

# Display Type Pressure Sensors



## PSB Series CATALOG

For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.

The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

### Features

- High accuracy digital pressure sensor
- Bright red LED display (character height : 9.5 mm)
- High display resolution  
: negative pressure 0.1 kPa / standard pressure 0.1 kPa, 1 kPa / compound pressure 0.2 kPa
- Unit conversion function  
- negative, compound pressure: kPa, kgf/cm<sup>2</sup>, bar, psi, mmHg, mmH<sub>2</sub>O, inHg  
- standard pressure: kPa, kgf/cm<sup>2</sup>, bar, psi
- Various output modes: hysteresis mode, automatic sensitivity adjustment mode, independent 2-point output mode, window comparison output mode
- Chattering prevention function (response time: 2.5 ms, 5 ms, 100 ms, 500 ms)
- Analog output (1 - 5 VDC≐) scale function
- Zero-point adjustment function
- Peak value and low value hold function
- Built-in reverse polarity protection circuit, overcurrent protection circuit

### Ordering Information

This is only for reference, the actual product does not support all combinations. For selecting the specified model, follow the Autonics website.

**P S B - ① ② ③ - M 5**

#### ① Pressure type and Range

	Pressure	Rated range
01	Static	0.0 to 100.0 kPa
1		0 to 1,000 kPa
V01	Negative	0.0 to -101.3 kPa
C01	Compound	-100.0 to 100.0 kPa

#### ② Connection

No mark: Cable type  
C: Connector type

#### ③ Control output

No mark: NPN open collector output  
P: PNP open collector output

### Product Components

- Product
- Unit sticker
- Instruction manual
- Connector type: Connector wiring

### Specifications

Model	PSB-V01□□-□	PSB-01□□-□	PSB-1□□-□	PSB-C01□□-□
Pressure type	Gauge pressure			
Applicable medium	Air, Non-corrosive gas			
Pressure	Negative	Static		Compound
Min display interval	1-digit <sup>01)</sup>	1-digit <sup>01)</sup>		2-digit
Rated pressure range	0.0 to -101.3 kPa	0.0 to 100.0 kPa	0 to 1,000 kPa	-100.0 to 100.0 kPa
Display & setting pressure range	5.0 to -101.3 kPa	-5.0 to 110.0 kPa	-50 to 1,100 kPa	-101.2 to 110.0 kPa
Display type	7 segment LED, 3 1/2 digit			
Display accuracy	-10 to 0 °C: ≤ ±2% F.S., 0 to 50 °C: ≤ ±1% F.S.			
Max. pressure	Rated pressure × 2	Rated pressure × 2	Rated pressure × 1.5	Rated pressure × 2

01) psi unit: 2-digit

Connection type	Cable type / Connector type model
Cable	• Cable type: Ø 4 mm, 5-core, 2 m • Connector type: 5-core, 3 m
Wire spec.	AWG 24 (0.08 mm, 40-core), insulator diameter: Ø 1 mm
Material	Case, Pressure port, Cover: IXEF
Guaranteed parameter write life	100,000 times
Protection structure	IP40 (IEC standard)
Approval	CE ENEC
Unit weight (packaged)	≈ 70 g (≈ 160 g)

Power supply	12 - 24 VDC≐ ± 10% (ripple P-P: ≤ 10%)
Current consumption	≤ 50 mA
Control output	NPN open collector output / PNP open collector output model
Load voltage	≤ 30 VDC≐
Load current	≤ 100 mA
Residual voltage	NPN: ≤ 1 VDC≐, PNP: ≤ 2 VDC≐
Hysteresis	Negative / Static: 1-digit (psi unit: 2-digit) Compound: 2-digit <sup>01)</sup>
Repeat error	Negative / Static: ± 0.2% F.S. ± 1 digit Compound: ± 0.2% F.S. ± 2 digits
Response time	2.5, 5, 100, 500 ms
Protection circuit	Output short over-current protection circuit
Vibration	1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 2 hours
Ambient temperature	-10 to 50 °C, storage: -20 to 60 °C (no freezing or condensation)
Ambient humidity	35 to 85%RH, storage: 35 to 85%RH (no freezing or condensation)

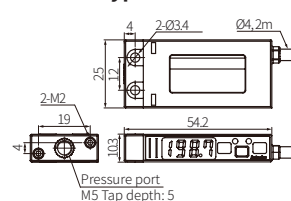
01) Due to the pressure unit operation, ± 1 digit errors may occur in the hysteresis.

Analog output	Voltage (1 - 5 VDC≐ ± 2% F.S)
Output impedance	1 kΩ
Linearity	≤ ± 2% F.S
Zero-point	≤ 1 VDC≐ ± 2% F.S.
Span	≤ 4 VDC≐ ± 2% F.S.
Resolution	1/2000

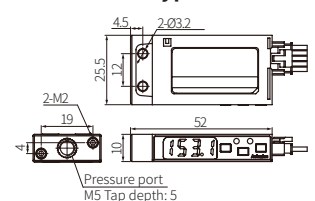
### Dimensions

• Unit: mm, For the detailed drawings, follow the Autonics website.

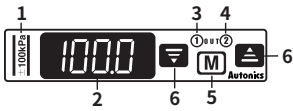
#### ■ Cable type



#### ■ Connector type



## Unit Descriptions



**1. Pressure range (sticker)**

**2. Display part (red)**

Run mode: Displays PV (present value), SV (setting value)

Setting mode: Displays parameter and setting value

**3. Output 1 indicator (red)**

Turns ON when the control output 1 is ON.

**4. Output 2 indicator (green)**

Turns ON when the control output 2 is ON.

**5. [M] key**

Enters parameter group / preset setting mode, selects item and returns run mode

**6. [▼], [▲] key**

Changes parameter / preset setting value, runs the mode or changes parameter.