## Pre-amplified/3V Excitation/Gauge

# X3GM-3,X3GM-6 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 (X3GMC only)

## ■Part number for ordering

#### Applications

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



Pressure type	Gauge pressure			
,	X3GM-3	X3GM-6		
Model	EXUP XFGM 3100	9416 XFCN 6050		
Package configuration	Surface mount package, 3mm pressure port	Surface mount package, 6mm pressure port		

Measurable pressure range (kPa)	Part number for ordering				
<del>-100~100</del>	X3GM-3100KPGWSR	X3GM-6100KPGWSR			
0~-100	X3GM-3100KPGVSR	X3GM-6100KPGVSR			
0~50	X3GM-3050KPGSR	X3GM-6050KPGSR			
0~100	X3GM-3100KPGSR	X3GM-6100KPGSR			
0~200	X3GM-3200KPGSR	X3GM-6200KPGSR			
0~1000	X3GM-3001MPGSR	X3GM-6001MPGSR			

#### Specifications

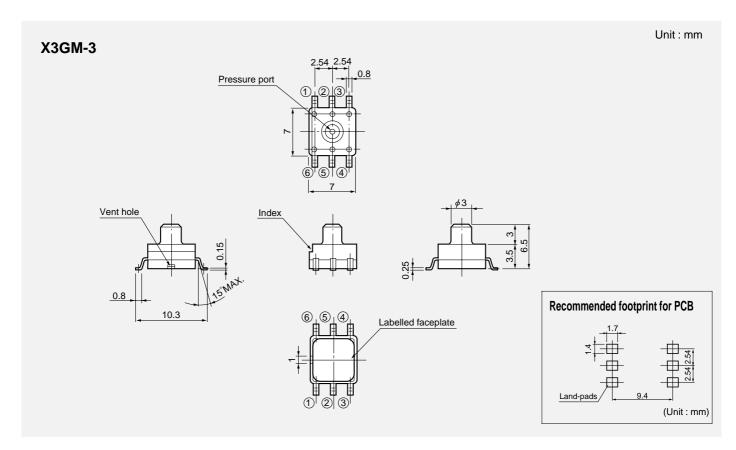
Model/Rated pressure	100KPGW	100KPGV	050KPG	100KPG	200KPG	001MPG	Unit
Recommended operating co	Recommended operating conditions						
Pressure type		Gauge pressure					
Rated pressure	±100	<del></del> 100	50	100	200	1000	kPa
	<u>+</u> 1.020	<del></del> 1.020	0.510	1.020	2.040	10.20	kg/cm <sup>2</sup>
Measurable pressure range	<del>-1</del> 00~100	0~ <del>−</del> 100	0~50	0~100	0~200	0~1000	kPa
Pressure media ※1	XFGM: Non-corrosive gas only, XFGMC: 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	<b>−</b> 10∼80					°C	
Storage temperature	-20~100					$^{\circ}$	
Operating humidity	30~80 (No dew condensation)						%RH
Electric performances/chara	acteristics (Excitat	ion voltage Vcc=3.	.0V constant, Amb	ient temperature T	a=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					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℃		

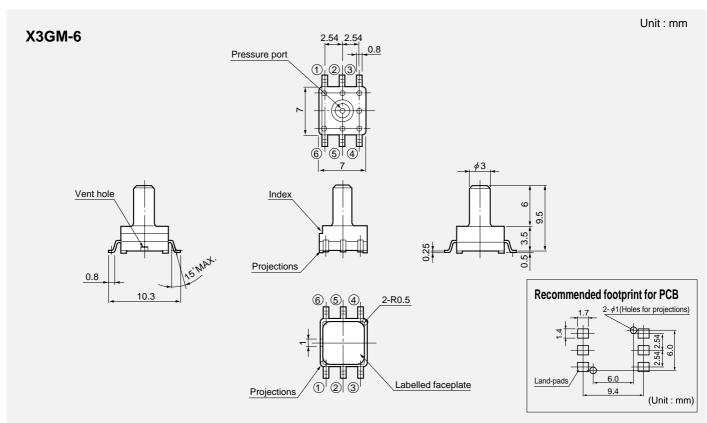
Note; %1) Please consult us available when you choose the C models.



<sup>※2)</sup> Excluding input voltage error.

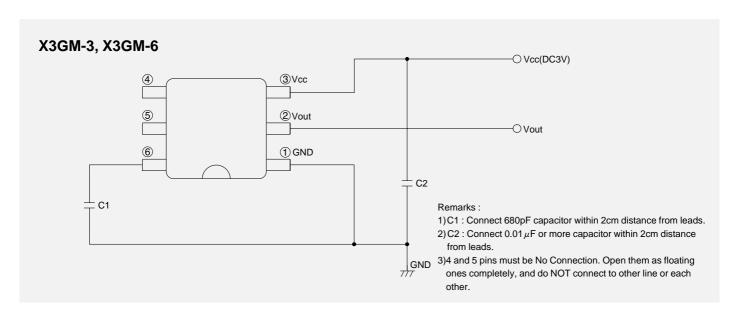
#### **■**Outline dimensions







### ■ Connection diagram



#### Transfer Function

 $\mbox{Vout=Vs} \times (\mbox{P} \times \alpha + \beta) \pm (\mbox{Pressure Error} \times \mbox{Temperature Error Multiplier} \times \alpha \times \mbox{Vs})$ 

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	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.

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