

## Features

- 3V excitation, Battery operation available
- Volt level output
- On-chip amplification and temperature compensations
- Pre-calibration of offset voltage and span
- Non-corrosive liquid measurable (X3PMC, X3HMC only)

## Applications

- Industrial instrumentation
- Pressure switch, Pneumatic device
- Medical device

## Part number for ordering

X3PM C - 050KP G R

Model  
X3PM  
X3HM

Rated pressure (Pa)

Available pressure media  
No mark : Non-corrosive gas only  
C : Non-corrosive gas and liquid  
(Contact us about availability)

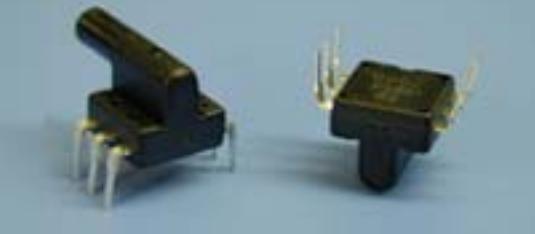
Terminal leads direction(See Outline Diagram)

No mark : 

R : 

Pressure type

G : Gauge (Positive pressure)  
GV : Gauge (Negative pressure)  
GW : Gauge (Bipolar pressure)

Pressure type	Gauge pressure	
	X3PM	X3HM
Model		
Package configuration	Dual-In-line-Package (DIP)	Horizontal pressure port DIP

Measurable pressure range (kPa)	Part number for ordering		
-100~100	X3PM-100KPGW	X3PM-100KPGWR	X3HM-100KPGWR
0~-100	X3PM-100KPGV	X3PM-100KPGVR	X3HM-100KPGVR
0~50	X3PM-050KPG	X3PM-050KPGR	X3HM-050KPGR
0~100	X3PM-100KPG	X3PM-100KPGR	X3HM-100KPGR
0~200	X3PM-200KPG	X3PM-200KPGR	X3HM-200KPGR
0~1000	X3PM-001MPG	X3PM-001MPGR	X3HM-001MPGR

## Specifications

Model/Rated pressure	100KPGW	100KPGV	050KPG	100KPG	200KPG	001MPG	Unit
<b>Recommended operating conditions</b>							
Pressure type	Gauge pressure						—
Rated pressure	±100	-100	50	100	200	1000	kPa
	±1.020	-1.020	0.510	1.020	2.040	10.20	kg/cm <sup>2</sup>
Measurable pressure range	-100~100	0~-100	0~50	0~100	0~200	0~1000	kPa
Pressure media ※1	XFPM, XFHM : Non-corrosive gas only, XFPMC, XFHMC : Non-corrosive gas and liquid						—
Excitation voltage	3.0±0.15						VDC
<b>Absolute maximum rating</b>							
Maximum load pressure	Twice of rated pressure					1.5times of rated pressure	—
Maximum excitation voltage	6						VDC
Operating temperature	-10~80						°C
Storage temperature	-20~100						°C
Operating humidity	30~80 (No dew condensation)						%RH
<b>Electric performances/characteristics (Excitation voltage Vcc=3.0V constant, Ambient temperature Ta=25°C)</b>							
Current consumption	less than 6						mA
Output impedance	less than 10						Ω
Source current	less than 0.1						mA
Sink current	less than 1.0						mA
Mechanical response time	2 (For the reference)						msec
Full scale span voltage	1.5						V
Offset voltage ※1.2	0.5±0.075						V
Full scale span voltage ※1.2	2.0±0.075						V
Accuracy ※1.2	±5.0						%FS/0~50°C

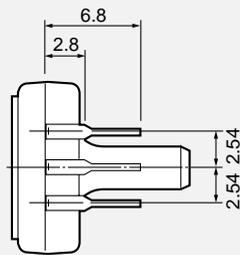
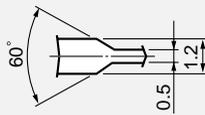
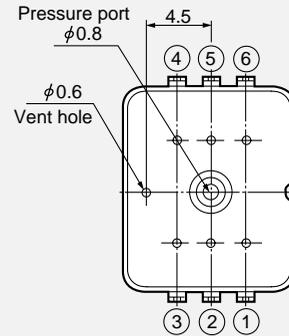
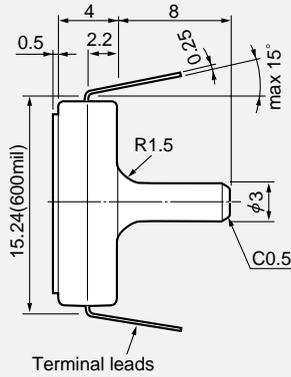
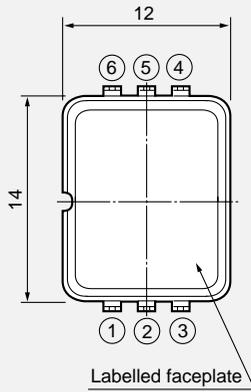
Note ; ※1) Please consult us available when you choose the C models.

※2) Excluding input voltage error.

Outline dimensions

unit (mm)

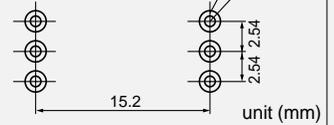
X3PM



Recommended footprint for PCB

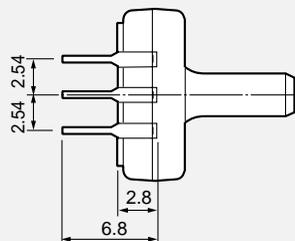
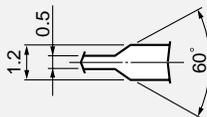
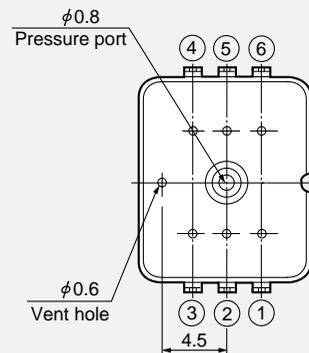
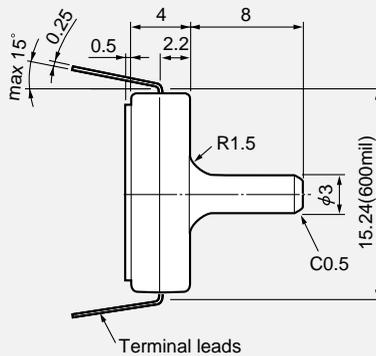
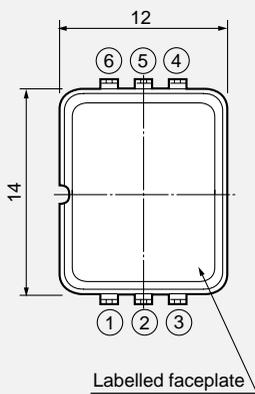
6- φ0.9(Diameter of through holes)

6- φ1.8(Diameter of lands)



X3PM-R

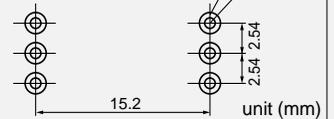
unit (mm)



Recommended footprint for PCB

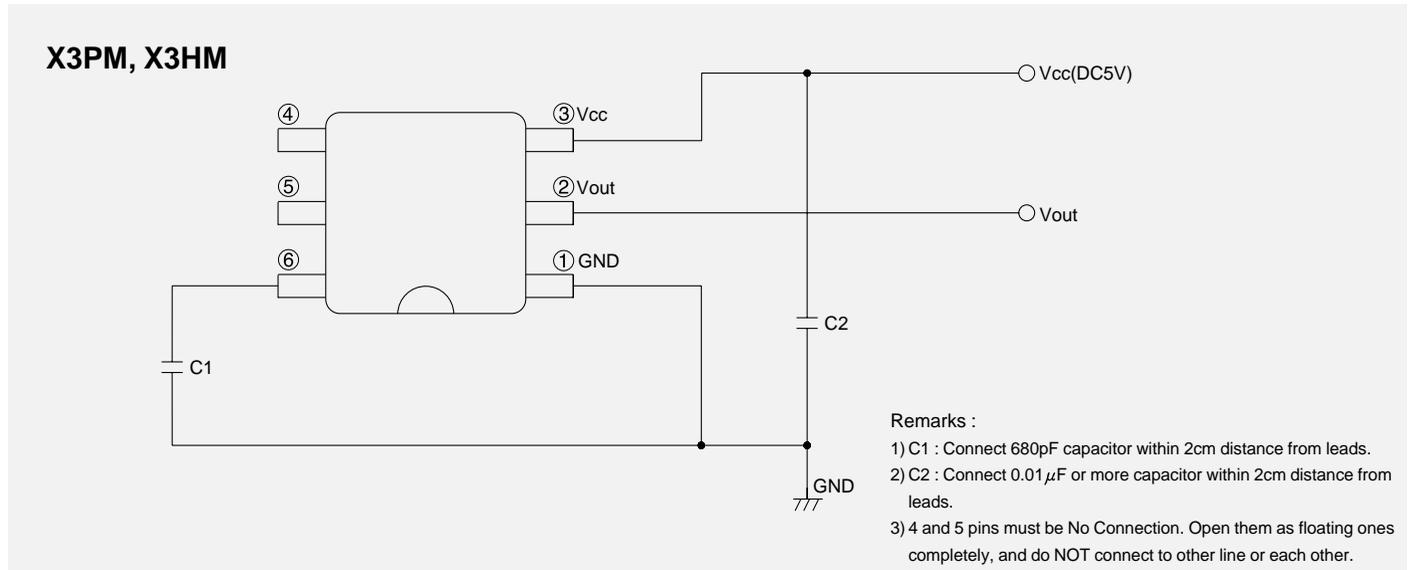
6- φ0.9(Diameter of through holes)

6- φ1.8(Diameter of lands)





## ■ Connection diagram ■



## ■ Transfer Function ■

$$V_{out} = V_s \times (P \times \alpha + \beta) \pm (\text{Pressure Error} \times \text{Temperature Error Multiplier} \times \alpha \times V_s)$$

※ $V_s = 3.0$ volts

Notes ; The output voltage (Vout) is no perfect ratiometric with the power supply voltage.

※P=Input Pressure(kPa)

Model	pressure range	$\alpha$	$\beta$	Pressure Error(kPa)
050KPG(D)	0~50kPa	0.01	0.1667	2.5
100KPG(D)	0~100kPa	0.005	0.1667	5.0
100KPGV(DV)	0~-100kPa	-0.005	0.1667	5.0
100KPGW(DW)	-100~+100kPa	0.0025	0.4167	10.0
200KPG(D)	0~200kPa	0.0025	0.1667	10.0
001MPG(D)	0~1MPa	0.0005	0.1667	50.0
115KPA	15~115kPa.abs	0.005	0.09167	5.0

※Temperature Error Multiplier=1

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

# Fujikura Ltd.

If you have any questions regarding technical issues or specifications, please contact us.  
Sensor Engineering Department 5-1 Kiba 1-chome, Koto-ku, Tokyo 135-8512, Japan  
Phone +81-(0)3-5606-1072 Fax. +81-(0)3-5606-1538  
E-mail : sensor@fujikura.co.jp