

KL92 Pressure Transmitter for Semiconductor Production Appliances Chemical-Resistance

Outline

This product is a fluoropolymers diaphragm seal type pressure transmitter.

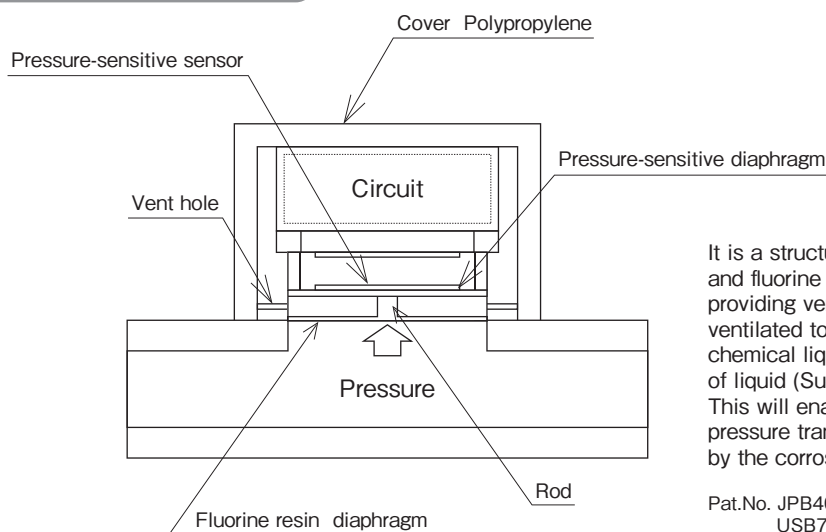
As the O-ring-free structure minimizes contamination risk and the elution of metal, it is suitable for pressure monitoring in the semiconductor manufacturing industry.

Features

- Wetted parts are all made of fluoropolymers (PFA, PTFE) and so structured as to minimize contamination risk.
- Improved corrosion resistance to chemicals, such as hydrofluoric acid.
- Enclosure rating is IP54 to meet the application requirement of wet station with compact resin body.



Features of sensor



It is a structure that binds pressure-sensitive diaphragm and fluorine resin diaphragm as wetted parts by rod. By providing vent hole addition, we structure that can be ventilated to the outside of the case corrosive chemical liquid gas coming from the transmission trace of liquid (Such as hydrofluoric acid). This will enable us to extend the life span of the pressure transmitter and sensors circuit is not affected by the corrosive gas.

Pat.No. JPB4065894
USB7,367,233
TWB1359263
KRB10-0970038
EPB1754963

Applications

- Cleaning equipment for semiconductor
- Cleaning equipment for FPD
- Chemical liquid supply device
- Wet station

Specifications

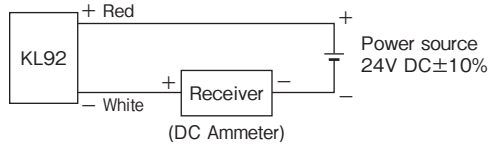
Item	Description
Fluid	Liquid (Not corrosive for PFA and PTFE)
Operating conditions	Free from combustible gas or liquid causing fire/explosion under normal condition
Pressure inlet	Tube connection, various types of nut, male screw ($\phi 1/4$, $\phi 3/8$, $\phi 1/2$ inch)
Wetted parts material	Diaphragm: PFA Others: PTFE (PFA)
Pressure range	0 to 0.3, 0.5 MPa
Allowable pressure	0.7 MPa
Fluid temperature	10 to 80°C
Operating temperature	10 to 60°C
Storage temperature	-10 to 65°C (No freezing inside the sensor)
Operating humidity	25 to 80%RH (No condensation inside the sensor)
Power source	24V DC \pm 10% (2 wire system) 12 to 24V DC (3 wire system)
Output	2 wire system: 4 to 20mA DC (Load resistance: 500 Ω max. at 24V DC) 3 wire system: 1 to 5V DC (Load resistance: 10k Ω min.)
Transmission system	2 wire system or 3 wire system
Accuracy	$\pm 1.0\%$ F.S.
Temperature coefficient	$\pm 0.05\%$ F.S./°C (Zero) $\pm 0.05\%$ F.S./°C (Span) Compensation temperature: 10 to 60°C
Setting system	External adjustment at zero point
Enclosure	Splash-proof excluding cable end (IP54)
Chassis material	Polypropylene (PP), fluorocarbon polymers (PTFE, PFA)
Weight	Approx. 180g (With cable)
CE compliance	Applicable Standards: EN61326-1:2013; EN61326-2-3:2013

Cable

	Environmental temperature	Conductor		Cable outer diameter (mm)	Minimum bend radius (mm)
		Cross-section area (mm ²)	Twisted conductors (pcs./mm)		
Shielded cable (Standard)	-60 to 90°C	0.34	17/0.16	$\phi 4.8$	19

Wiring

2 wire system (Current output)

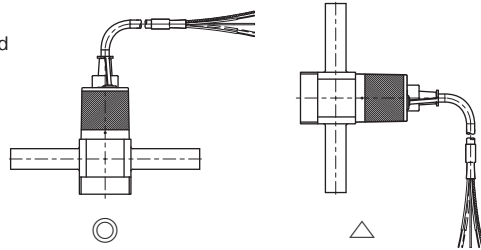


3 wire system (Voltage output)



Installation position

Horizontal installation position is recommended since stagnant foreign matter at pressurized parts may cause errors.

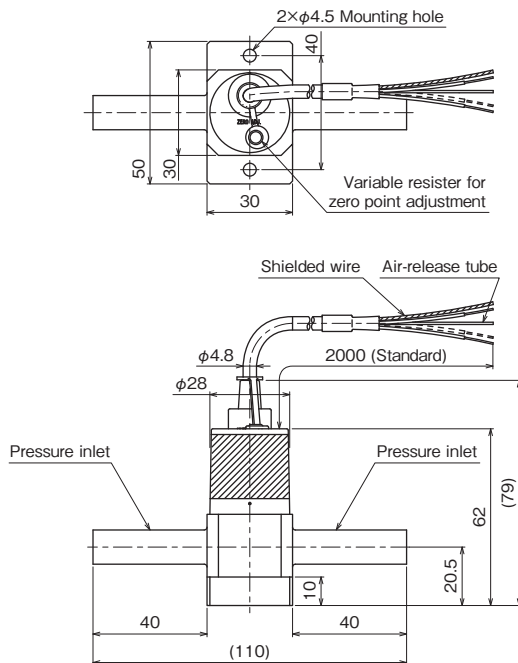


Dimensions 1

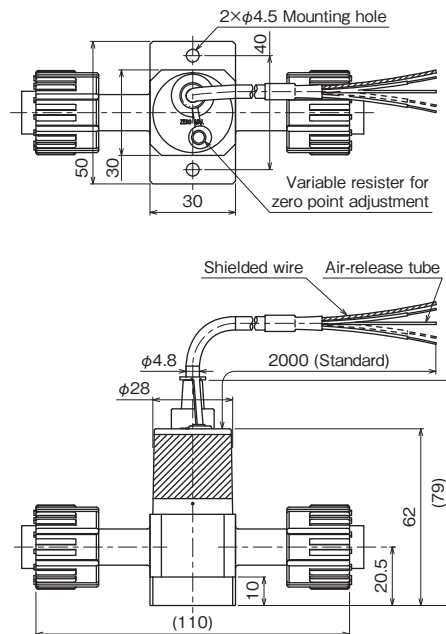
Unit: mm

Inline type

Tube connection



S300 nut (Press fit) from Nippon Pillar Packing Co., Ltd.



Model number	Connecting port
KL92-151	φ1/4 inch
KL92-161	φ3/8 inch
KL92-171	φ1/2 inch

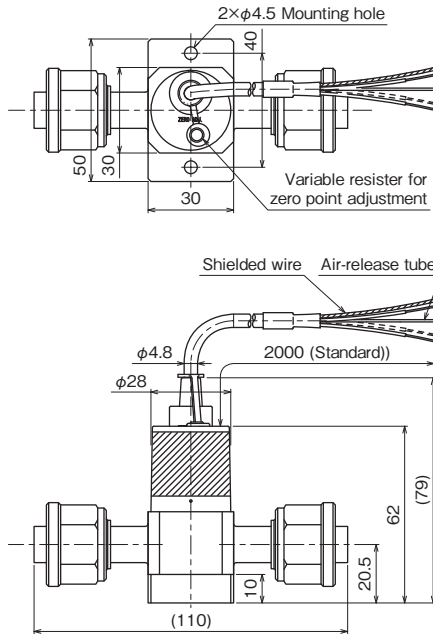
Model number	Connecting port
KL92-152	φ1/4 inch
KL92-162	φ3/8 inch
KL92-172	φ1/2 inch

Dimensions 2

Unit: mm

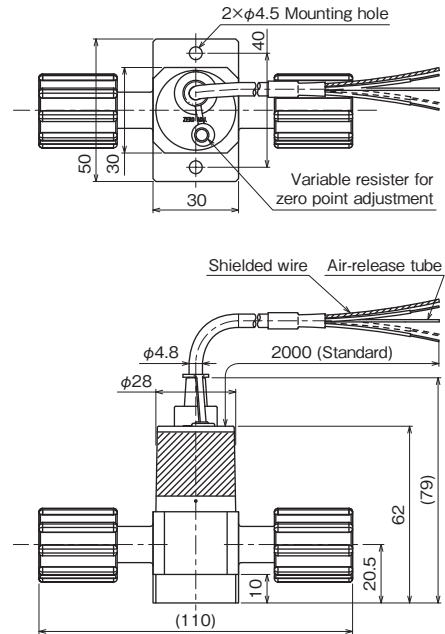
Inline type

20 series nut (Press fit) from Flowell Corporation



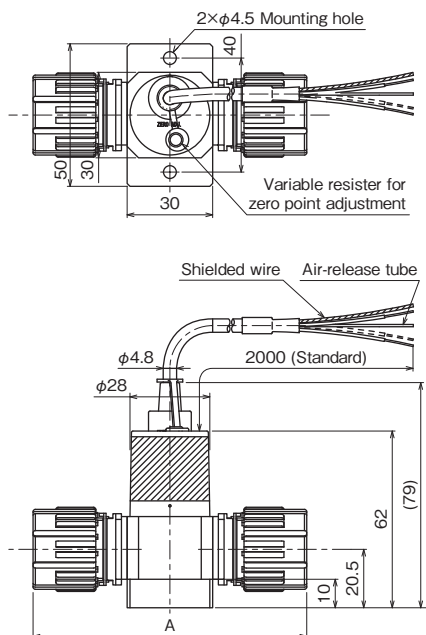
Model number	Connecting port
KL92-154	φ1/4 inch
KL92-164	φ3/8 inch
KL92-174	φ1/2 inch

Flare nut (Insert)



Model number	Connecting port
KL92-156	φ1/4 inch
KL92-166	φ3/8 inch
KL92-176	φ1/2 inch

S300 male screw from Nippon Pillar Packing Co., Ltd.



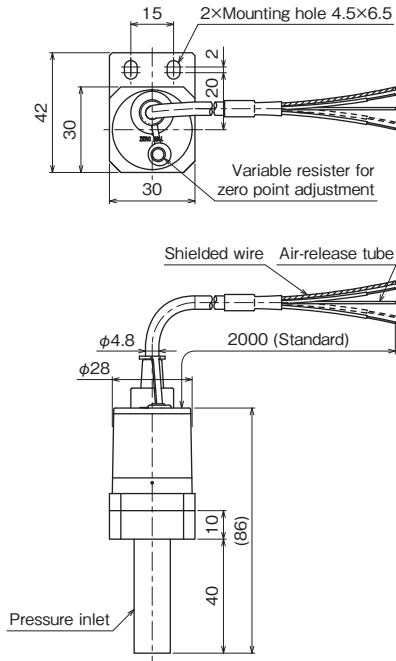
Model number	Connecting port	A size
KL92-15A	φ1/4 inch	68
KL92-16A	φ3/8 inch	80
KL92-17A	φ1/2 inch	96

Dimensions 3

Uni: mm

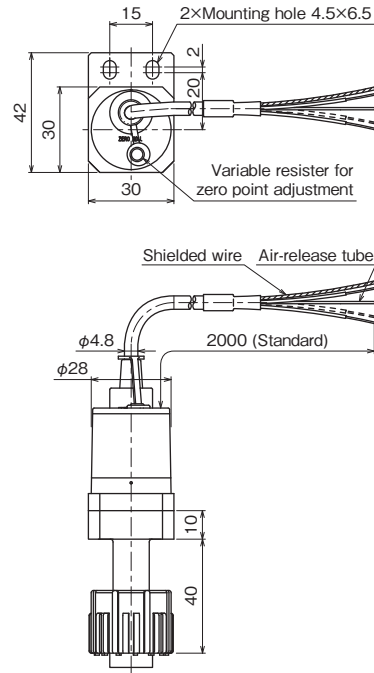
Single port type

Tube connection



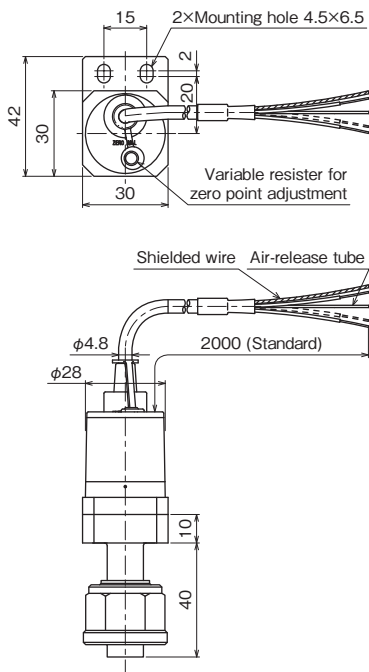
Model number	Connecting port
KL92-251	φ 1/4 inch
KL92-261	φ 3/8 inch
KL92-271	φ 1/2 inch

S300 nut (Press fit) from Nippon Pillar Packing Co., Ltd.



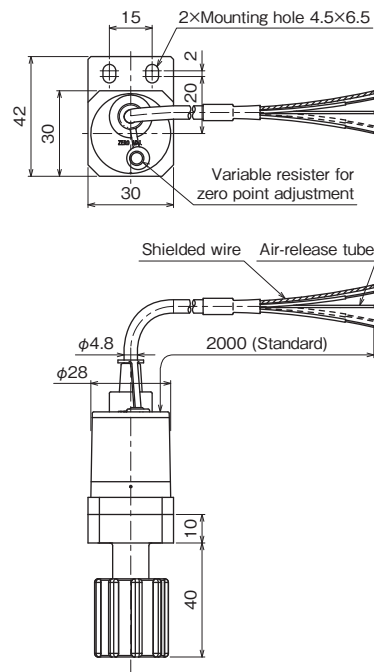
Model number	Connecting port
KL92-252	φ 1/4 inch
KL92-262	φ 3/8 inch
KL92-272	φ 1/2 inch

20 series nut (Press fit) from Flowell Corporation



Model number	Connecting port
KL92-254	φ 1/4 inch
KL92-264	φ 3/8 inch
KL92-274	φ 1/2 inch

Flare nut (Insert)



Model number	Connecting port
KL92-256	φ 1/4 inch
KL92-266	φ 3/8 inch
KL92-276	φ 1/2 inch

Model number configuration

Please specify the model number, each specs and the range for ordering.

Model																
K L 9 2					7			×	×	×	×	×	×	×		
Pressure transmitter Chemical-resistance type		①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮
Model number					Selective spec.					Additional spec. (Option)						
① Connecting type		1	In-line type Element: PFA Sensing part (Case, Fitting): PTFE (PFA)													
		2	Single port type Element: PFA Sensing part (Case, Fitting): PTFE (PFA)													
② Pressure connecting bore diameter		5	Bore diameter (O.D. 1/4", I.D. 5/32")													
		6	Bore diameter (O.D. 3/8", I.D. 1/4")													
		7	Bore diameter (O.D. 1/2", I.D. 3/8")													
③ Pressure connecting port		1	Tube connection													
		2	S300 nut (Press fit) from Nippon Pillar Packing Co., Ltd.													
		4	20 series nut (Press fit) from Flowell Corporation													
		6	Flare nut (Insert)													
		A	S300 male screw from Nippon Pillar Packing Co., Ltd. (In-line type only)													
④ Pressure range		3	0 to 0.3MPa													
		5	0 to 0.5MPa													
⑤ Accuracy		7	±1.0%F.S.													
⑥ Power source		⑥	⑦	⑥Power source										⑦Analog output		
		1	1	24V DC±10% (2 wire system)										4 to 20mA DC (2 wire system)		
⑦ Analog output		N	8	12 to 24V DC±10% (3 wire system)										1 to 5V DC (3 wire system)		
				⑨	1		Cable 2 m (Standard)									
				9	Specify length of cable.											
⑮ Documents				0	Nil											
				1	Required (Please specify the desired documents separately.) Submission drawings, instruction manual, inspection procedure, test report (1 pc 1 copy), inspection / traceability certificate, attended inspection											

Please specify the pressure range and units separately besides selection of range code.

*Specify "X" if there is no applicable specification.