

Features

- 3V excitation, Battery operation available
- Very small surface mountable package, Easy to mount on PCB
- Volt level output
- On-chip amplification and temperature compensations
- Pre-calibration of offset voltage and span

Applications

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

Part number for ordering

X3DM - 050KP D S R

Model
X3DM

Rated pressure (Pa)

Pressure type


D : Differential

DW : Differential (Bipolar pressure)

Terminal leads direction (See Outline Diagram)



Terminal leads configuration
S : Surface mount package

Pressure type	Differential pressure X3DM
Model	
Package configuration	Surface mount package
Measurable pressure range (kPa)	Part number for ordering
-100~100	X3DM-100KPDWSR
0~50	X3DM-050KPDSR
0~100	X3DM-100KPDSR
0~200	X3DM-200KPDSR
0~1000	X3DM-001MPDSR

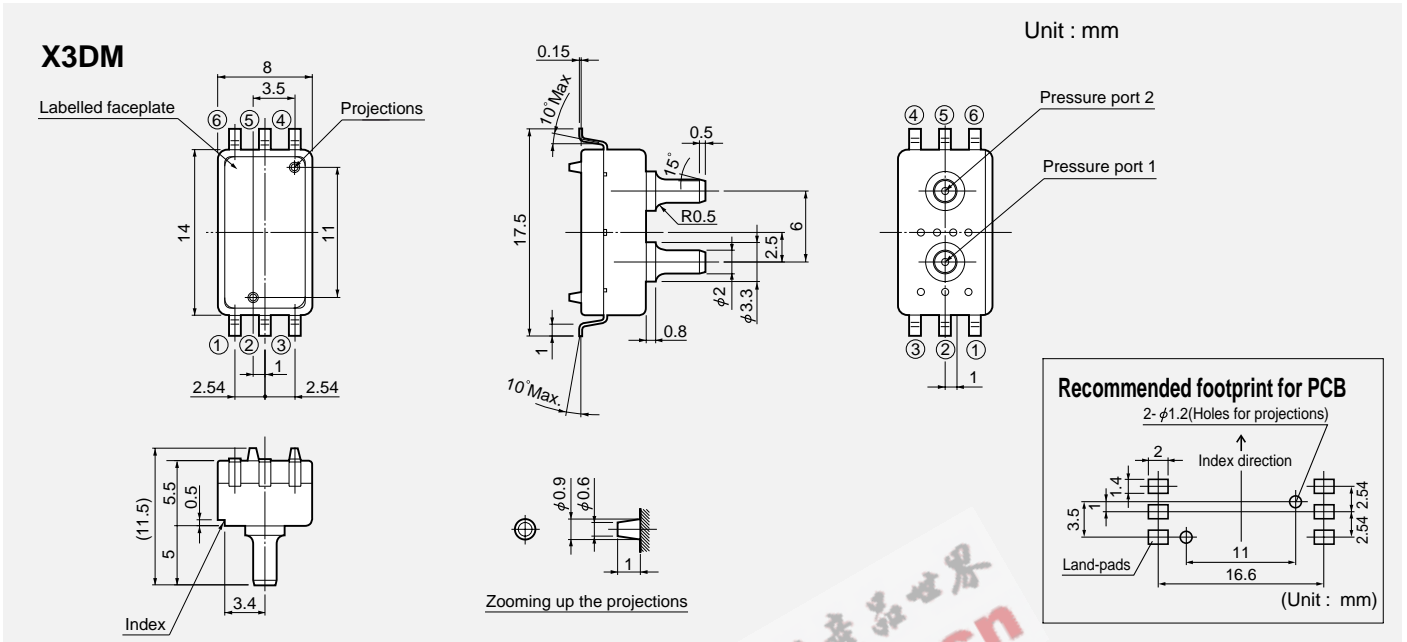
Specifications

Model/Rated pressure	100KPDW	050KPD	100KPD	200KPD	001MPD	Unit
Recommended operating conditions						
Pressure type	Differential pressure					—
Rated pressure	±100 ±1.020	50 0.510	100 1.020	200 2.040	1000 10.20	kPa kg/cm ²
Measurable pressure range	-100~100	0~50	0~100	0~200	0~1000	kPa
Pressure media	Non-corrosive gas only					—
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					°C
Storage temperature	-20~100					°C
Operating humidity	30~80 (No dew condensation)					%RH
Electric performances/characteristics(Excitation voltage Vcc=3.0V constant, Ambient temperature Ta=25°C)						
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※2	±5.0					%FS/0~50°C

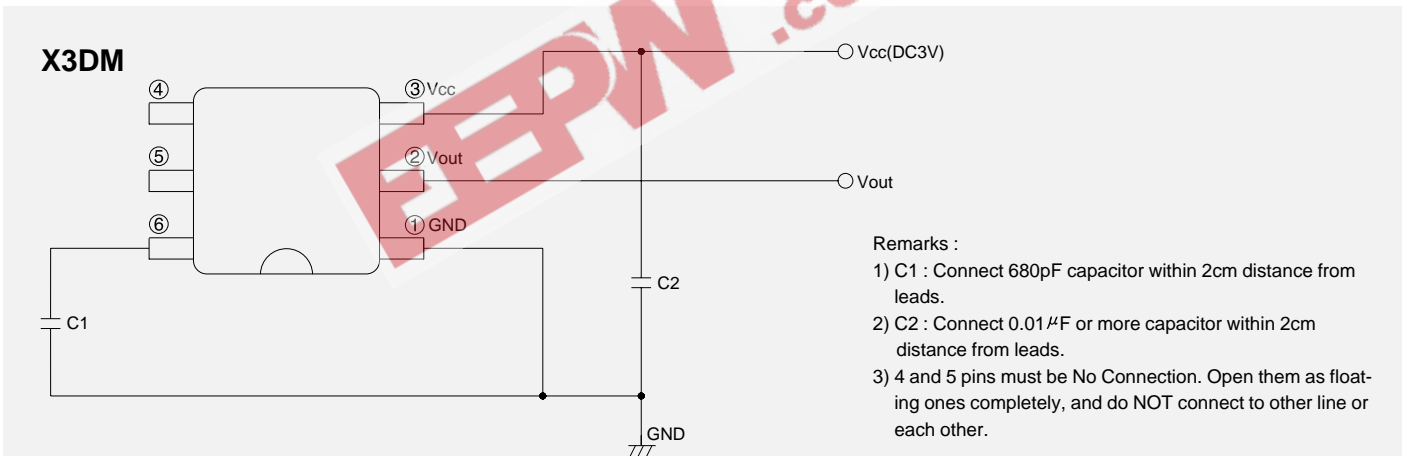
Note ; ※1) Output refers to pressure at pressure port 2.

※2) Excluding input voltage error.

■ Outline dimensions ■



■ 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 (V_{out}) is no perfect ratiometric with the power supply voltage.

※ $P = \text{Input Pressure (kPa)}$

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)	-0~+100kPa	0.0025	0.4667	10.0
200KPG(D)	0~200kPa	0.0025	0.1667	10.0
001MPGW(D)	0~+1MPa	0.0025	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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