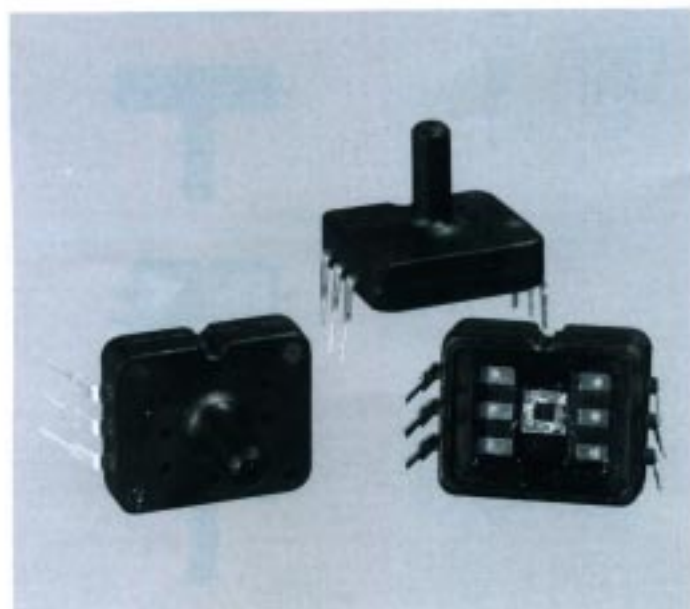


# XFPM Series • Absolute Pressure Model

On-chip signal conditioned, Amplified,  
Temperature compensated & Calibrated, Absolute pressure sensors  
Contribute to cost reductions and space saving.



## ■ Features

- High accuracy, competitive prices and small size.
- High level output signal saves space and adds reliability
- Operational amplifiers and temperature compensation thin-film-resistors are integrated on one chip.
- Offset voltage and sensitivity have been adjusted.

## ■ Applications

- Barometers
- Weather monitor
- Relative altimeter

## ■ Model No.

### XFPM-115 KPA R



## ■ Specifications

Model(XFPM - )	115KPA (R)	115KPA (R)L	Unit	Remarks
Recommended operating conditions				
Rated Pressure	2.175 to 16.675		psi	
	15 to 115		kPa	
Pressure reference	Absolute pressure			
Pressure media	Non-corrosive gas			
Supply voltage (constant voltage)	5±0.25		VDC	
Absolute maximum rating				
Maximum load pressure	Twice rated pressure			
Maximum input voltage	12		VDC	
Operating temperature	-40 to 125	-10 to 80	°C	
Storage temperature	-40 to 125	-20 to 100	°C	
Electric performances/characteristics (Supply voltage Vcc=5.0V of constant voltage, Ambient temperature Ta=25°C)				
Current consumption	Typ.7.0 (Max.12)	Max.10	mA	
Output Impedance	10 or less		Ω	
Source current	0.01 or less		mA	
Sink current	1 or less		mA	
Output span voltage	4.5	4.0	V	
Offset voltage	0.2±0.1125	0.5±0.1	V	※1
Full scale voltage	4.7±0.1125	4.5±0.1	V	※1
Total accuracy	±2.5/0 to 85°C	±5.0/0 to 50°C	%FS	※1※2
Response Time	1.0		ms	※3

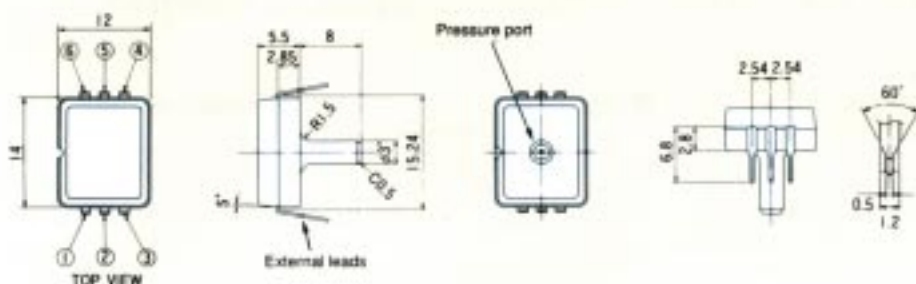
Note : ※1) Supply voltage change error is not included. (Refer to the Transfer Function Table on the back.)

※2) Accuracy consists of the following: non-linearity, temperature errors over the temperature range 0 to 85°C, (115KPA L=0 to 50°C), pressure hysteresis and calibration error (sensitivity and offset).

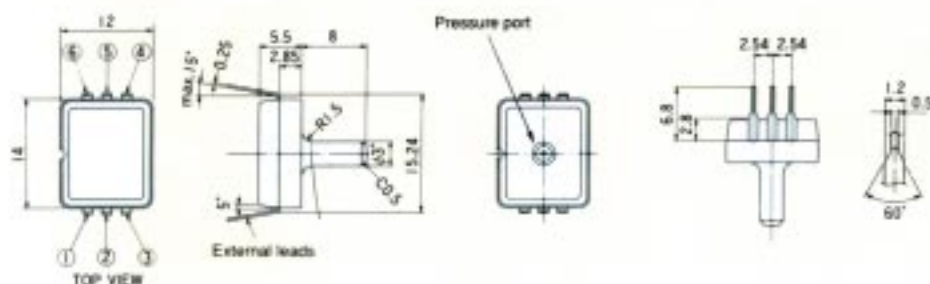
※3) Response time is defined as the time for the change in output voltage from 10% to 90% of its final value when the input pressure makes a step change.

## Outline drawing and Terminal arrangement

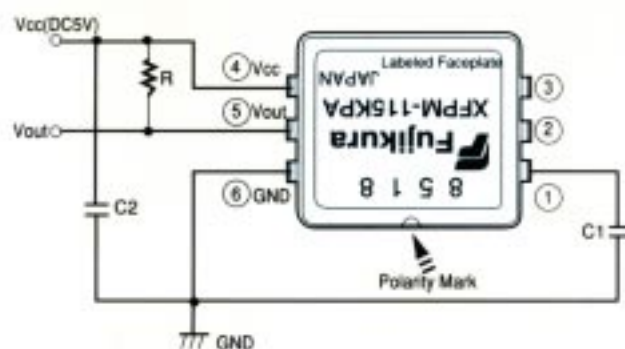
XFPM-115KPA



XFPM-115KPAR



## Connection diagram



**Remarks**

- 1) C1 : Connect 680pF where it is, within 2cm from the terminal.
- 2) C2 : Connect 0.01 $\mu$ F or more where it is, within 2cm from the terminal.
- 3) R : Connect 3.9k $\Omega$ .
- 4) Number 4 and 5 pins are NC pins. Leave them floating and do not connect them with other lines or NC pins.

### \* Transfer function

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

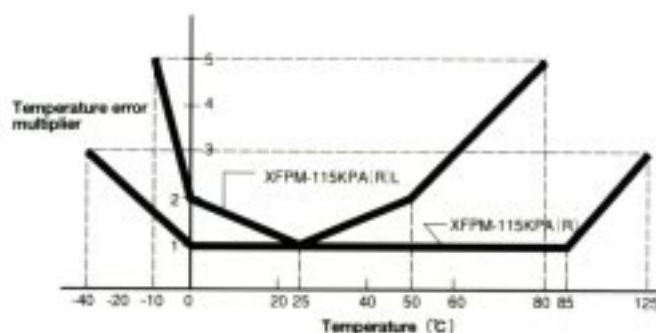
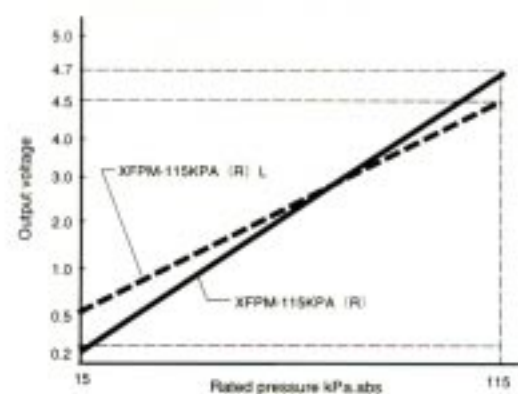
$$V_s = 5.0 \pm 0.5\% (V)$$

(When supply voltage  $V_s$  changes up to  $\pm 5\%$ , output voltage  $V_{out}$  also changes according to the above function.)

P=Input pressure (kPa)

Type	Pressure range	$\alpha$	$\beta$	Pressure error (kPa)
XFPM-115KPA (R)	15~115kPa Absolute pressure	0.009	-0.095	2.5
XFPM-115KPA (RL)	15~115kPa Absolute pressure	0.008	-0.02	2.5

## Output characteristics



Please read "Notes" at the back cover before using Fujikura Pressure Sensors. By using Fujikura Pressure Sensors, you are agreeing to be bound by the terms of "Notes".

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Printed in Japan 9804-9804-500-D