■Features
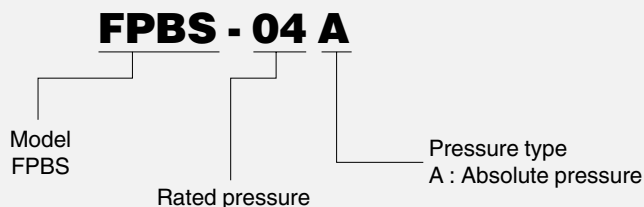
· Very small size(φ5.8mm)

· 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

FPBS - 04 A

Model
FPBS

Rated pressure

Pressure type
A : Absolute pressure

Pressure type	Absolute pressure		
	FPBS		
Model			
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/cm²·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	℃
Storage temperature		－30～85		℃
Operating humidity		30～80 (No dew condensation)		％RH
Electric performances/characteristics (Excitation current I=0.15mA constant, Ambient temperature Ta=25℃)				
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℃	±5/5～35℃	％FS
	Temperature coefficient of sensitivity (TCS)	2.5/10～40℃	2.5/5～35℃	％FS
	Linearity	±0.5 (NL1),－6.5～0 (NL2)	±0.5	％FS

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

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Evaluating equations
· V(P,T)is defined as the output voltage at Pressure kPa·abs, Temperature T.
· Full scale span voltage
  (04A) : = SPAN[62.1～111.1kPa]=SPAN04(25)
$$=V(111.1,25)-V(62.1,25)$$
  (82A) : = SPAN[101.3～905.5kPa]=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)/SPAN04(25)×100
  (82A) : = (V(101.3,35)−V(101.3,5)/SPAN82(25)×100

· Temperature coefficient of sensitivity(TCS)
  (04A) : = (SPAN04MAX.−SPAN04MIN.)/SPAN1(25)×100
  (82A) : = (SPAN82MAX.−SPAN82MIN.)/SPAN2(25)×100
  SPAN MAX : = The value is bigger of SPAN04 or SPAN82.
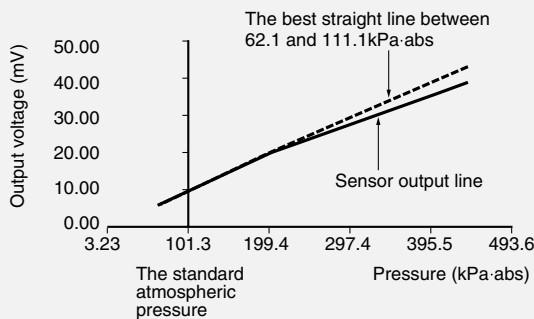 SPAN MIN : = The value is smaller of SPAN04 or SPAN82.
· Linearity
  (04A) : NL1= (V(86.6,25)−(V(62.1,25)+V(111.1,25))/2)
$$/SPAN04(25)×100$$
       NL2= (V(434.7,25)−(333.4×SPAN04(25)/49.0+V(101.3,25)))
$$/(434.7×SPAN04(25)/49.0)×100$$
  (82A) : = (V(503.4,25)−(V(101.3,25)+V(905.5,25))/2)
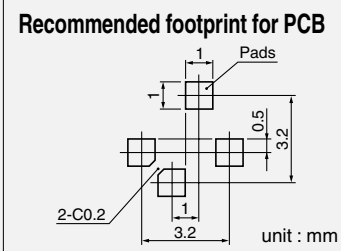$$/SPAN82(25)×100$$

●**Example of output characteristics(04A)**

Excitation current : i=0.15mA Constant
Temperature : Ta=25℃

The best straight line between 62.1 and 111.1kPa·abs

Output voltage (mV)

50.00
40.00
30.00
20.00
10.00
0.00

3.23　101.3　199.4　297.4　395.5　493.6

Sensor output line

The standard atmospheric pressure

Pressure (kPa·abs)

●**Example of output characteristics(82A)**

Excitation current : i=0.15mA Constant
Temperature : Ta=25℃

Output voltage (mV)

10.0
8.0
6.0
4.0
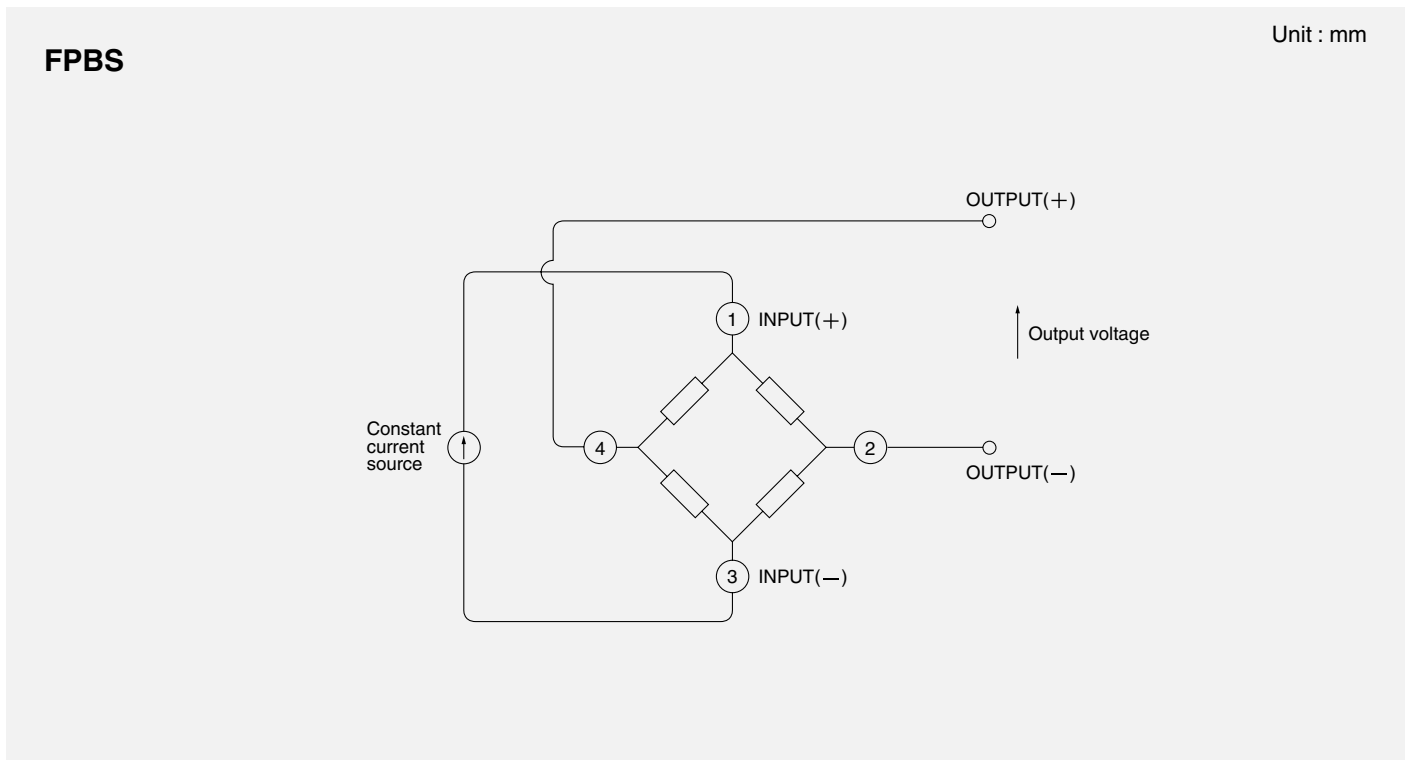2.0

101.3　297.4　993.6　689.7　885.9

Sensor output line

The standard atmospheric pressure

Pressure (kPa·abs)

■**Outline dimensions**■

Unit : mm

FPBS

Pressure detective part

ϕ5.8　ϕ4.6

0.35

2.5

①　②　③　④

Recommended footprint for PCB

Pads

1　1

0.5　3.2

2-C0.2

3.2　1

unit : mm

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■ Connection diagram ■

FPBS

Unit : mm

OUTPUT(＋)

① INPUT(＋)

Output voltage

Constant current source

④

② OUTPUT(－)

③ INPUT(－)
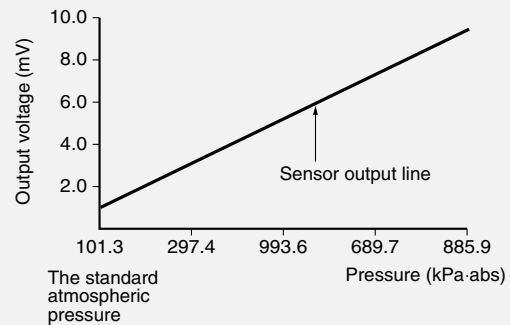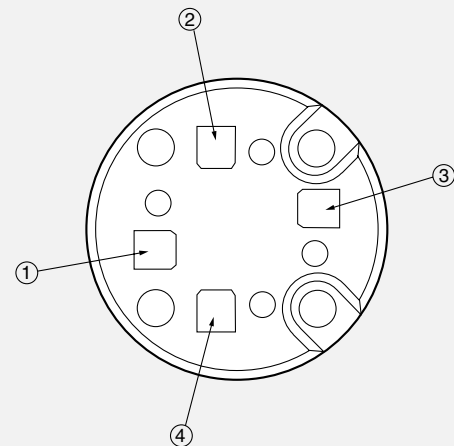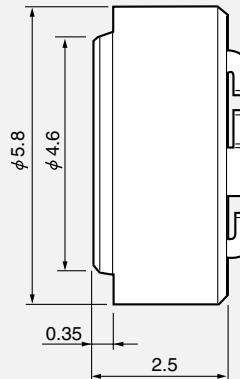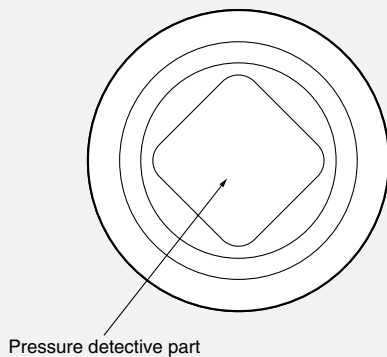
Note ; Please read instruction "Notes" before using the sensor.
Fujikura reserves the right to change specifications without notice.

Fujikura Ltd.

If you have any questions regarding technical issues or specifications, please contact us.
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