

Dual Display Type Pressure Sensors



PSQ 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

- Pressure measurement of any gas, liquid or oil [fluid type] except substances which may corrode stainless steel 316L
- Dual display for simultaneous display of process value (PV) and setpoint value (SV)
- Secondary (SV) display : setpoint value, pressure unit, or display-OFF
- Switch between NPN and PNP open collector output via parameter configuration
- 3-color main (PV) display (RUN mode : green/red, parameter setting mode : orange)
- 12-segment LCD display capable of diverse alphanumeric characters
- Measurement range : -100.0 to 100.0 kPa /-100 to 1000 kPa (Pneumatic type : compound pressure, Fluid type : sealed gauge pressure)
- Analog output : voltage (1-5VDC \approx), current (DC 4-20mA)
- Copy parameter settings function
- External input : Auto-Shift, Remote, Hold (PSQ-□□□□U-□ models only)
- Forced output control mode for device testing and inspection
- Display resolution : 0.1 kPa /1 kPa (by model)
- One-touch connector type for easy wiring and maintenance
- Password lock for parameter configuration settings

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 Q - ① C ② ③ ④ - ⑤

① Applicable medium

No mark: Pneumatic type (air, non-corrosive gas)
B: Fluid type (gas, liquid)

② Pressure range (unit: kPa)

01: -100.0 to 100.0
1: -100 to 1,000

③ Cable

No mark: Cable type (fluid type)
C: Connector type (pneumatic type)

④ Option input / output

No mark: No support
U: Support (analog output or external input)


⑤ Pressure port

Pressure port \ Medium	Pneumatic type	Fluid type
R1/8 (default)	○	○
Rc1/8	○	○
NPT1/8	○	-
R1/4	-	○
NPT1/4	-	○
9/16-18UNF (Metal gasket sealing)	-	○

Product Components

- Product
- Pneumatic type: bracket A, B
- Connector type: Connector wiring (PSO-C01)
- Instruction manual
- Fluid type: bracket C

Specifications

Model	PSQ-C□□□□□	PSQ-BC□□□□□
Applicable medium	Pneumatic type (air, non-corrosive gas)	Fluid type (non-corrosive gas and fluid that do not corrode stainless steel 316L)
Pressure type	Gauge pressure	Sealed gauge pressure ⁰¹⁾
Rated pressure range	-100.0 to 100.0 kPa / -100 to 1,000 kPa model	
Display and setting pressure range	<ul style="list-style-type: none"> • Rated pressure range -100.0 to 100.0 kPa model: -101.3 to 110.0 kPa • Rated pressure range -100 to 1,000 kPa model: -101 to 1,100 kPa 	
Display type	PV / SV display part: 12 segment LCD, 4digit	
Display accuracy	-10 to 0 °C: $\leq \pm 1\%$ F.S., 0 to 50 °C: $\leq \pm 0.5\%$ F.S.	
Min. display unit	<ul style="list-style-type: none"> • Rated pressure range -100.0 to 100.0 kPa model: 0.1 kPa • Rated pressure range -100 to 1,000 kPa model: 1 kPa 	
Min. display interval	Different by pressure unit ⁰²⁾	
Max. pressure range	<ul style="list-style-type: none"> • Rated pressure range -100.0 to 100.0 kPa model: Rated pressure $\times 2$ • Rated pressure range -100 to 1,000 kPa model: Rated pressure $\times 1.5$ 	Rated pressure $\times 3$
Connection	Connector type	Cable type
Cable	$\varnothing 4$ mm, 5 core, 2 m	$\varnothing 4$ mm, 5 core, 3 m
Wire	AWG 24 (0.08 mm, 40 seam) insulator diameter: $\varnothing 1$ mm	
Material	Front case: PC, back case: PBT+G15%, pressure port: SUS303	Front case: PC, back case: PA6, pressure port: SUS316L
Protection structure	IP40 (IEC standard)	IP65 (IEC standard)
Approval	CE  ENEC	
Unit weight (packaged)	≈ 80 g (≈ 165 g)	≈ 125 g (≈ 210 g)

01) The unit is sealed structure. It is based on atmospheric pressure 101.3kPa.

02) Refer to 'minimum display interval per pressure unit'.

Power supply	12 - 24 VDC \approx (ripple P-P: $\leq 10\%$)
Allowable voltage range	90 to 110% of rated voltage
Current consumption	≤ 50 mA (analog output model: ≤ 70 mA)
Control output	NPN or PNP open collector output
Load voltage	≤ 30 VDC \approx
Load current	≤ 100 mA
Residual voltage	≤ 2 VDC \approx
Hysteresis	Different by output operation mode (parameter) ⁰¹⁾
Repeat error	$\pm 0.2\%$ F.S. \pm min. display interval
Response time	2.5 to 5,000 ms (parameter)
Protection circuit	Output short over current protection circuit
Insulation resistance	≥ 50 M Ω (500 VDC \approx megger)
Dielectric strength	1,000 VAC \sim 50 / 60 Hz for 1 min
Vibration	1.5mm amplitude at frequency of 10 to 55Hz (for 1min) 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	30 to 80%RH, storage: 30 to 80%RH (no freezing or condensation)

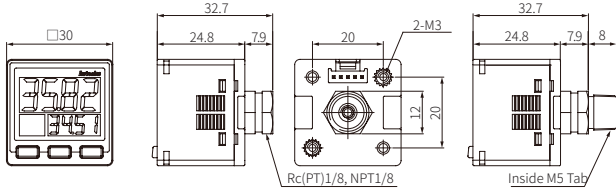
01) Refer to 'Output operation mode'.

External input	Auto shift - Remote zero - Hold (parameter)
ON / OFF voltage input	ON voltage: ≤ 0.4 VDC≐, OFF voltage: 5-Vin or open, input impedance: ≈ 100 kΩ
Resolution	1 / 2,000
Option output	Analog voltage - Analog current output (parameter)
Analog voltage output	1 - 5 VDC≐ ± 2.5% F.S., output impedance: ≈ 240 Ω
Analog current output	DC4 - 20 mA ± 2.5% F.S., output impedance: ≈ 100 kΩ
Linearity	≤ ± 1% F.S.
Resolution	1 / 2,000
Response time	50 ms

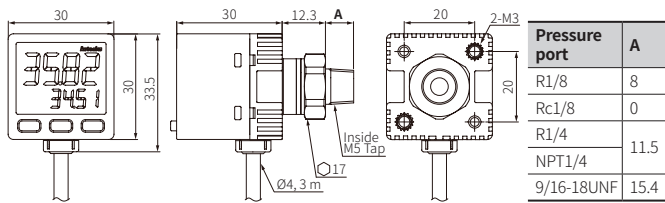
Dimensions

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

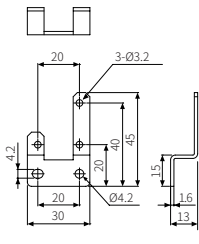
■ Pneumatic type



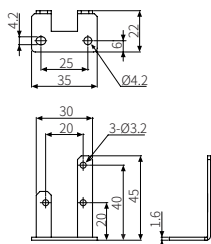
■ Fluid type



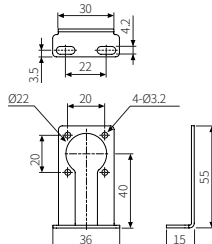
■ Bracket A



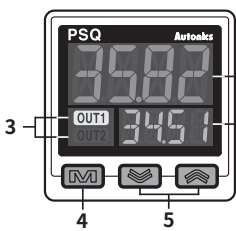
■ Bracket B



■ Bracket C



Unit Descriptions



- 1. PV display part (green, red, orange)**
RUN mode: Displays PV (present value).
Setting mode: Displays parameter.
- 2. SV display part (green)**
RUN mode: Displays SV (setting value), unit, etc.
Setting mode: Displays SV.
- 3. Output (OUT1, OUT2) indicator (orange)**
Turns ON while the control output turns ON.
- 4. [M] key**
Enters parameter, selects the setting item and returns RUN mode.
- 5. [▼], [▲] key**
Sets preset of output operation mode, executes modes and changes parameters.

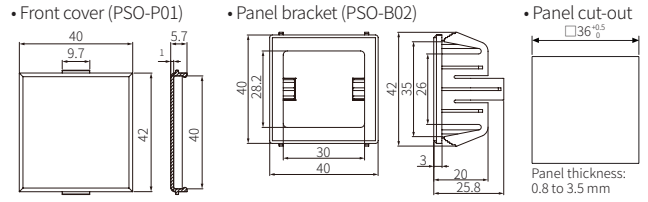
Sold Separately

- Integrated installation set: Front cover (PSO-P01), Panel bracket (PSO-B02)
 - Separate installation set⁰¹⁾: Front cover (PSO-P02), Front/rear panel bracket set (PSO-B04)
 - M5 gender⁰¹⁾ (PSO-Z01)
- 01) Only for pneumatic type model

Sold Separately: Installation Set

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

■ Integrated installation set (pneumatic / fluid type)



■ Separate installation set (pneumatic type)

