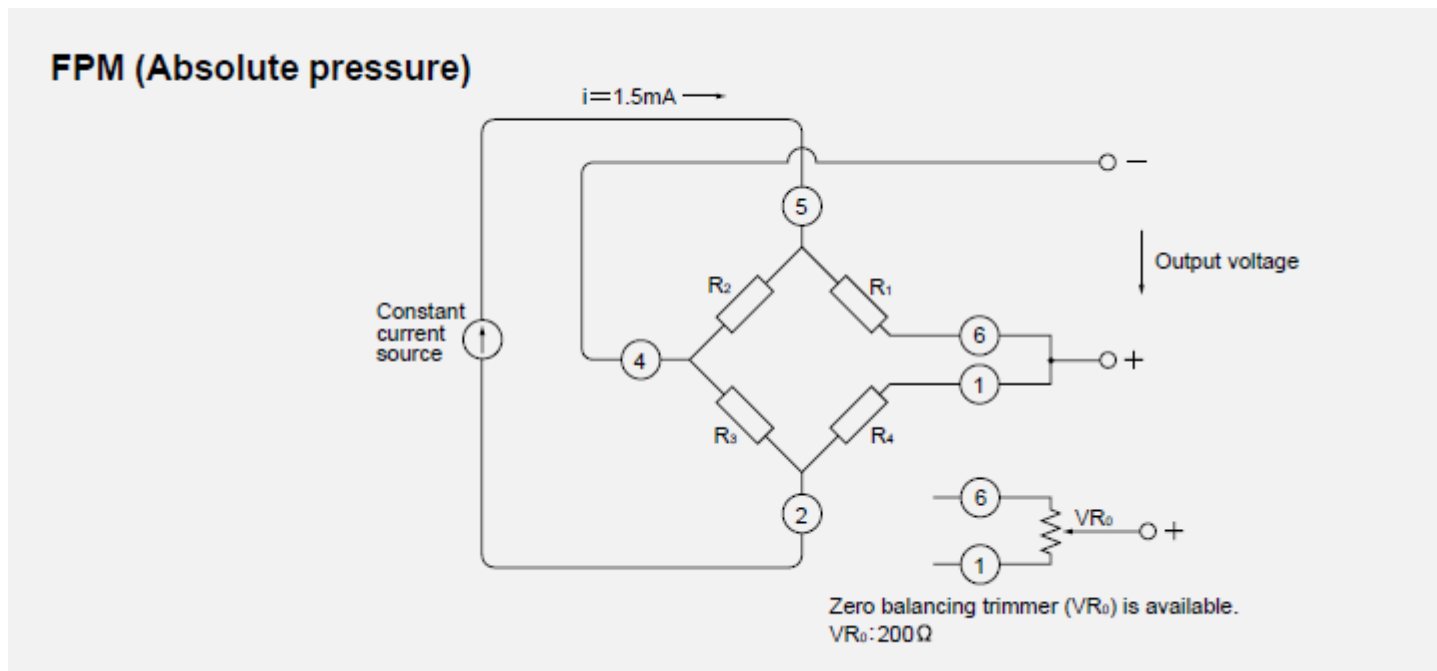
■Output characteristics■

↑ Output voltage（mV）

Offset voltage

Output span voltage

34.66　　　　101.3　　　　168.0

Atomospheric pressure

→Pressure(kPa.abs)
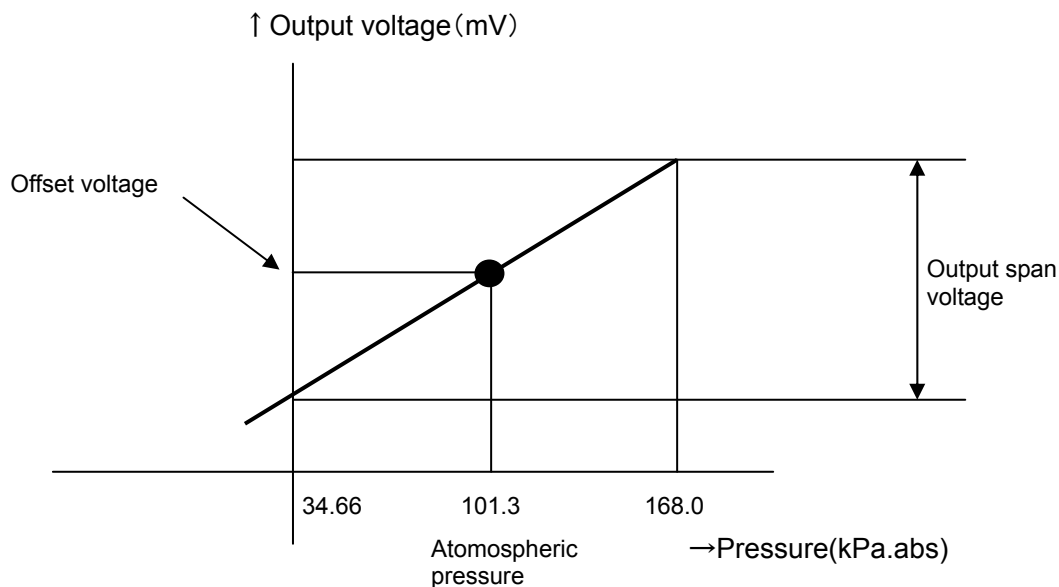
Note ;　Please read instruction "Notes" before using the sensor.
　　　　Fujikura reserves the right to change specifications without notice.

　　　　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.

If you have any questions／regarding technical issues or specifications, please contact us.
Fujikura Ltd.　Sensor Department　　5-1 Kiba 1-chome, Koto-ku, Tokyo 135-8512, Japan
Phone +81-(0)3-5606-1072
E-mail : sensor@fujikura.co.jp

Fujikura