

Pre-amplified/5V Excitation/Differential

XFDM Data sheet

■ Features

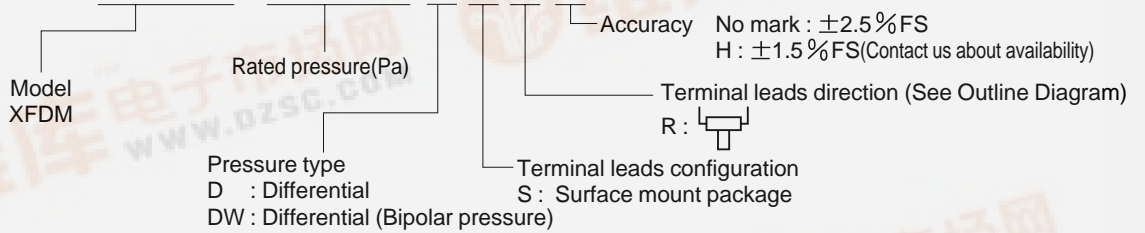
- Two accuracy ranks, $\pm 1.5\%FS$ and $\pm 2.5\%FS$ available
- Volt level output
- On-chip amplification and temperature compensations
- Pre-calibration of offset voltage and span
- Very small surface mountable package, Easy to mount on PCB

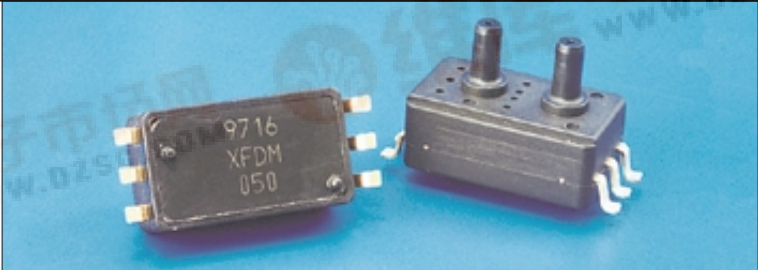
■ Applications

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

■ Part number for ordering

XFDM - 025KP D S R H



Pressure type	Differential pressure XFDM
Model	
Package configuration	Surface mount package

Measurable pressure range (kPa)	Part number for ordering
-100~100	XFDM-100KPDWSR
0~25	XFDM-025KPDSR
0~50	XFDM-050KPDSR
0~100	XFDM-100KPDSR
0~200	XFDM-200KPDSR
0~1000	XFDM-001MPDSR

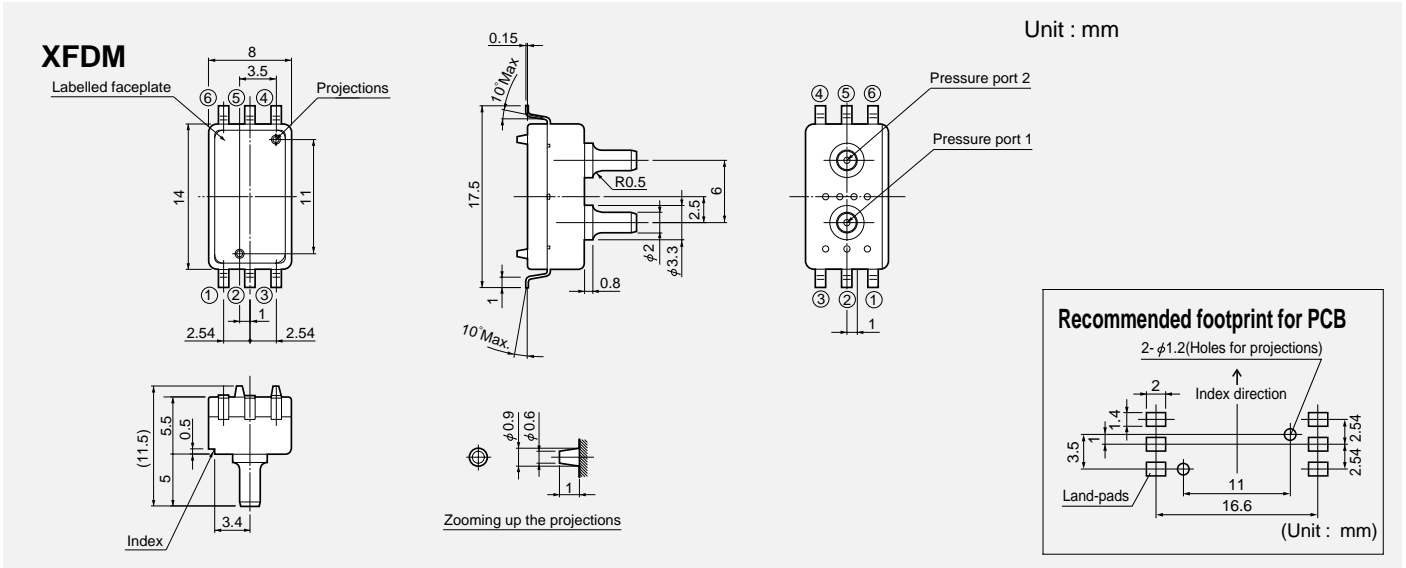
■ Specifications

Model/Rated pressure	100KPDW	025KPD	050KPD	100KPD	200KPD	001MPD	Unit
Recommended operating conditions							
Pressure type	Differential pressure						—
Rated pressure	± 100	25	50	100	200	1000	kPa
Measurable pressure range	± 1.020	0.255	0.510	1.020	2.040	10.20	kg/cm ²
Pressure media	-100~100	0~25	0~50	0~100	0~200	0~1000	kPa
Excitation voltage	Non-corrosive gas only						—
Absolute maximum rating	5.0 \pm 0.25						VDC
Maximum load pressure	Twice of rated pressure					1.5times of rated pressure	—
Maximum excitation voltage	8						VDC
Operating temperature	-40~125						°C
Storage temperature	-40~125						°C
Operating humidity	30~80 (No dew condensation)						%RH
Electric performances/characteristics (Excitation voltage Vcc=5.0V constant, Ambient temperature Ta=25°C)							
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, 3	0.2 \pm 0.1125, 0.2 \pm 0.0675(H)						V
Full scale span voltage ※1, 2, 3	4.7 \pm 0.1125, 4.7 \pm 0.0675(H)						V
Accuracy ※2, 3	$\pm 2.5, \pm 1.5$ (H)						%FS/0~85°C

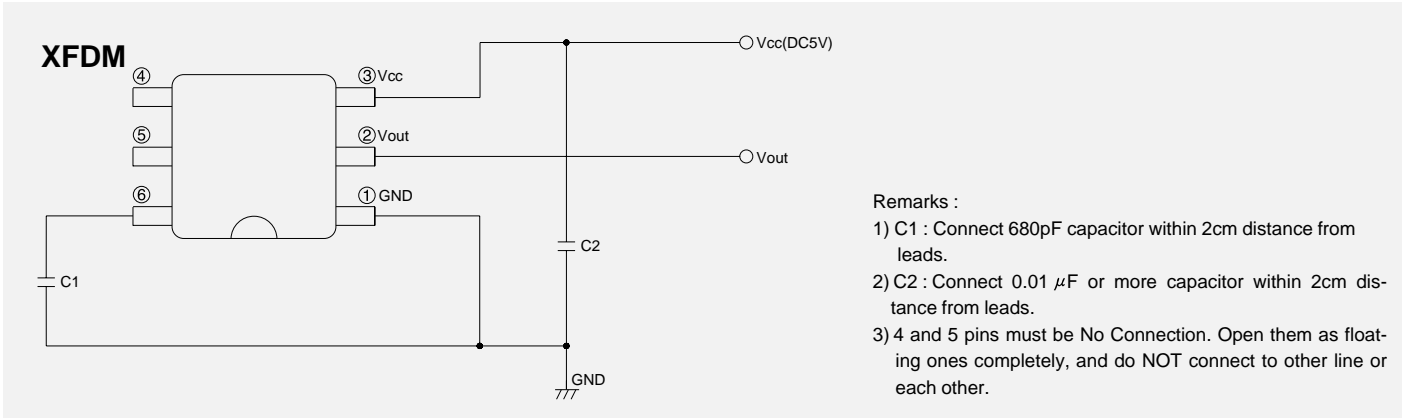
Note ; ※1) Output refers to pressure at pressure port 2.
 ※2) Excluding input voltage error.
 ※3) Please consult us availability when you choose the H models.



■ Outline dimensions ■



■ Connection diagram ■



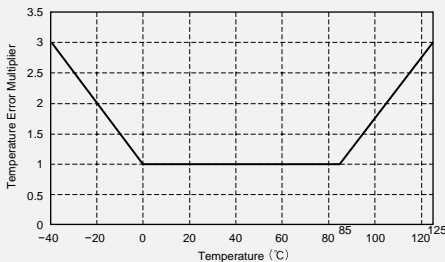
■ Transfer Function ■

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

※Vs=5.0volts Notes ; The output voltage (Vout) is no perfect ratiometric with the power supply voltage.

※P=Input Pressure(kPa)

※Temperature Error Multiplier



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)	-0~+100kPa	0.0045	0.49	5.0
200KPG(D)	0~200kPa	0.0045	0.04	5.0
001MPGW(D)	0~+1MPa	0.0009	0.04	25
115KPA	15~115kPa.abs	0.009	-0.095	2.5

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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