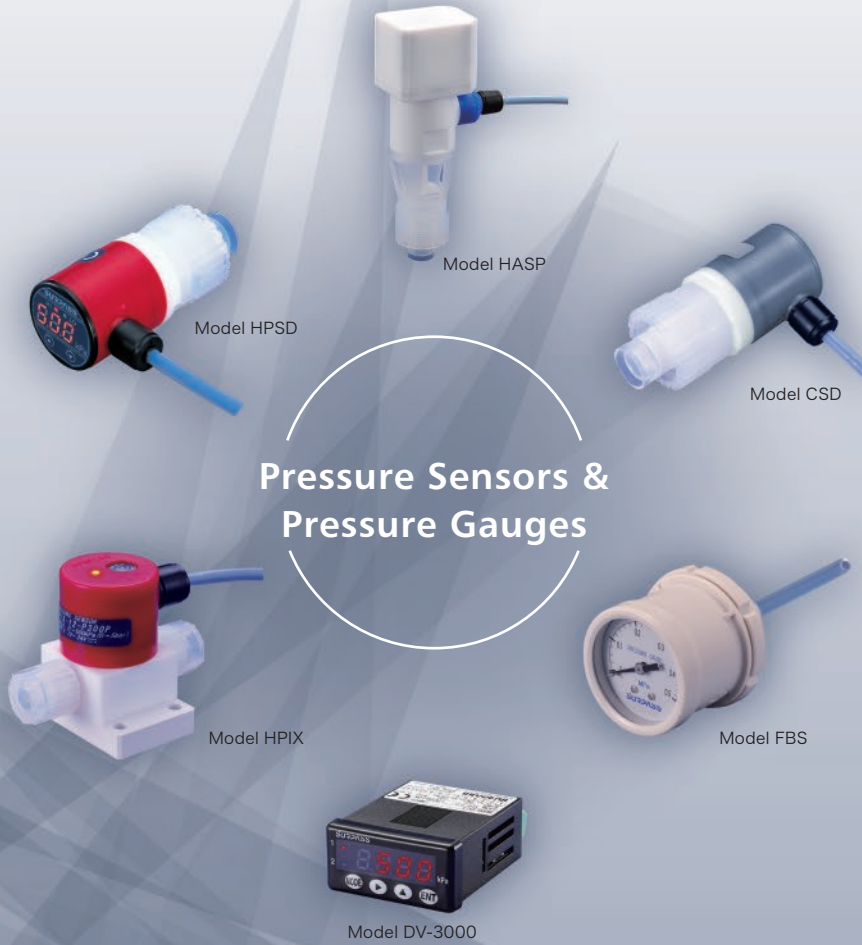


Pressure Sensors & Pressure Gauges



Product Selection	P.52
· Usage Example	P.53
Model HPSD Pressure Sensor	P.54
Model HPSX Pressure Sensor	P.56
Model HPID Pressure Sensor	P.58
Model HPIX Pressure Sensor	P.60
Model HASP Pressure Sensor	P.62

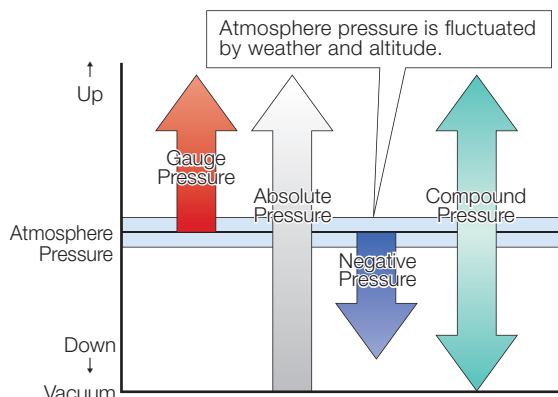
Model CSD / CSX Pressure Sensor	P.64
Model FB Pressure Gauge	P.66
Model FBS Pressure Gauge	P.68
Model DV-3000 Pressure Monitor	P.69
· Safety Instructions	P.70

Pressure Sensors & Pressure Gauges

Product Selection

Classification		Type	Pressure Type	Rated Pressure	Analog Output	Wetted Parts	Model		
Pressure Sensor	Gas-permeable Proof product	Single port	Gauge Pressure	0~300kPa	4~20mA	PTFE PFA	HPSD HPSX		
				0~500kPa					
				0~700kPa					
		In-line	Gauge Pressure	0~300kPa					
				0~500kPa					
				0~700kPa					
	Single port	Gauge Pressure	0~500kPa	4~20mA	CSD CSX				
			—				Single port	Gauge Pressure	0~300kPa
									0~500kPa
0~700kPa									
Compound Pressure	-100~300kPa								
	-100~500kPa								
	0~0.3MPa								
Pressure Gauge	Gas-permeable Proof product	Single port	Gauge Pressure		0~0.5MPa	Pointer Indication	PTFE PFA Kalrez® O-ring	FB	
					0~0.7MPa				
				0~0.3MPa					
				0~0.5MPa	FB-HT				
				0~0.5MPa					
				0~0.5MPa					
Pressure Monitor							DV-3000		
Blacket							TPL-B		

Pressure Type



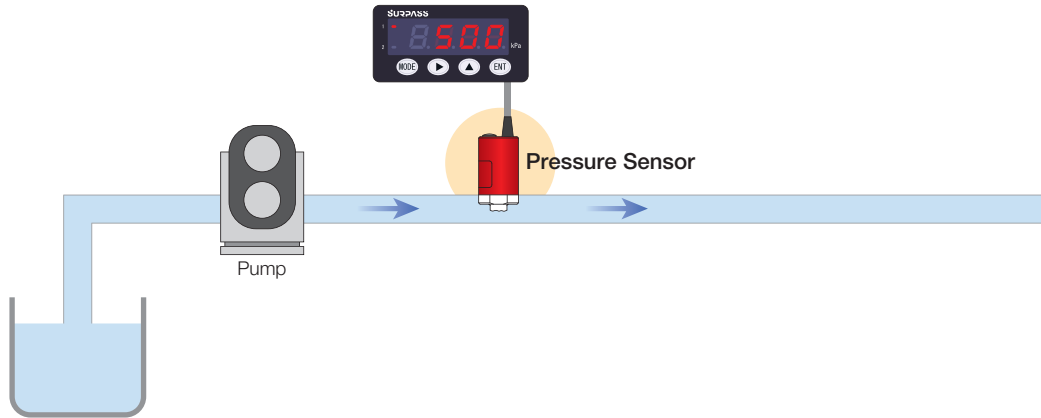
Pressure is classified into four categories.

- Gauge Pressure** Gauge pressure is zero-referenced against atmosphere pressure.
- Absolute Pressure** Absolute pressure is zero-referenced against a perfect vacuum.
- Negative Pressure** Negative pressure is reduced against atmosphere pressure.
- Compound Pressure** Compound pressure consists of Gauge and Negative pressure.

Usage Example

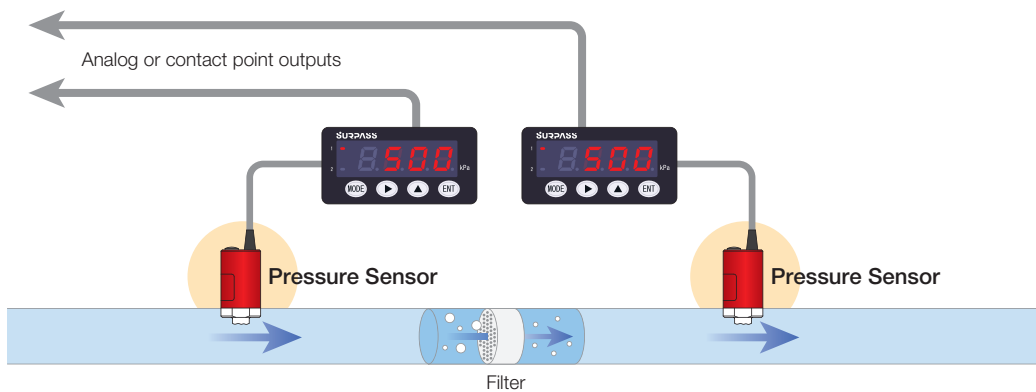
Confirm Pumping Pressure

Enables to ensure the liquid delivery when the pressure sensor put the secondary side of the pump.



Monitor Clogging

Enables to monitor the filter whether it works or not when the pressure sensor put both primary and secondary side.

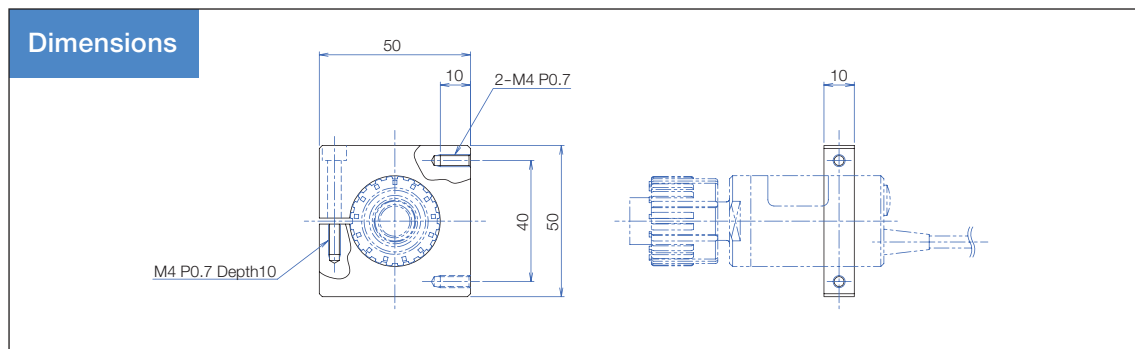


Option

● **Bracket for Sensor**

This is a holder that glues to single port type pressure sensor. It is made from heat-resistant PVC.

Type	TPL-B	Usable Models	HPSD, HPSX, HPS, CSD, CSX
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Pressure Sensors

Model HPSD Pressure Sensor

Gas-permeable Proof Product

RoHS2



Features

- Wetted parts are anti-corrosive fluorine resin materials.
- This is a gas-permeable proof product.
- Pressure rate can be seen on site with its display.
- Pressure switch function is also available.
- Zero adjustment works by pushing the UP and DOWN button together.

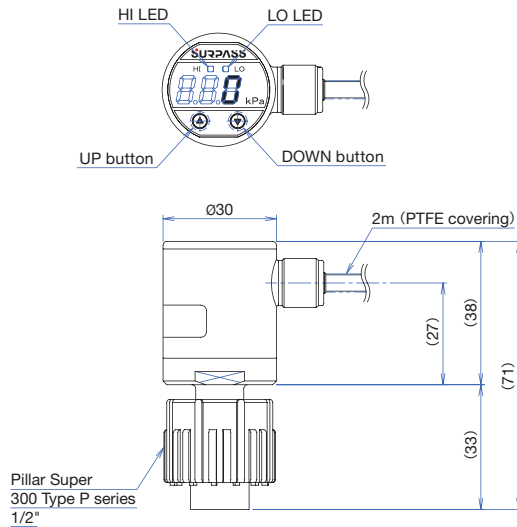
Caution Do not rotate the red sensor case. It may cause malfunction.

Specifications

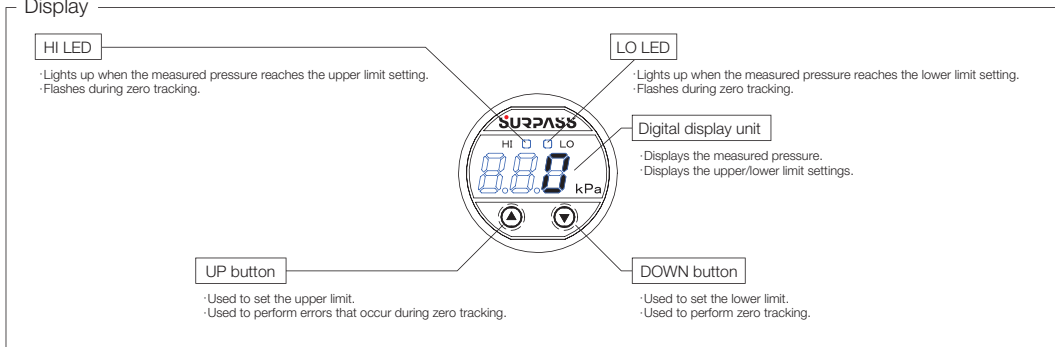
Type	HPSD-1/2-P300P-3	HPSD-1/2-P300P	HPSD-1/2-P300P-7
Pressure type	Gauge pressure		
Rated pressure	0~300kPa	0~500kPa	0~700kPa
Withstanding pressure	450kPa	750kPa	800kPa
Fitting	Pillar Super 300 Type P series		
Connection type	Tube fitting nut space-saver type		
Connection size	1/2" (Ø12.7×Ø9.53)		
Wetted parts	PTFE, PFA		
Fluids	Gas, Liquid (DI water and Chemical)		
Fluid temperature	15~80°C		
Ambient temperature	15~50°C		
Linearity	±1% F.S. (at 25°C)		
Hysteresis	±1% F.S. (at 25°C)		
Temperature drift	±0.05% F.S./°C		
Analog output	DC 4~20mA		
Power supply	DC 12~24V ±10%		
Current consumption	12V Max. 100mA / 24V Max. 70mA		
Degree of protection	In accordance with IP65		
Cable specification	Length	2m (PTFE jacket covering)	
	Thickness	AWG28	
	Cores	6	
	Core outer diameter	Ø0.83	
	Outer diameter	PTFE covering Ø4.8, PVC covering Ø3.3	
	Covering material	PTFE, PVC	
	Standard	UL style 2725	
Pressure switch specification	Accuracy	±1% F.S.	
	Setting points	Two arbitrary points (upper and lower limits)	
	Hysteresis	2% F.S.	
	Output	NPN Open collector Max.30V/80mA	
Display specification	Display range	Low limit: -2% F.S. of rated pressure ~Upper limit: +5% F.S. of rated pressure	
	Accuracy	±1% F.S. ±1digit	
	Alarm lamp	LED shines when go over upper and lower limit	

Dimensions

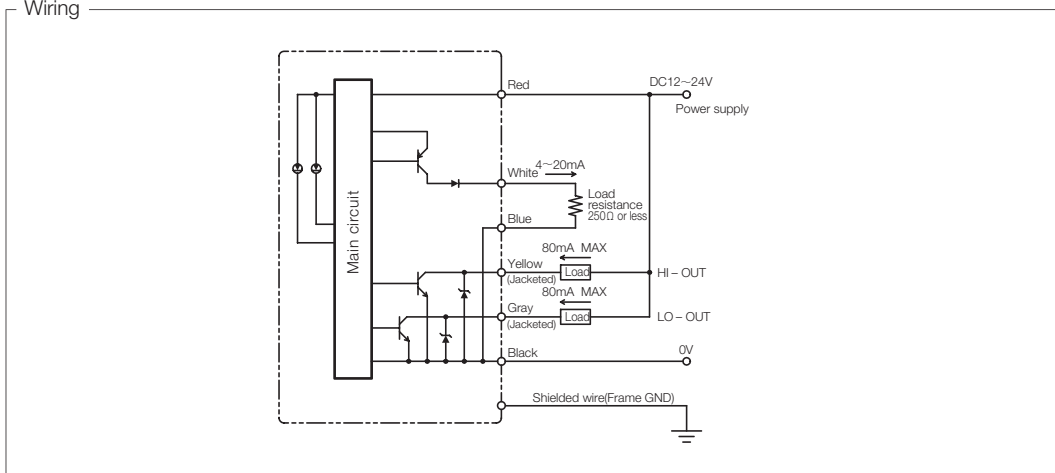
● HPSD-1/2-P300P-□



Display



Wiring



Usage Note Zero Adjustment must be processed under zero pressure.

Pressure Sensors

Model HPSX Pressure Sensor

Gas-permeable Proof Product

RoHS2



Features

- ⊙ Wetted parts are anti-corrosive fluorine resin materials.
- ⊙ This is a gas-permeable proof product.
- ⊙ Zero adjustment works by pushing the button and external input.
- ⊙ LED lamp signs power supply status and zero adjustment completion.
- ⊙ Zero adjustment completion will be indicated by output signal.

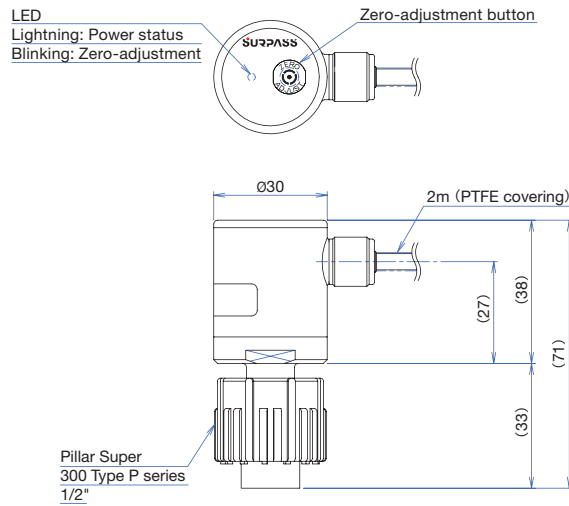
Caution Do not rotate the red sensor case. It may cause malfunction.

Specifications

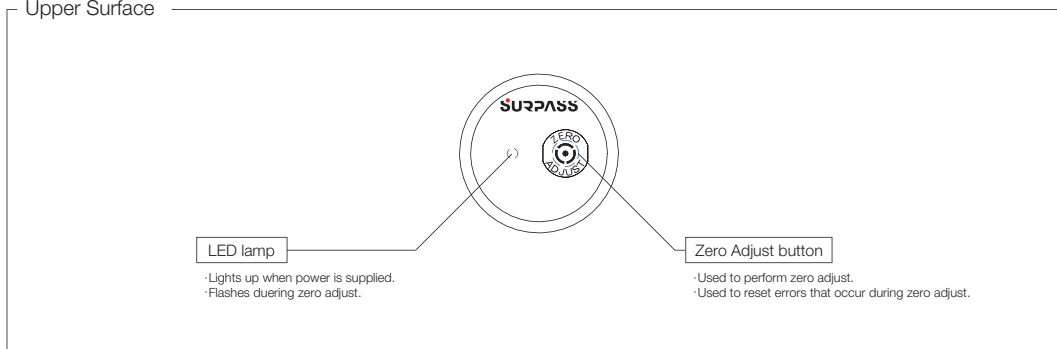
Type	HPSX-1/2-P300P-3	HPSX-1/2-P300P	HPSX-1/2-P300P-7
Pressure type	Gauge pressure		
Rated pressure	0~300kPa	0~500kPa	0~700kPa
Withstanding pressure	450kPa	750kPa	800kPa
Fitting	Pillar Super 300 Type P series		
Connection type	Tube fitting nut space-saver type		
Connection size	1/2" (Ø12.7×Ø9.53)		
Wetted parts	PTFE, PFA		
Fluids	Gas, Liquid (DI water and Chemical)		
Fluid temperature	15~80°C		
Ambient temperature	15~50°C		
Linearity	±1% F.S. (at 25°C)		
Hysteresis	±1% F.S. (at 25°C)		
Temperature drift	±0.05% F.S./°C		
Analog output	DC 4~20mA		
Power supply	DC 12~24V ±10%		
Current consumption	12V Max. 100mA / 24V Max. 70mA		
Degree of protection	In accordance with IP65		
Cable specification	Length	2m (PTFE jacket covering)	
	Thickness	AWG28	
	Cores	6	
	Core outer diameter	Ø0.83	
	Outer diameter	PTFE covering Ø4.8, PVC covering Ø3.3	
	Covering material	PTFE, PVC	
	Standard	UL style 2725	

Dimensions

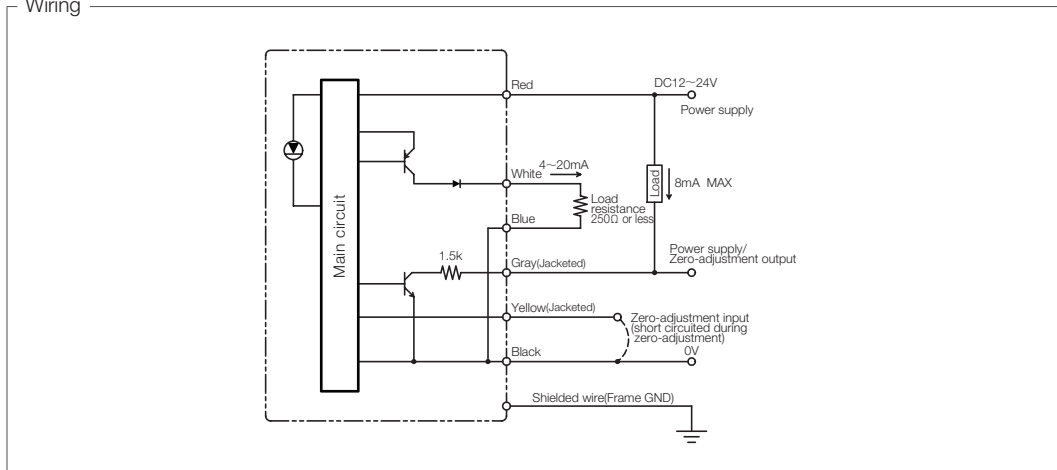
● HPSX-1/2-P300P-□



Upper Surface



Wiring



Usage Note Zero Adjustment must be processed under zero pressure.

Pressure Sensors

Model HPID Pressure Sensor

Gas-permeable Proof Product

RoHS2



Features

- Wetted materials are anti-corrosive fluorine resin .
- This is a gas-permeable proof product.
- This is a in-line type pressure sensor.
- Pressure rate can be seen on site with its display.
- Pressure Switch function is also available.
- Zero adjustment works by pushing the UP and DOWN button together.

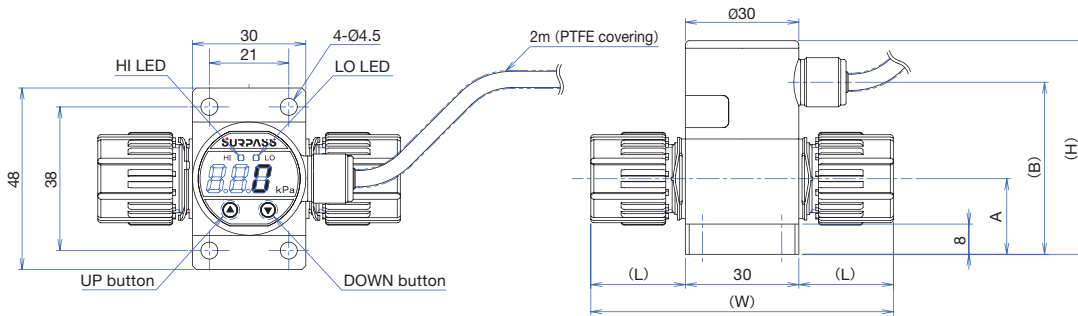
Caution Do not rotate the red sensor case. It may cause malfunction.

Specifications

Type	HPID-12-P300P-3	HPID-12-P300P	HPID-12-P300P-7
	HPID-13-P300P-3	HPID-13-P300P	HPID-13-P300P-7
	HPID-14-P300P-3	HPID-14-P300P	HPID-14-P300P-7
Pressure type	Gauge pressure		
Rated pressure	0~300kPa	0~500kPa	0~700kPa
Withstanding pressure	450kPa	750kPa	800kPa
Fitting	Pillar Super 300 Type P series		
Connection size	12: 1/4" (Ø6.35×Ø3.95), 13: 3/8" (Ø9.53×Ø6.35), 14: 1/2" (Ø12.7×Ø9.53)		
Wetted parts	PTFE		
Fluids	Gas, Liquid (DI water and Chemical)		
Fluid temperature	15~80°C		
Ambient temperature	15~50°C		
Linearity	±1% F.S. (at 25°C)		
Hysteresis	±1% F.S. (at 25°C)		
Temperature drift	±0.05% F.S./°C		
Analog output	DC 4~20mA		
Power supply	DC 12~24V ±10%		
Current consumption	12V Max. 100mA / 24V Max. 70mA		
Degree of protection	In accordance with IP65		
Cable specification	Length	2m (PTFE jacket covering)	
	Thickness	AWG28	
	Cores	6	
	Core outer diameter	Ø0.83	
	Outer diameter	PTFE covering Ø4.8, PVC covering Ø3.3	
	Covering material	PTFE, PVC	
	Standard	UL style 2725	
Pressure switch specification	Accuracy	±1% F.S.	
	Setting points	Two arbitrary points (upper and lower limits)	
	Hysteresis	2% F.S.	
	Output	NPN open collector Max.30V/80mA	
Display specification	Display range	Low limit: -2% F.S. of rated pressure ~Upper limit: +5% F.S. of rated pressure	
	Accuracy	±1% F.S. ±1digit	
	Alarm lamp	LED shines when get over upper and lower limit	

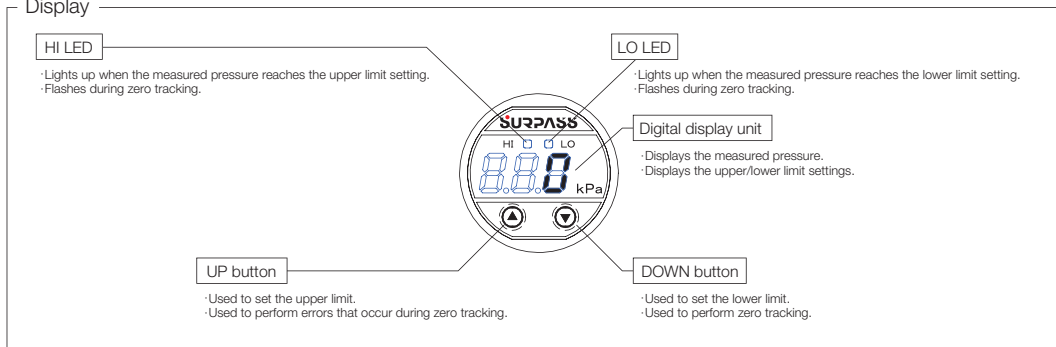
Dimensions

● HPID-□-P300P-□

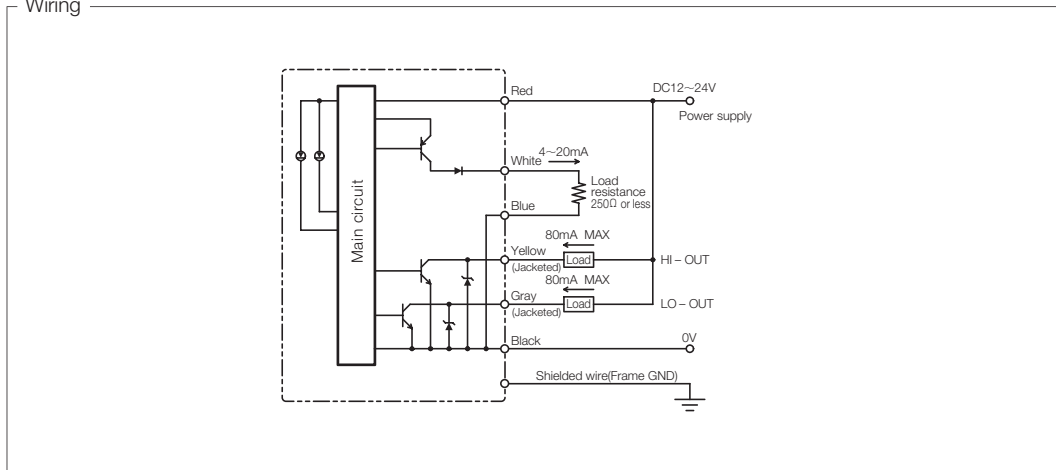


Model	(L)	(W)	(H)	A	(B)
HPID-12-P300P-□	19	68	49.5	16	38.5
HPID-13-P300P-□	25	80	56.5	20	45.5
HPID-14-P300P-□	29	88	58	20	47

Display



Wiring



Usage Note Zero Adjustment must be processed under zero pressure.

Pressure Sensors

Model HPIX Pressure Sensor

Gas-permeable Proof Product

RoHS2



Features

- ⦿ This is a in-line pressure sensor whose wetted materials are anti-corrosive fluorine resin.
- ⦿ This is a gas-permeable proof product.
- ⦿ Zero adjustment works by pushing the button and external input.
- ⦿ LED lamp signs power supply status and zero adjustment completion.
- ⦿ Zero adjustment completion will be indicated by output signal.

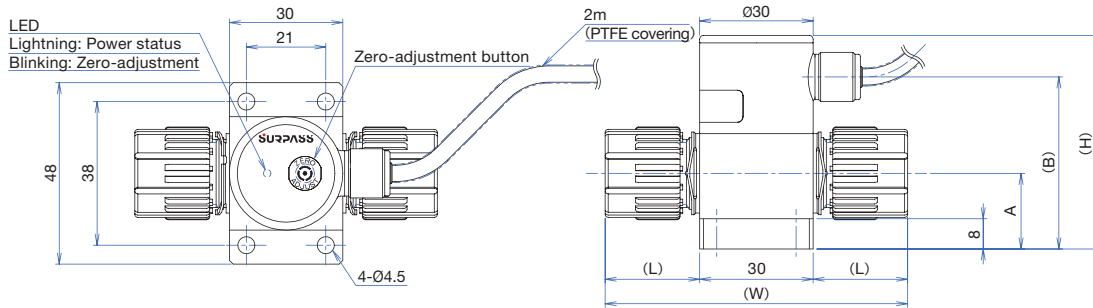
Caution Do not rotate the red sensor case. It may cause malfunction.

Specifications

Type	HPIX-12-P300P-3	HPIX-12-P300P	HPIX-12-P300P-7
	HPIX-13-P300P-3	HPIX-13-P300P	HPIX-13-P300P-7
	HPIX-14-P300P-3	HPIX-14-P300P	HPIX-14-P300P-7
Pressure type	Gauge pressure		
Rated pressure	0~300kPa	0~500kPa	0~700kPa
Withstanding pressure	450kPa	750kPa	800kPa
Fitting	Pillar Super 300 Type P series		
Connection size	12: 1/4" (Ø6.35×Ø3.95), 13: 3/8" (Ø9.53×Ø6.35), 14: 1/2" (Ø12.7×Ø9.53)		
Wetted parts	PTFE		
Fluids	Gas, Liquid (DI water and Chemical)		
Fluid temperature	15~80°C		
Ambient temperature	15~50°C		
Linearity	±1% F.S. (at 25°C)		
Hysteresis	±1% F.S. (at 25°C)		
Temperature drift	±0.05% F.S./°C		
Analog output	DC 4~20mA		
Power supply	DC 12~24V ±10%		
Current consumption	12V Max. 100mA / 24V Max. 70mA		
Degree of protection	In accordance with IP65		
Cable specification	Length	2m (PTFE jacket covering)	
	Thickness	AWG28	
	Cores	6	
	Core outer diameter	Ø0.83	
	Outer diameter	PTFE covering Ø4.8, PVC covering Ø3.3	
	Covering material	PTFE, PVC	
Standard	UL style 2725		

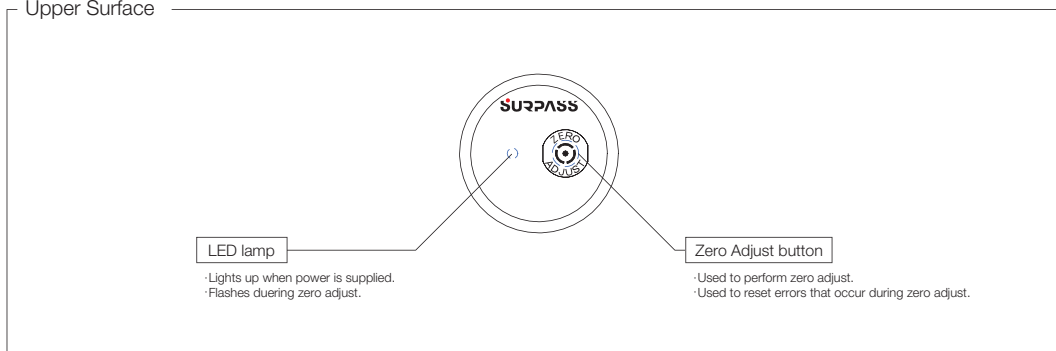
Dimensions

● HPIX-□-P300P-□

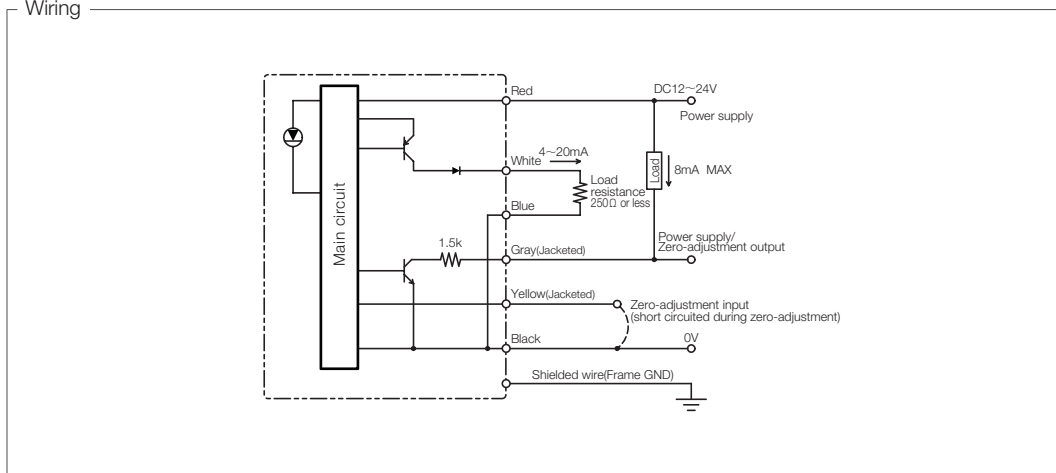


Model	(L)	(W)	(H)	A	(B)
HPIX-12-P300P-□	19	68	49.5	16	38.5
HPIX-13-P300P-□	25	80	56.5	20	45.5
HPIX-14-P300P-□	29	88	58	20	47

Upper Surface



Wiring



Usage Note Zero Adjustment must be processed under zero pressure.

Pressure Sensors

Model HASP Pressure Sensor

Gas-permeable Proof Product



RoHS2



HASP-1/2-P300P-SHT2

Features

- ⊙ Compatible with fluid temperatures of 180°C.
- ⊙ Wetted parts are anti-corrosive fluorine resin materials.
- ⊙ Zero adjustment works by external input.
- ⊙ Zero adjustment completion will be indicated by output signal.
- ⊙ Easy to install with detachable cable.

Caution Do not rotate the sensor case. It may cause malfunction.

Specifications

Type	HASP-1/2-P300P-SHT2	
Pressure type	Gauge pressure	
Rated pressure	0~500kPa	
Withstanding pressure	750kPa	
Fitting	Pillar Super 300 Type P series	
Connection type	Tube fitting nut space-saver type	
Connection size	1/2" (Ø12.7×Ø9.53)	
Wetted parts	PTFE, PFA	
Fluids	Gas, Liquid (DI water and Chemical)	
Fluid temperature	15~180°C	
Ambient temperature	15~60°C	
Linearity	±1% F.S. (at 25°C)	
Hysteresis	±1% F.S. (at 25°C)	
Temperature drift	±0.08% F.S./°C	
Analog output	DC 4~20mA	
Power supply	DC 12~24V ±10%	
Current consumption	12V Max. 100mA / 24V Max. 42mA	
Protection of degree	In accordance with IP65	
Cable specification	Length	2m (PTFE covering)
	Size	AWG28
	Cores	6
	Core outer diameter	Ø0.83
	Outer diameter	PTFE covering Ø4.8, PVC covering Ø3.3
	Covering material	PTFE, PVC
	Standard	UL style 2725

*The above specifications exclude fittings, and the heat and pressure resistance of fittings are depending on the manufacturer.

Air Purge Condition

Pressure Range	Under 200kPa
Flow Range	3~14L/min
Temperature Range	25~40°C
Connection Size	Rc1/8

*Please make sure to do air purge.

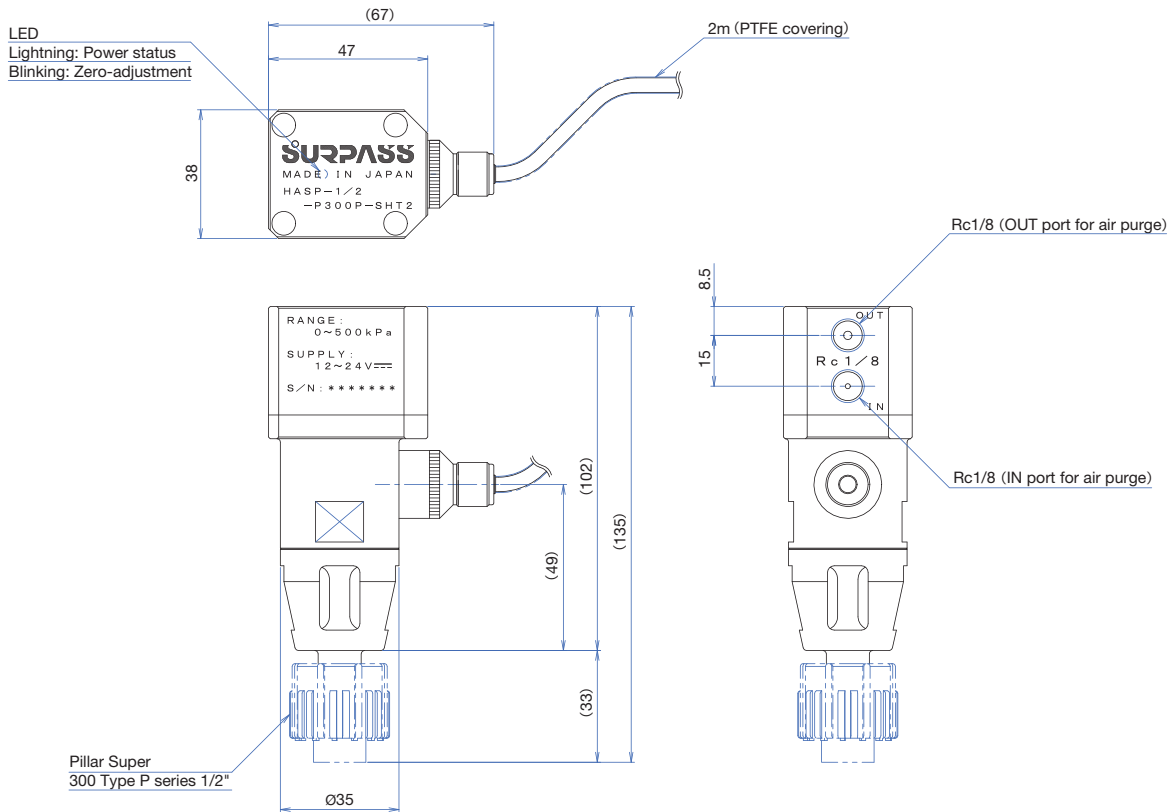
Usage Note



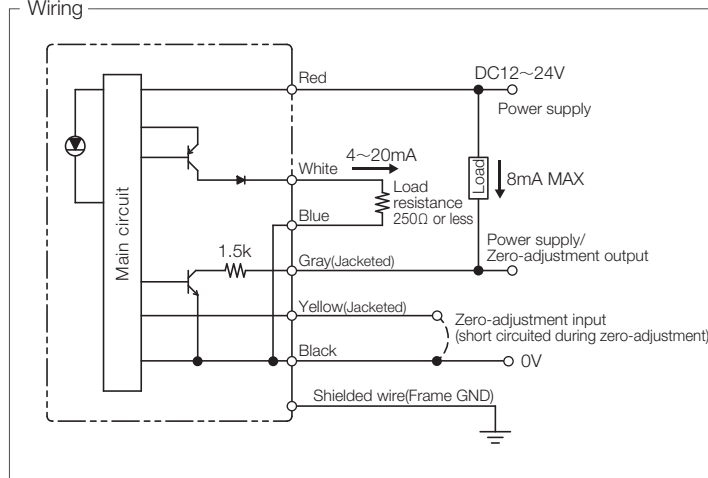
⊙ Be sure to use with in the ambient temperature range.

Dimensions

● HASP-1/2-P300P-SHT2



Wiring



Usage Note Zero Adjustment must be processed under zero pressure.

Pressure Sensors

Model CSD / CSX Pressure Sensor

RoHS2


Features

- ⊙ Wetted parts are anti-corrosive fluorine resin materials.
- ⊙ Zero adjustment works by pushing the button.
- ⊙ Model CSD: Pressure rate can be seen on site with its display.
- ⊙ Model CSD: Pressure switch function is also available.
- ⊙ Model CSX: LED lamp signs power supply status and zero adjustment completion.
- ⊙ Model CSX: Zero adjustment completion will be indicated by output signal.

Caution

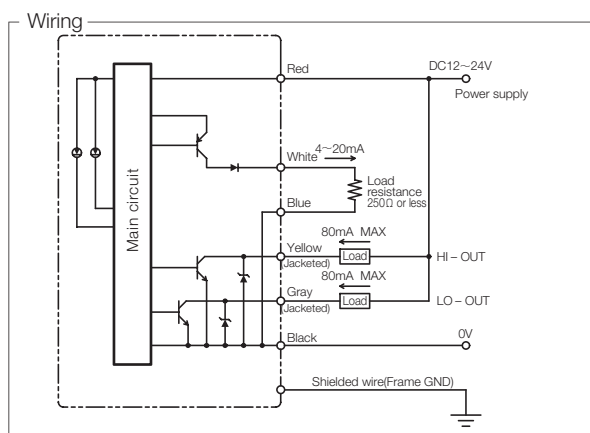
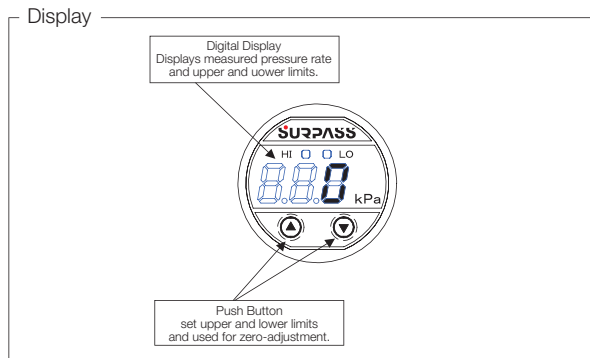
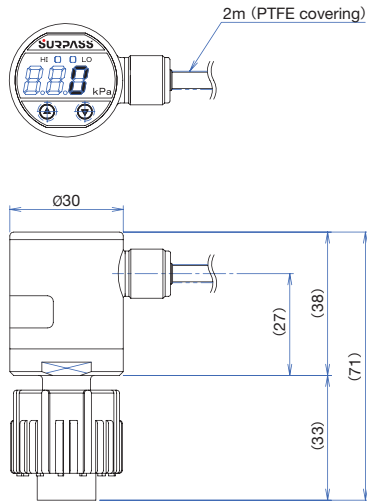
- ⊙ Do not rotate the gray sensor case. It may cause malfunction.
- ⊙ This model is not compatible with gas-permeable fluid (including Ozone).

Specifications

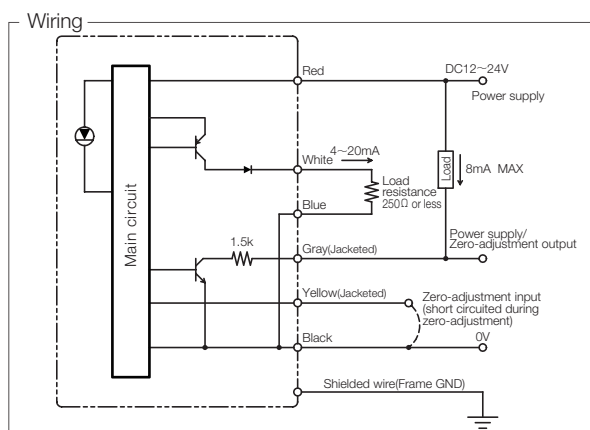
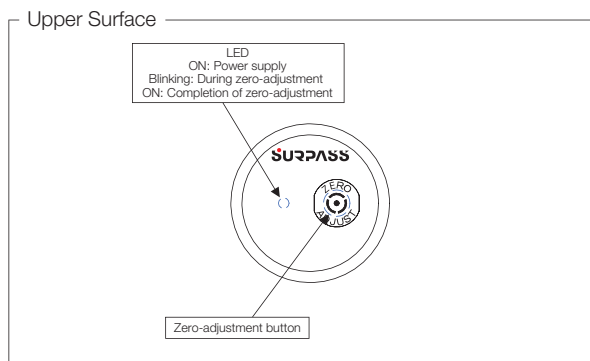
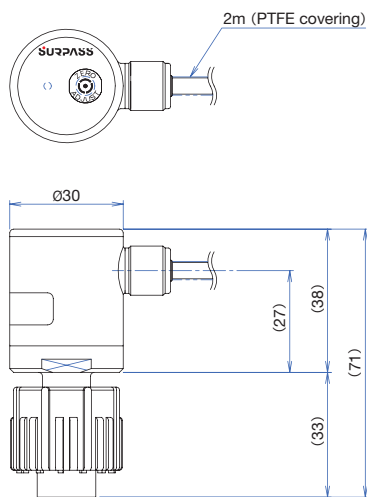
Type	CSD-1/2-P300P-D30A	CSD-1/2-P300P-D20A	CSD-1/2-P300P-3	CSD-1/2-P300P	CSD-1/2-P300P-7
	CSX-1/2-P300P-D30A	CSX-1/2-P300P-D20A	CSX-1/2-P300P-3	CSX-1/2-P300P	CSX-1/2-P300P-7
Pressure type	Gauge pressure				
Rated pressure	-100~500kPa	-100~300kPa	0~300kPa	0~500kPa	0~700kPa
Withstanding pressure	750kPa	450kPa	450kPa	750kPa	800kPa
Fitting	Pillar Super 300 Type P series				
Connection type	Tube fitting nut space-saver type				
Connection size	1/2" (Ø12.7×Ø9.53)				
Wetted parts	PTFE, PFA				
Fluids	Gas, Liquid (DI water and Chemicals not to corrosive or permeable against fluorocarbon resin)				
Fluid temperature	15~80℃				
Ambient temperature	15~50℃				
Linearity	±1% F.S. (at 25℃)				
Hysteresis	±1% F.S. (at 25℃)				
Temperature drift	±0.08% F.S./℃				
Analog output	DC 4~20mA				
Power supply	DC 12~24V ±10%				
Current consumption	12V Max. 100mA / 24V Max. 70mA				
Degree of protection	In accordance with IP65				
Cable specification	Length	2m (PTFE covering)			
	Thickness	AWG28			
	Cores	6			
	Core outer diameter	Ø0.83			
	Outer diameter	PTFE covering Ø4.8, PVC covering Ø3.3			
	Covering material	PTFE, PVC			
Standard	UL style 2725				
Pressure switch specification (CSD only)	Accuracy	±1% F.S.			
	Setting points	Two arbitrary points (upper and lower limits)			
	Hysteresis	2% F.S.			
	Output	NPN open collector Max.30V/80mA			
Display specification (CSD only)	Display range	Low limit: -2% F.S. of rated pressure ~Upper limit: +5% F.S. of rated pressure			
	Accuracy	±1% F.S. ±1digit			
	Alarm lamp	LED shines when go over upper and lower limit			

Dimensions

● Model CSD - With display



● Model CSX - Without display



Usage Note Zero Adjustment must be processed under zero pressure.

Pressure Sensors

Model FB Pressure Gauge

Gas-permeable Proof Product

RoHS2



FB-05-1/4



FB-03-R3

Features

- All wetted parts are anti-corrosive fluorine resin materials.
- This is a gas-permeable proof product.
- Gas permeability structure is available by special double-sealing.
- Available for strong acid and alkaline chemicals.
- Outside case is made of PP.
- Wetted parts are made from no oil and water.

Standard Type

Specifications

Type	FB-03-1/4	FB-05-1/4	FB-07-1/4
	FB-03-1/2	FB-05-1/2	FB-07-1/2
	FB-03-R3	FB-05-R3	FB-07-R3
Rated pressure	0~0.3MPa		
Accuracy	0.00~0.05MPa ±3%F.S. 0.05~0.25MPa ±2%F.S. 0.25~0.30MPa ±3%F.S.	0.00~0.05MPa ±3%F.S. 0.05~0.45MPa ±2%F.S. 0.45~0.50MPa ±3%F.S.	0.00~0.10MPa ±3%F.S. 0.10~0.60MPa ±2%F.S. 0.60~0.70MPa ±3%F.S.
Connection type	Tube fitting, R thread		
Connection size	1/4 : 1/4" (Ø6.35×Ø3.95), 1/2 : 1/2" (Ø12.7×Ø9.53), R3 : R3/8		
Wetted parts	PTFE, PFA, Kalrez® O-ring		
Fluids	Gas and Liquid (DI water and Chemicals)		
Fluids temperature	10~50°C		
Ambient temperature	10~40°C		

High Temperature Compatible Type

Specifications

Type	FB-03-1/4-HT	FB-05-1/4-HT
	FB-03-1/2-HT	FB-05-1/2-HT
Rated pressure	0~0.3MPa	
Accuracy	0.00~0.06MPa ±5%F.S. 0.06~0.24MPa ±2%F.S. 0.24~0.30MPa ±5%F.S.	0.00~0.10MPa ±5%F.S. 0.10~0.40MPa ±2%F.S. 0.40~0.50MPa ±5%F.S.
Connection type	Tube Fitting	
Connection size	1/4: 1/4" (Ø6.35×Ø3.95), 1/2: 1/2" (Ø12.7×Ø9.53)	
Wetted parts	PTFE, PFA, Kalrez® O-ring	
Fluids	Gas and Liquid (DI water and Chemicals)	
Fluids temperature	10~150°C	
Ambient temperature	10~40°C	

Caution Do not cut the tube when install.

Water Hammer Protective Type

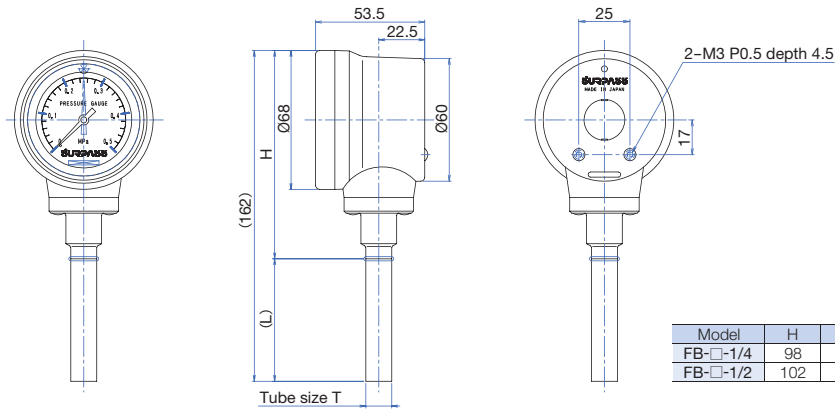
Specifications

Type	FB-03-1/4-IOF4	FB-05-1/4-IOF4
Rated pressure	0~0.3MPa	
Accuracy	0.00~0.05MPa ±3%F.S. 0.05~0.25MPa ±2%F.S. 0.25~0.30MPa ±3%F.S.	0.00~0.05MPa ±3%F.S. 0.05~0.45MPa ±2%F.S. 0.45~0.50MPa ±3%F.S.
Connection type	Tube Fitting	
Connection size	1/4: 1/4" (Ø6.35×Ø3.95)	
Wetted parts	PTFE, PFA, Kalrez® O-ring	
Fluids	Gas and Liquid (DI water and Chemicals)	
Fluids temperature	10~50°C	
Ambient temperature	10~40°C	

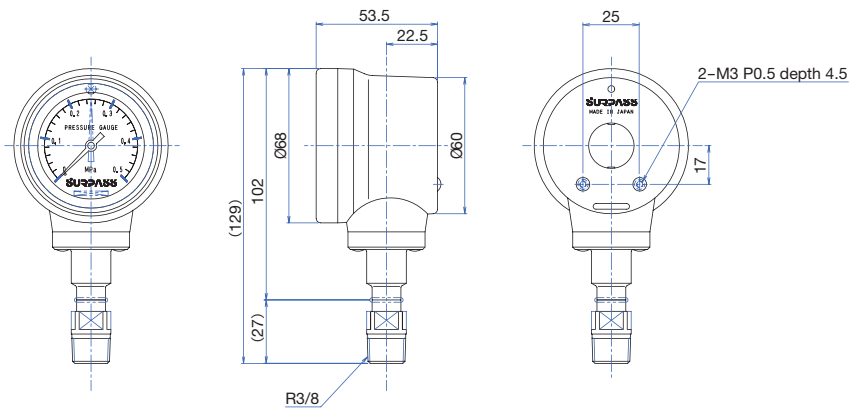
Usage Note : When select a model, please set the operating pressure within 20-80% of rated pressure for better performance.

Dimensions

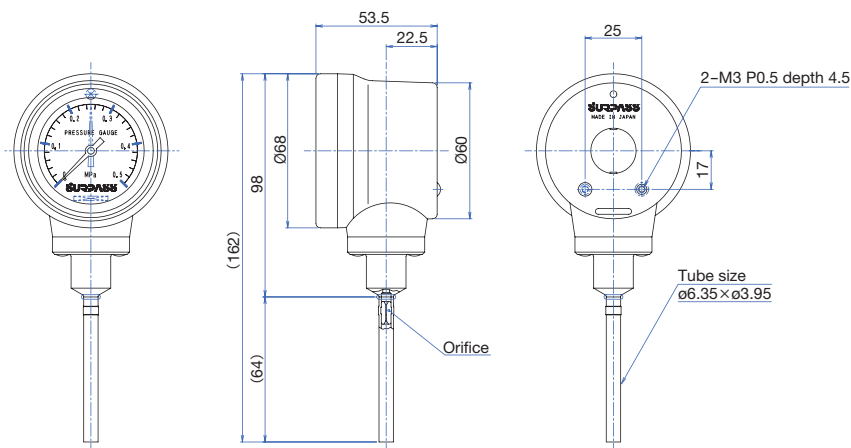
- FB-□-□
- FB-□-□-HT



- FB-□-R3

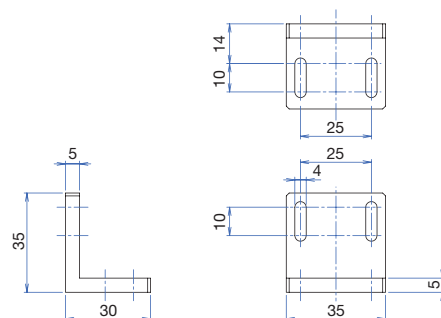


- FB-□-1/4-IOF4



Mounting Bracket for Model FB

- FB-B (Material: PVC)



Pressure Sensors

Model FBS Pressure Gauge

Gas-permeable Proof Product

RoHS2



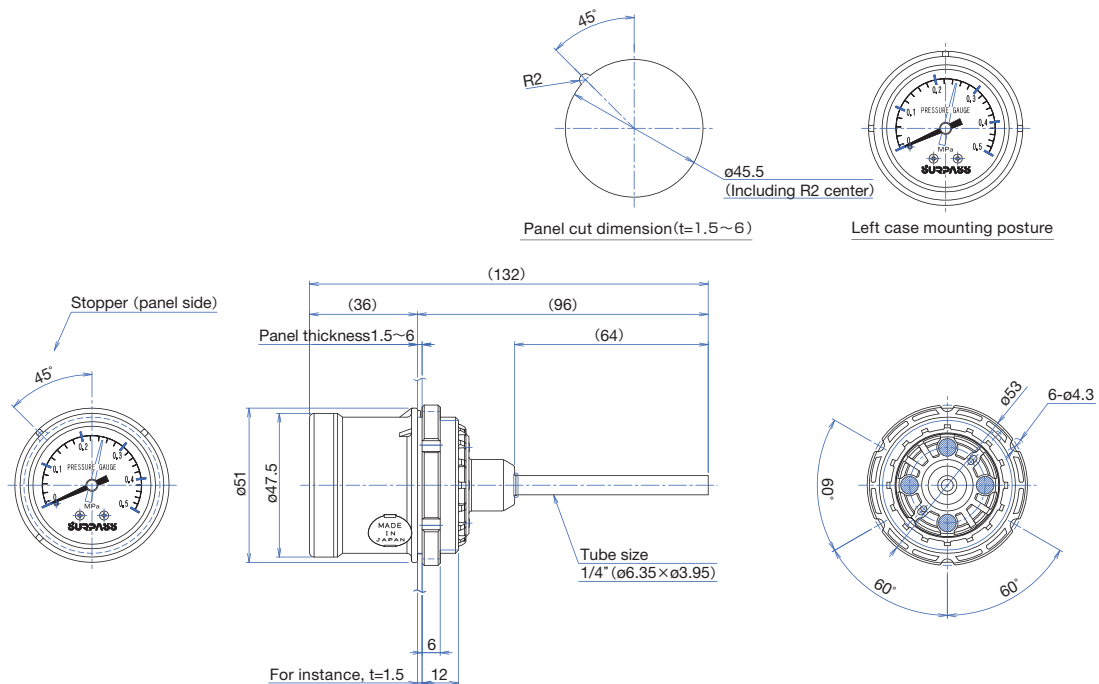
Features

- Pressure gauge that can mount into panel.
- All wetted parts are anti-corrosive fluorine resin materials.
- This is a gas-permeable proof product.
- Gas permeability structure is available by special double-sealing.
- Available for strong acid and alkaline chemicals.
- Outside case is made of PP.
- Wetted parts are made from no oil and water.

Specifications

Type	FBS-05-1/4
Rated pressure	0~0.5MPa
Accuracy	0.00~0.10MPa ±3%F.S. 0.10~0.40MPa ±2%F.S. 0.40~0.50MPa ±3%F.S.
Connection type	Tube Fitting
Connection size	1/4" (Ø6.35×Ø3.95)
Wetted parts	PTFE, PFA, Kalrez® O-ring
Fluids	Gas and Liquid (DI water and Chemicals)
Fluids temperature	10~50℃
Ambient temperature	10~40℃

Dimensions



Usage Note : When select a model, please set the operating pressure within 20-80% of rated pressure for better performance.

Model DV-3000 Pressure Monitor

RoHS2



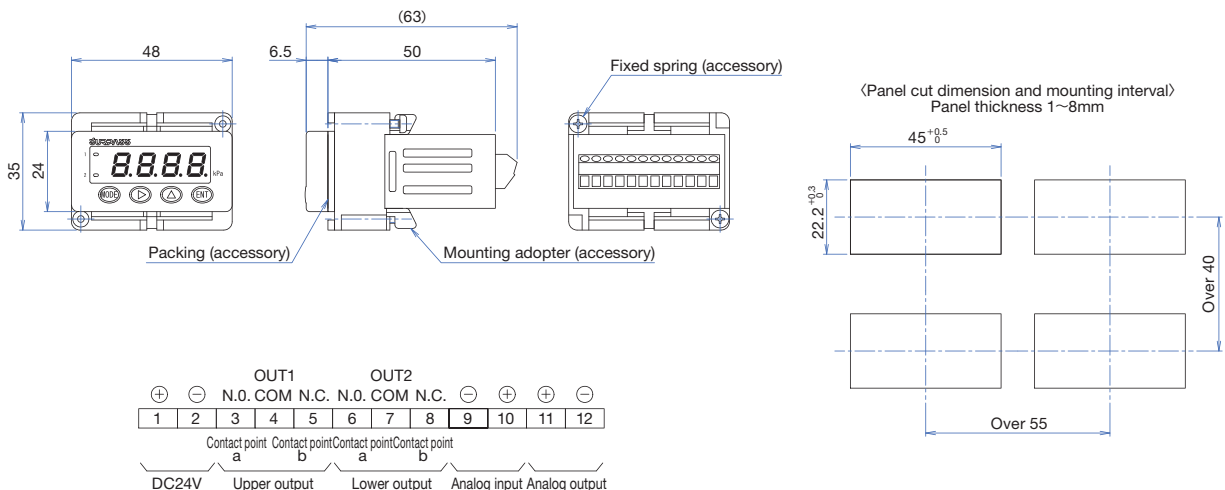
Features

- Small monitor that displays actual pressure rate.
- Display is in accordance with IP66.
- Available with analog output.
- Available with Hi&Low limit output point and relay contact output point.

Specifications

Type	DV-33A0	DV-34AM	DV-35A0	DV-37A0
Rated pressure	0~300kPa	-100~300kPa	0~500kPa	0~700kPa
Input	DC4~20mA			
Pressure sensor rated pressure	0~300kPa	-100~300kPa	0~500kPa	0~700kPa
Power supply	DC 24V±10%			
Current consumption	100mA			
Accuracy	±0.3% F.S. ±1digit (at 23°C)			
Hi & Low limit point	Two arbitrary points Relay c contact point AC220V 0.12A(Resistive load) DC 30V 1A (Resistive load)			
Analog output	DC4~20mA (Max. 500Ω load resistance is allowable.) Accuracy ±0.3F.S.(at 23°C)			
Operating / Storage temperature	0~50°C, 30~80%RH (No-condensation)			
Degree of protection	IP66 *Adapt to only display when you use together with accessory packing			

Dimensions



Pressure Sensors & Pressure Gauges

● Safety Instructions



- Before using the product, read the instruction manual carefully and use it correctly.
We are not liable for accidents that occurred during use other than those described in the instruction manual.
 - Before wiring, be sure to turn off the power supply.
 - When using a commercially available switching regulator for power supply, be sure to ground the frame ground (F.G.) terminal.
 - When using a device (such as a switching regulator or inverter motor) as a noise source around the sensor mounting area, be sure to ground the frame ground (F.G.) terminal of the device.
 - Avoid the parallel wiring or the sharing of wiring tube with any high-voltage cable and power cable, it may cause of induction, resulting in malfunction of the product.
 - The analog voltage output is not equipped with a short circuit protection circuit.
 - Use within the rated pressure range.
 - Do not apply pressure that exceeds the pressure resistance.
The diaphragm will be damaged and the correct output cannot be obtained.
 - Make sure that the power supply input does not exceed the rating.
 - Wait for more than 20 minutes for warming up with the power being supplied.
 - Do not insert a hard object such as a screwdriver from the pressure port.
The diaphragm will be damaged and correct output cannot be obtained.
 - Make sure that the pressure in the piping is at atmospheric pressure before maintenance and replacement.
 - When there is pulsation and pressure fluctuation, a regulator or a damper must be installed to suppress pulsation.
 - Avoid the presence of foreign matter in the fluid, it may cause malfunction.
 - Do not use fluids that contain refuse or foreign matter, as this may interfere with normal function.
 - Abrasive or coagulative fluids may interfere with normal function, and take measures to prevent sticking residue on the wetted parts.
 - The pressure gauge is inspected and adjusted in an upright position, so be sure to use it in an upright position.
 - Avoid external vibration to the pressure gauge.
 - To apply pressure to the gauge, slowly open the gauge valve and gradually increase pressure.
In particular, when applying pressure for the first time, please conduct while confirming safety.
 - Periodic inspection should be performed for safety when using chemical solution with high permeability for a long time.
 - Do not use the product in a harsh environment where fluid temperature changes rapidly, as this may cause damage to the product.
 - Protect unused wiring.
 - If static electricity is generated, the equipment may seriously damage.
Please use after applying antistatic measures.
 - Do not rotate the red or gray sensor case. It may cause malfunction.
 - Do not warm up the product directly from the outside. It may cause external or internal leakage failure.
- 〈Pressure Monitor〉**
- When mounting on a panel, if the screw is over tightened, the mounting frame may come off the stopper.
 - If the panel strength is weak, a gap may occur between the gasket and the panel, which may impair waterproofness.
 - Do not block the area around the unit. It does interfere with heat ventilation.
 - Do not block the air vents at the top of the terminal.

- Kalrez® is a registered trademark of DuPont.
- Pillar Super 300 Type P series is a trademark of Nippon Pillar Industry Co., Ltd.
- Entegris Flaretek is a trademark of Entegris, Inc.