

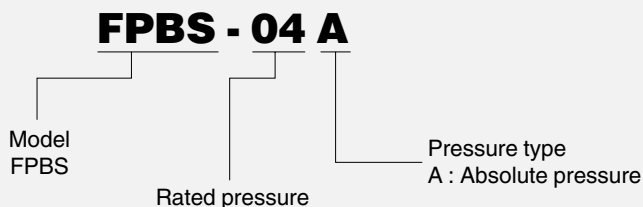
■ Features

- Very small size(φ 5.8mm)
- Surface mount package
- Non-corrosive gas, Water or Sea water

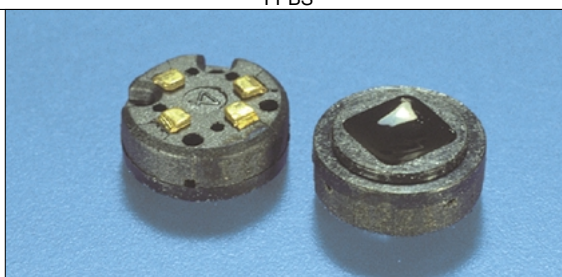
■ Applications

- Barometer, Relative altimeter
- Weather forecast
- Altitude compensation
- Diving depth meter

■ Part number for ordering



Pressure type	Absolute pressure	
Model	FPBS	
Package configuration	Surface mount package	
Measurable pressure range(kPa-abs)	Part number for ordering	
42.6~434.7	FPBS-04A	
101.3~905.5	FPBS-82A	



■ Specifications

Model/Rated pressure	04A	82A	unit
Recommended operating conditions			
Pressure type	Absolute pressure		—
Rated pressure	434.7	905.5	kPa·abs
	3.4	8.2	kg/cm ² ·abs
Measurable pressure range	42.6~434.7	101.3~905.5	kPa·abs
Pressure media	Non-corrosive gas, Water or Sea water		—
Excitation current(Constant)	0.15		mADC
Absolute maximum rating			
Maximum load pressure	1961	2942	kPa·abs
Maximum excitation current	3		mADC
Operating temperature	-20~70	-20~70	°C
Storage temperature	-30~85		°C
Operating humidity	30~80 (No dew condensation)		%RH
Electric performances/characteristics (Excitation current I=0.15mA constant, Ambient temperature Ta=25°C)			
Full scale span voltage	2.5~7.0	5.0~9.0	mV
Offset voltage	1.0~11.0 (at 62.1kPa·abs)	1.0~3.0 (at 101.3kPa·abs)	mV
Bridge impedance	3000~4500		Ω
Mechanical response time	2 (For the reference)		msec
Accuracy	Temperature sensitivity of offset (TSO)	±5/10~40°C	±5/5~35°C
	Temperature coefficient of sensitivity (TCS)	2.5/10~40°C	2.5/5~35°C
	Linearity	±0.5 (NL1), -6.5~0 (NL2)	±0.5
			%FS
			%FS
			%FS

Note ; ※ It's not available when pressure media always contact.

Evaluating equations

· V(P,T) is defined as the output voltage at Pressure kPa·abs, Temperature T.

· Full scale span voltage

$$(04A) := \text{SPAN}[62.1 \sim 111.1 \text{ kPa}] = \text{SPAN04}(25) \\ = V(111.1, 25) - V(62.1, 25)$$

$$(82A) := \text{SPAN}[101.3 \sim 905.5 \text{ kPa}] = \text{SPAN82}(25) \\ = V(905.5, 25) - V(101.3, 25)$$

· Offset voltage

$$(04A) := V(62.1, 25)$$

$$(82A) := V(101.3, 25)$$

· Temperature sensitivity of offset (TSO)

$$(04A) := (V(62.1, 40) - V(62.1, 10)) / \text{SPAN04}(25) \times 100$$

$$(82A) := (V(101.3, 35) - V(101.3, 5)) / \text{SPAN82}(25) \times 100$$

· Temperature coefficient of sensitivity (TCS)

$$(04A) := (\text{SPAN04MAX} - \text{SPAN04MIN}) / \text{SPAN1}(25) \times 100$$

$$(82A) := (\text{SPAN82MAX} - \text{SPAN82MIN}) / \text{SPAN2}(25) \times 100$$

SPAN MAX := The value is bigger of SPAN04 or SPAN82.

SPAN MIN := The value is smaller of SPAN04 or SPAN82.

· Linearity

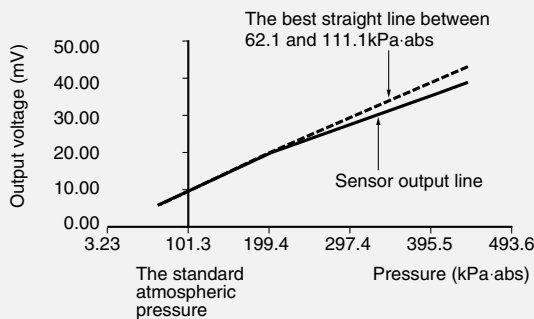
$$(04A) : \text{NL1} = (V(86.6, 25) - (V(62.1, 25) + V(111.1, 25)) / 2) / \text{SPAN04}(25) \times 100$$

$$\text{NL2} = (V(434.7, 25) - (333.4 \times \text{SPAN04}(25) / 49.0 + V(101.3, 25))) / (434.7 \times \text{SPAN04}(25) / 49.0) \times 100$$

$$(82A) := (V(503.4, 25) - (V(101.3, 25) + V(905.5, 25)) / 2) / \text{SPAN82}(25) \times 100$$

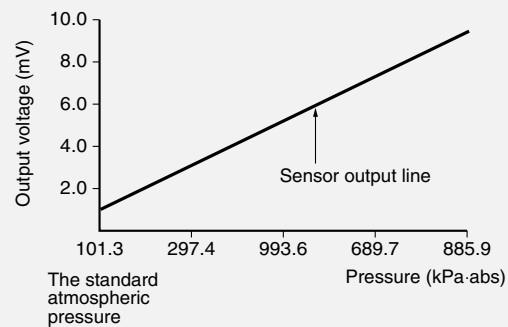
● Example of output characteristics(04A)

Excitation current : i=0.15mA Constant
Temperature : Ta=25°C



● Example of output characteristics(82A)

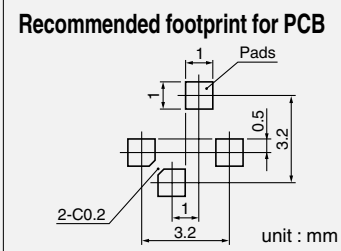
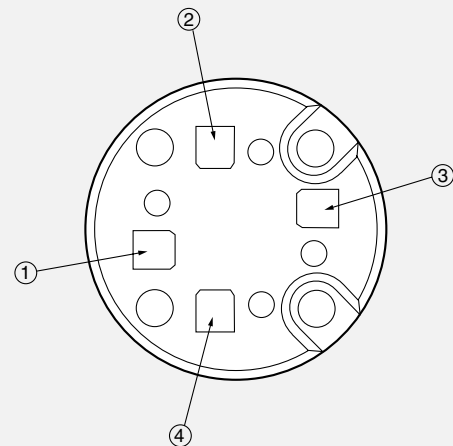
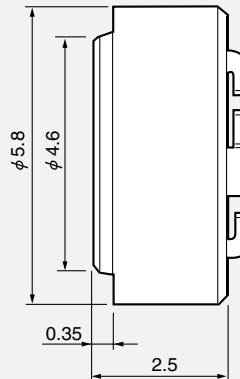
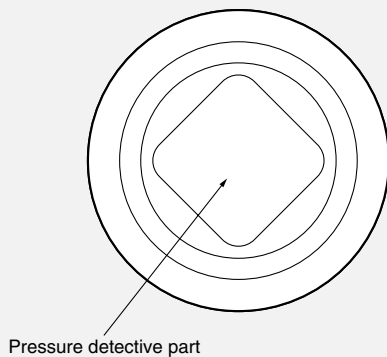
Excitation current : i=0.15mA Constant
Temperature : Ta=25°C



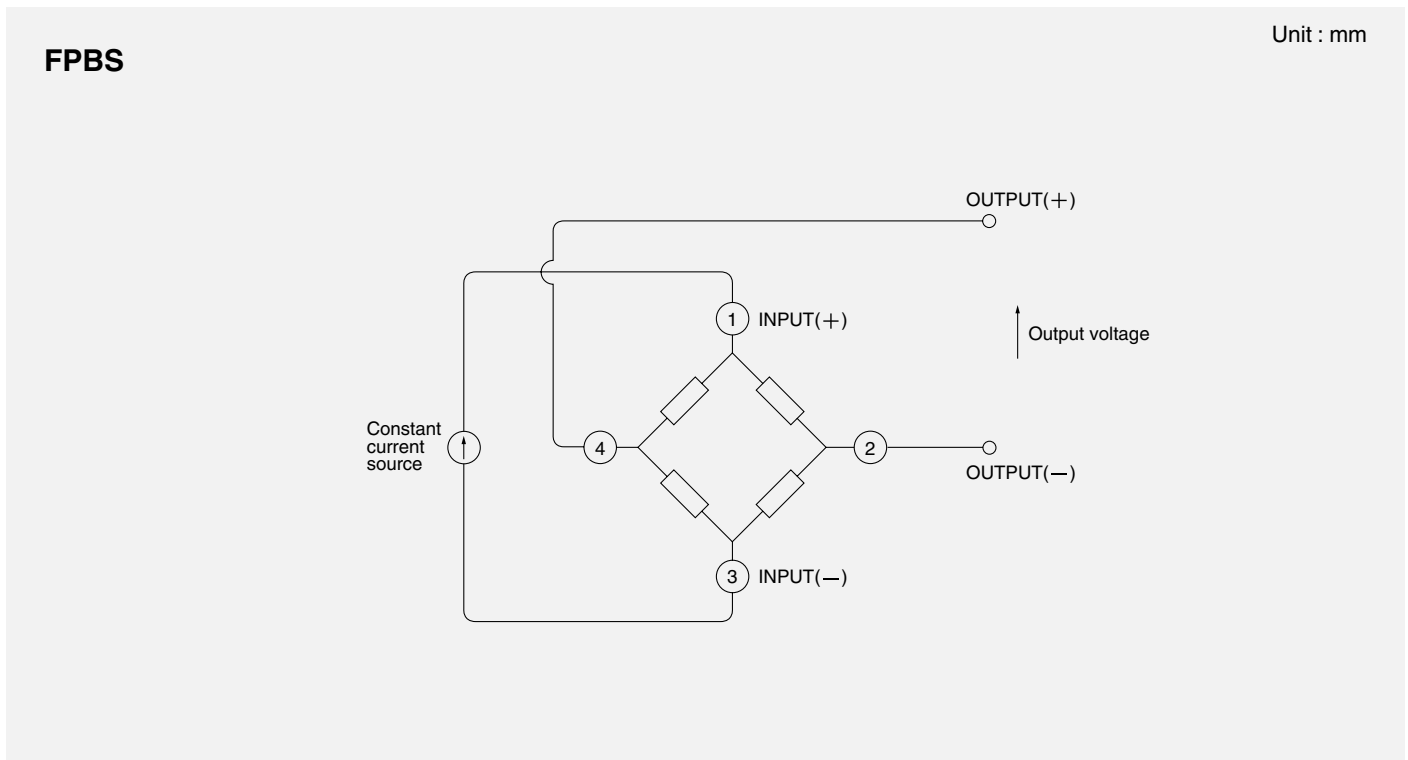
■ Outline dimensions ■

FPBS

Unit : mm



■ Connection diagram ■



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

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