Pre-amplified/3V Excitation/Gauge　X3PM,X3HM Data sheet

■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)

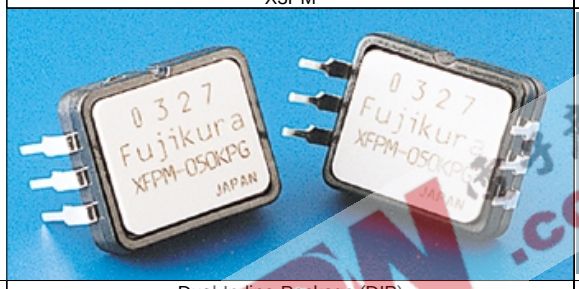
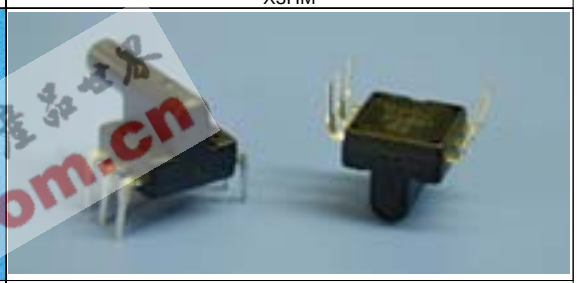
■Applications

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

■Part number for ordering

X3PM C - 050KP G R

- Model: X3PM / X3HM
- Available pressure media: No mark : Non-corrosive gas only; C : Non-corrosive gas and liquid (Contact us about availability)
- Rated pressure (Pa)
- Pressure type: G : Gauge (Positive pressure); GV : Gauge (Negative pressure); GW : Gauge (Bipolar pressure)
- Terminal leads direction(See Outline Diagram): No mark : ; R :

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
Recommended operating conditions							
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/cm²
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
Absolute maximum rating							
Maximum load pressure	Twice of rated pressure					1.5times of rated pressure	—
Maximum excitation voltage	6						VDC
Operating temperature	−10～80						℃
Storage temperature	−20～100						℃
Operating humidity	30～80 (No dew condensation)						%RH
Electric performances/characteristics (Excitation voltage Vcc=3.0V constant, Ambient temperature Ta=25℃)							
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℃

Note ; ※1) Please consult us available when you choose the C models.
※2) Excluding input voltage error.

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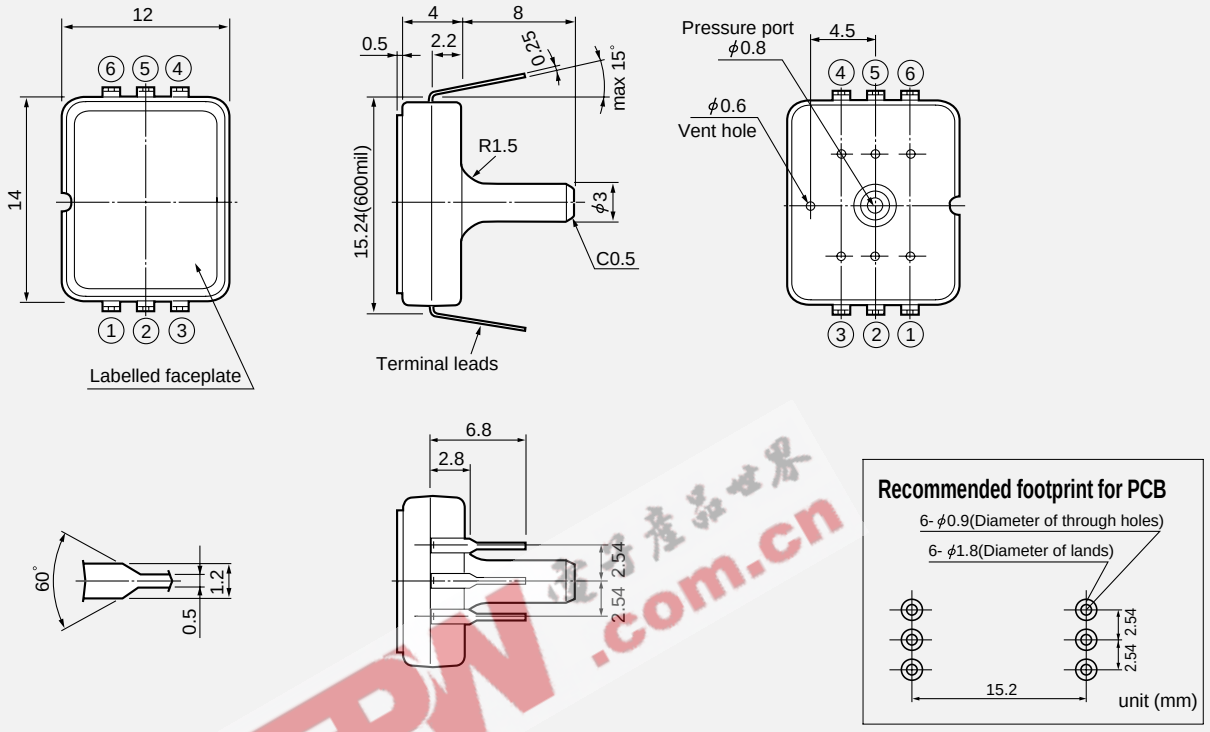
■ Outline dimensions ■

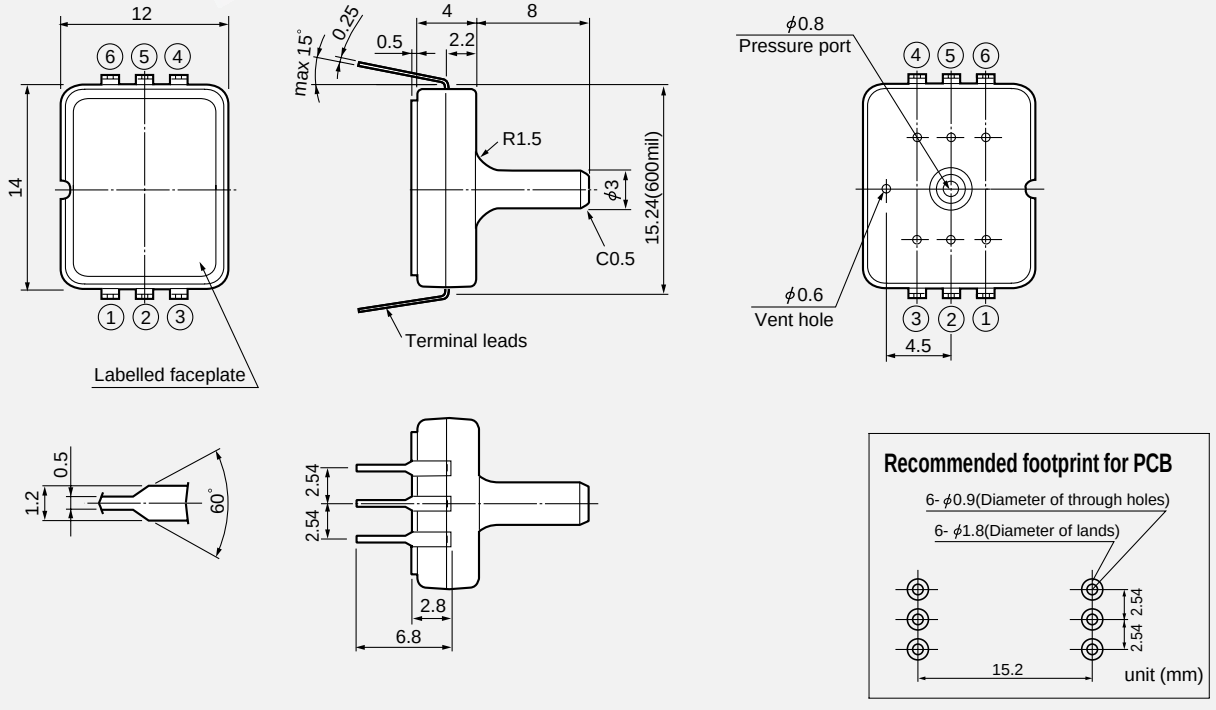
unit (mm)

X3PM



unit (mm)

X3PM-R



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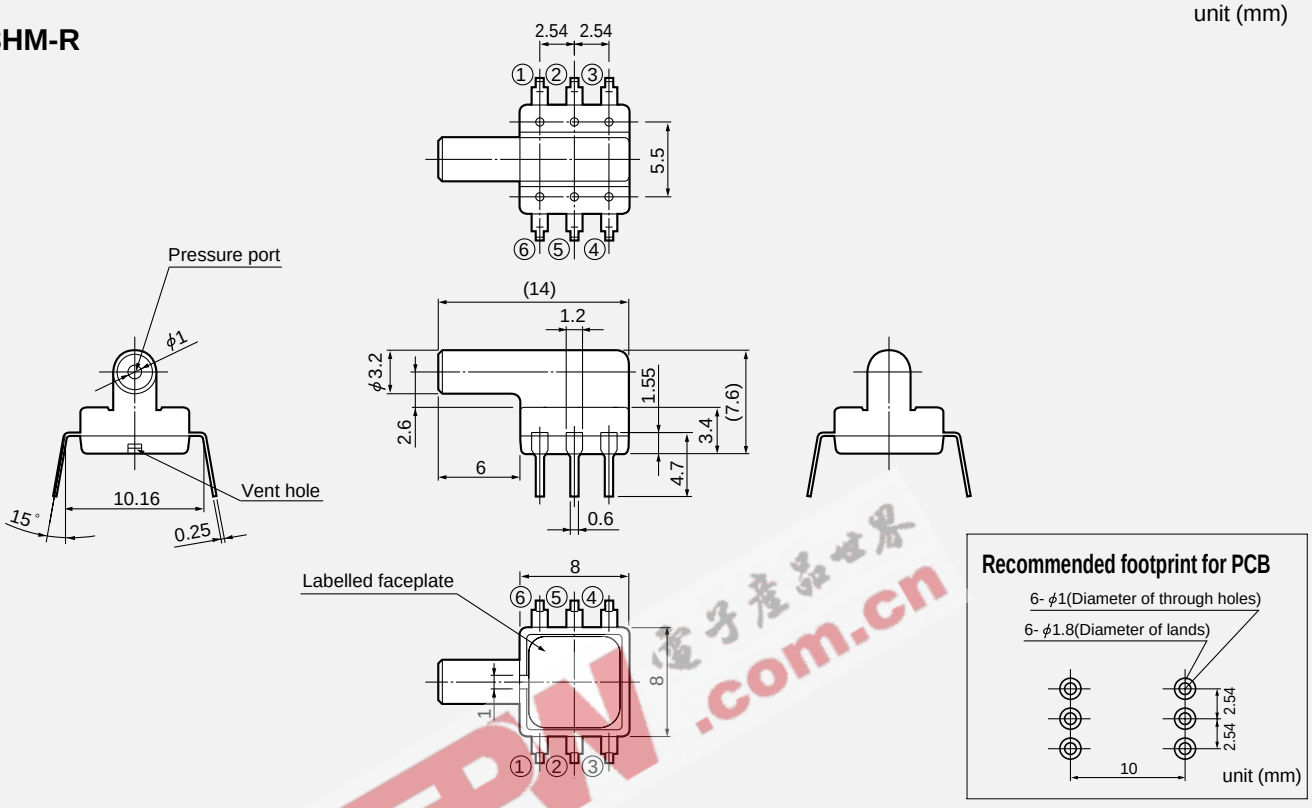
■ Outline dimensions ■

unit (mm)

X3HM-R



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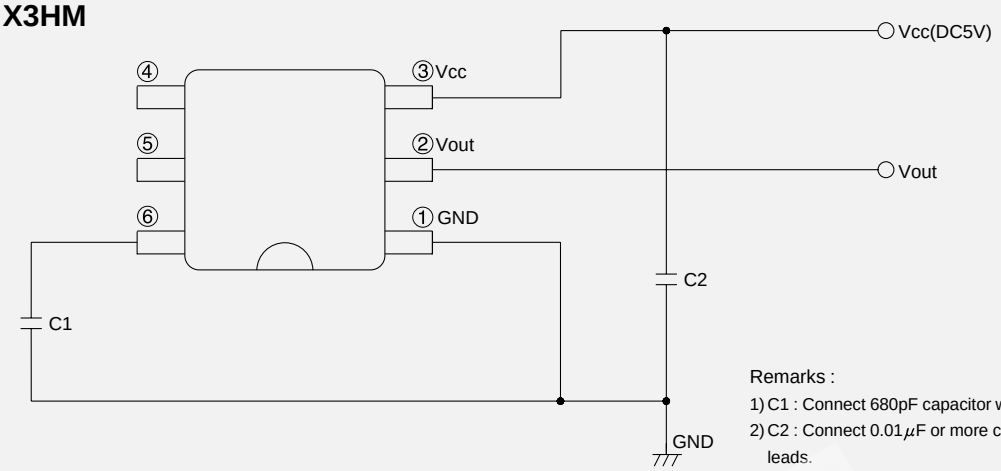
■ Connection diagram ■

X3PM, X3HM



Remarks :
1) C1 : Connect 680pF capacitor within 2cm distance from leads.
2) C2 : Connect 0.01μF or more capacitor within 2cm distance from leads.
3) 4 and 5 pins must be No Connection. Open them as floating ones completely, and do NOT connect to other line or each other.

■ Transfer Function ■

Vout=Vs×(P× α + β)±(Pressure Error×Temperature Error Multiplier× α × Vs)

※Vs=3.0volts

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

※P=Input Pressure(kPa)

Model	pressure range	α	β	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.
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