Pre-amplified/5V Excitation/Gauge XFPM,XFHM Data sheet

■Features

- Two accuracy ranks, ±1.5%FS and ±2.5%FS available
- Volt level output
- On-chip amplification and temperature compensations
- Pre-calibration of offset voltage and span
- Non-corrosive liquid measurable (XFPMC, XFHMC only)

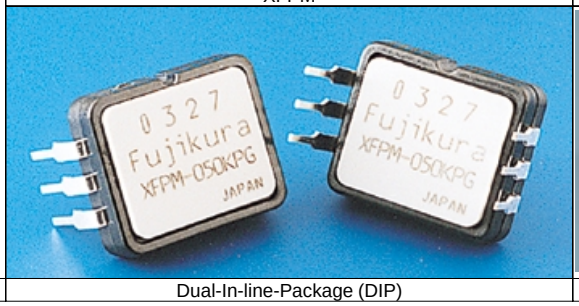
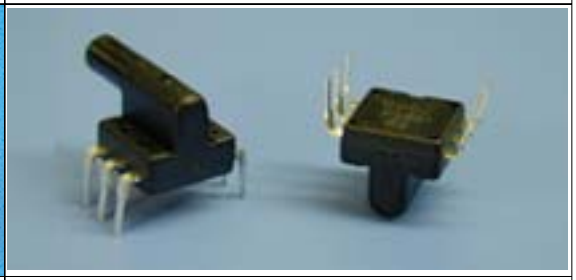
■Applications

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

■Part number for ordering

XFPM C - 025KP G R H

- Model: XFPM, XFHM
- 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 :
- Accuracy: No mark : ±2.5 FS %; H : ±1.5 FS % (Contact us about availability)

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

Measurable pressure range (kPa)	Part number for ordering		
−100 ~100	XFPM-100KPGW	XFPM-100KPGWR	XFHM-100KPGWR
0 ~−100	XFPM-100KPGV	XFPM-100KPGVR	XFHM-100KPGVR
0~25	XFPM-025KPG	XFPM-025KPGR	XFHM-025KPGR
0~50	XFPM-050KPG	XFPM-050KPGR	XFHM-050KPGR
0 ~100	XFPM-100KPG	XFPM-100KPGR	XFHM-100KPGR
0~200	XFPM-200KPG	XFPM-200KPGR	XFHM-200KPGR
0 ~1000	XFPM-001MPG	XFPM-001MPGR	XFHM-001MPGR

■Specifications

Model/Rated pressure	100KPGW	100KPGV	025KPG	050KPG	100KPG	200KPG	001MPG	Unit
Recommended operating conditions								
Pressure type	Gauge pressure							—
Rated pressure	±100	−100	25	50	100	200	1000	kPa
	±1.020	−1.020	0.255	0.510	1.020	2.040	10.20	kg/cm²
Measurable pressure range	−100~100	0~−100	0~25	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	5.0±0.25							VDC
Absolute maximum rating								
Maximum load pressure	Twice of rated pressure						1.5times of rated pressure	—
Maximum excitation voltage	8							VDC
Operating temperature	−40~125							℃
Storage temperature	−40~125							℃
Operating humidity	30~80 (No dew condensation)							%RH
Electric performances/characteristics(Excitation voltage Vcc=5.0V constant, Ambient temperature Ta=25℃)								
Current consumption	less than 10							mA
Output impedance	less than 10							Ω
Source current	less than 0.2							mA
Sink current	less than 2							mA
Mechanical response time	2 (For the reference)							msec
Full scale span voltage	4.5							V
Offset voltage ※1.2	0.2±0.1125, 0.2±0.0675(H)							V
Full scale span voltage※1.2	4.7±0.1125, 4.7±0.0675(H)							V
Accuracy ※1.2	±2.5, ±1.5(H)							%FS/0~85℃

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

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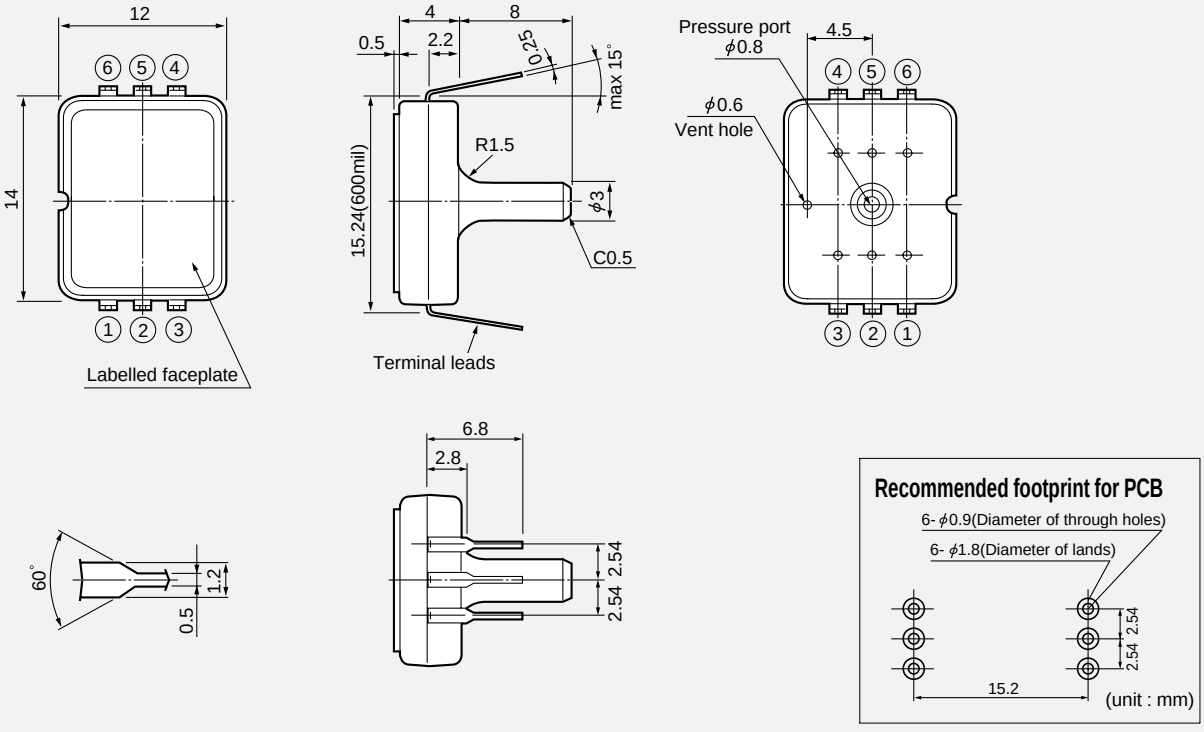
■ Outline dimensions ■

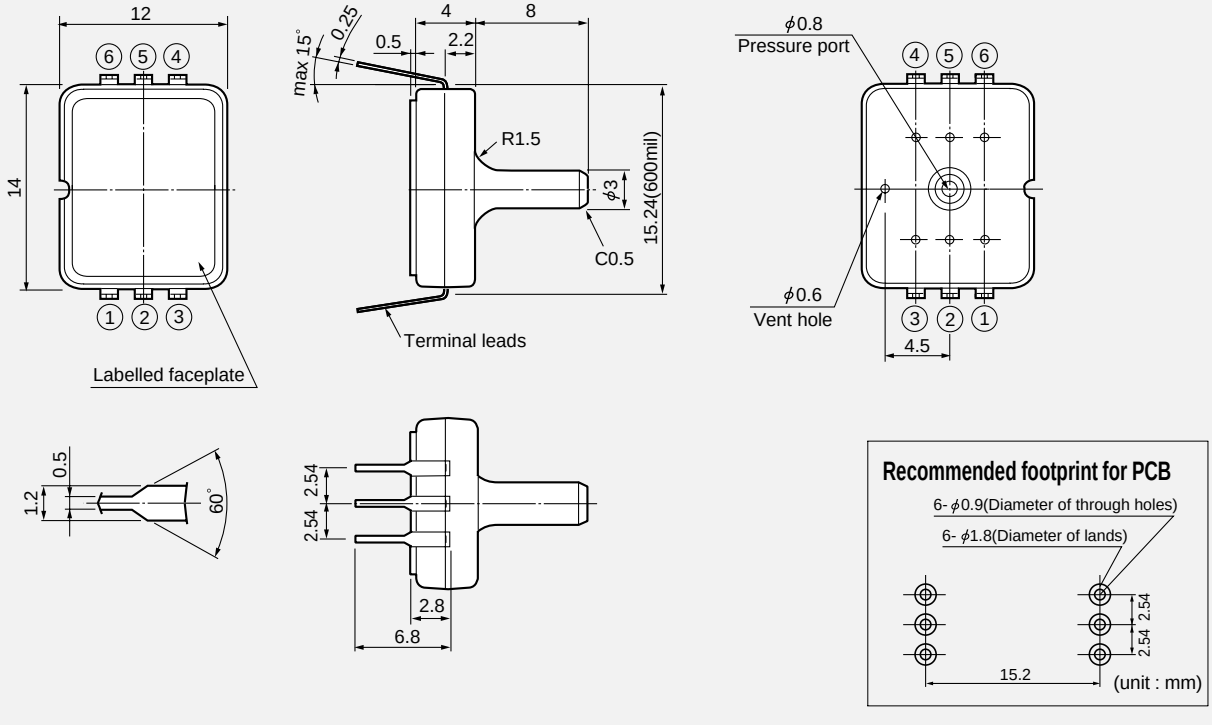
unit : mm

XFPM



unit : mm

XFPM-R



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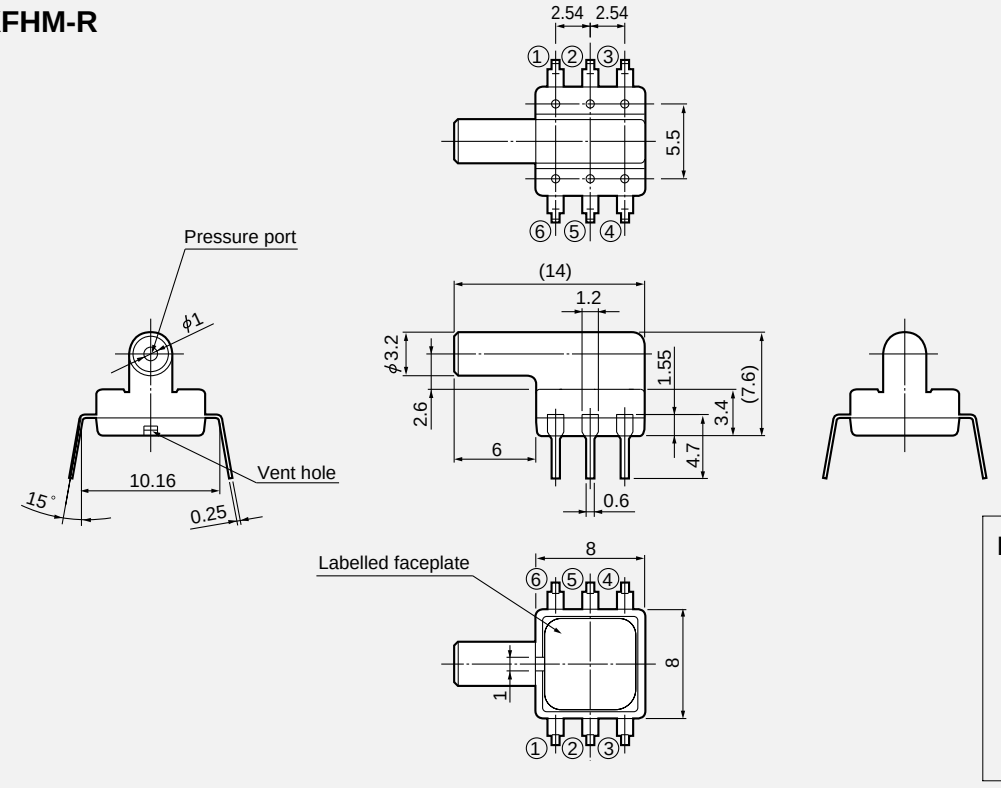
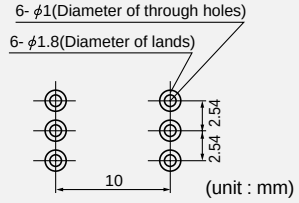
■ Outline dimensions ■

unit : mm

XFHM-R



Recommended footprint for PCB



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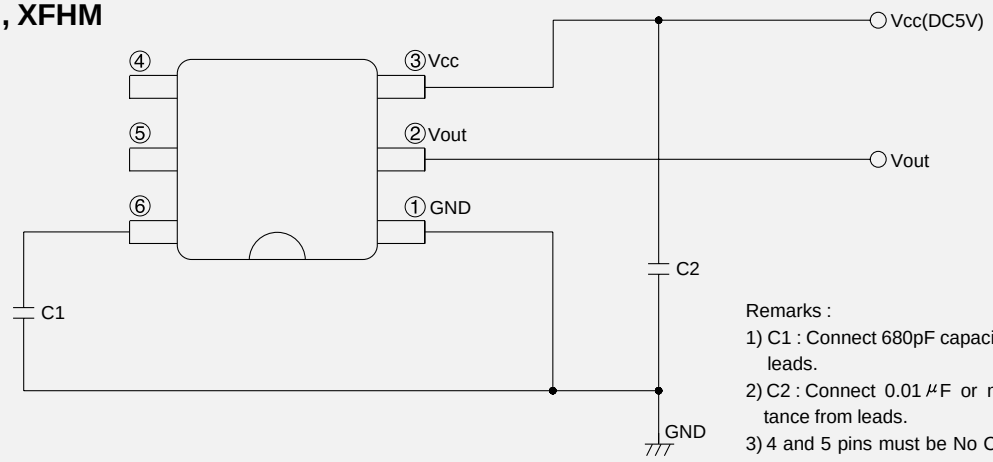
■ Connection diagram ■

XFPM, XFHM



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)

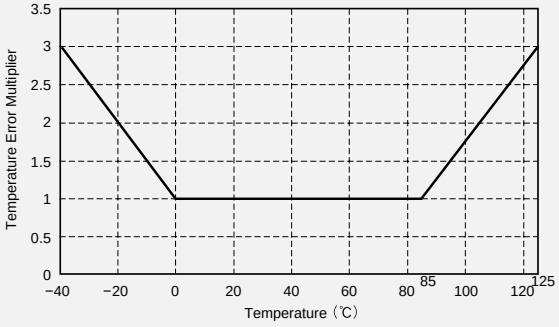
※Vs=5.0volts

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)
025KPG(D)	0～25kPa	0.036	0.04	0.625
050KPG(D)	0～50kPa	0.018	0.04	1.25
100KPG(D)	0～100kPa	0.009	0.04	2.5
100KPGV	0～−100kPa	−0.009	0.04	2.5
100KPGW(DW)	−100～+100kPa	0.0045	0.49	5.0
200KPG(D)	0～200kPa	0.0045	0.04	5.0
001MPG(D)	0～1MPa	0.0009	0.04	25
115KPA	15～115kPa.abs	0.009	−0.095	2.5

※Temperature Error Multiplier



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

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