

Differential pressure gauge with electrical contact

Model : P621, P622, P623, P624, P625 Series

WISE®

Service intended

P621 to P625 series are designed to measure differential pressure from 5kPa to 1.5MPa at static pressure up to 5MPa and have electrical contact.

P621 to P625 series are designed to control and alarm for differential pressure, providing right time to replace air and sludge filter during the process.

Nominal diameter

100 and 150mm

Accuracy

±1.0% of full scale

±1.5% of full scale

Scale range (MPa, kPa, bar)

0 ~ 5 to 0 ~ 50kPa and

0 ~ 0.1 to 0 ~ 1.5MPa

Static pressure

5MPa

Working temperature

Ambient : -20 ~ 65°C

Fluid : -20 ~ 80°C

Degree of protection

IP56



Standard features

Pressure connection

Stainless Steel (316SS)

Element

Bellows

Stainless Steel (316LSS)

Case & bezel ring

Stainless Steel (304SS)

Bayonet Type

Dial

White Aluminium with

Black Graduations

Conduit connection

M20x1.5P

Window

Polycarbonate

Pointer

Aluminium alloy, Black painted

Process connection

1/4", NPT(F)

1/2", NPT(F) at 3-Way Manifold valve
and 5-Way Manifold valve

Standard accessories

- Mounting Bracket for 2" Pipe Mounting
- Silver gray Finished Steel

Optional

- Remote Seal
- Mounting Bracket with 316SS for 2" Pipe Mounting.
- 3-Way Manifold valve (316SS)
- 5-Way Manifold valve (316SS)
- 3-Way Manifold valve (MONEL)
- 5-Way Manifold valve (MONEL)

Ordering information

Base model

P621: High alarm contact diff, pressure gauge

P622: High and Low alarm contact diff, pressure gauge

P623: Low alarm contact diff, pressure gauge

P624: High and H/High alarm contact diff, pressure gauge

P625: Low and L/Low alarm contact diff, pressure gauge

Nominal diameter

4 : 100mm

6 : 150mm

Mounting type (Refer to mounting type & dimension)

D : Bottom Connection, Mounting Bracket for 2" Pipe

Accuracy

3 : $\pm 1.0\%$ of Full Scale.4 : $\pm 1.5\%$ of Full Scale.

Process connection

C : 1/4" NPT(F)

E : 1/2" NPT(F) (Only at 3-way & 5-way manifold valve)

Mounting bracket type

D : Standard Bracket

E : 304SS Mounting Bracket

F : 316SS Mounting Bracket

W : Wall Mounting Bracket (316SS)

Unit

H : bar

I : MPa

J : kPa

S : mbar

Range

041 : 0~0.1MPa

042 : 0~0.2MPa

043 : 0~0.3MPa

044 : 0~0.4MPa

045 : 0~0.6MPa

047 : 0~1MPa

050 : 0~1.5MPa

066 : 0~5kPa, Not available with

remote seal type

070 : 0~10kPa, Not available with

remote seal type

119 : 0~30kPa, Not available with

remote seal type

123 : 0~50kPa

Dial color

3 : 2 Colors

Options

0 : Standard

(Mounting Bracket for 2" Pipe)

1 : Accessories

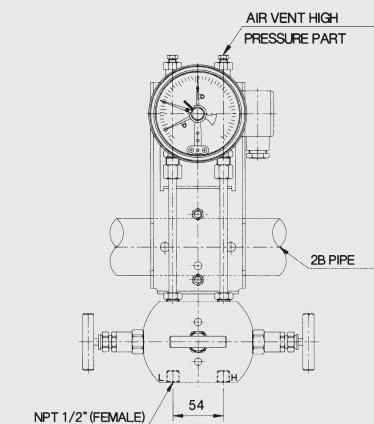
(3-way & 5-way manifold valve)

4 : 1/2" or 3/4" NPT(F) Conduit
Connection

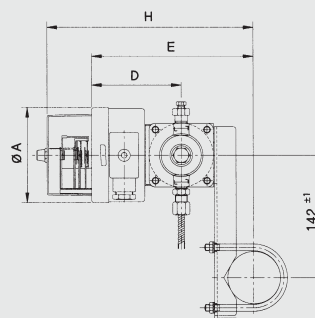
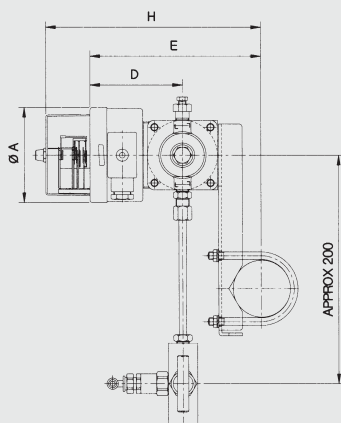
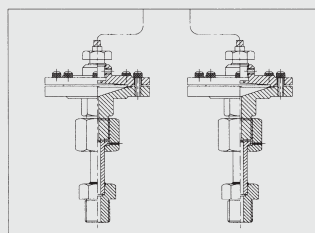
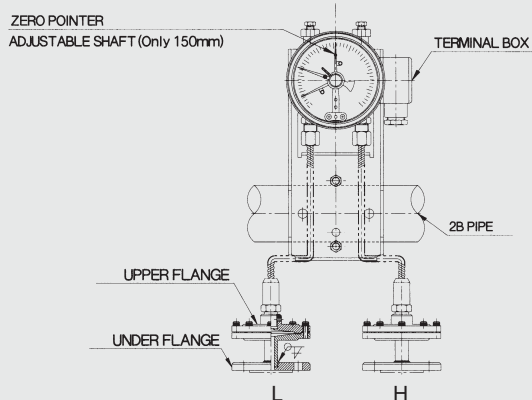
P623	6	D	4	E	D	I	047	3	1	Sample model number
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P621 to P625 : Type of mounting

CODE P621,P622,P623,P624,P625



CODE P621,P622,P623,P624,P625 (Remote seal)



Dimensions (mm)

DIAL SIZE	A	D	E	H
100	101.3	98	158.5	193
150	168.5	108	168.5	203

Snap - action contacts

General

Electromechanical limit switches in pointer type measuring instruments are auxiliary current switches which open or close electrical circuits at set limit values by means of a contact arm which is moved by the actual value pointer.

The snap action contact is a mechanical contact for switching capacities up to 30W 50VA max.

Contact making will be delayed and or advanced in relation to the movement of the actual value pointer.

To closed the circuit, the contact pin of the movable contact arm is attracted in a jump by the permanent magnet fastened to the supporting arm shortly before the set value has been reached.

Due to the retention force of the magnet, snap action contacts are more resistant against shock and vibration.

The switching safety is increased by the increased contact pressure.

When the circuit is opened, the magnet keeps the contact arm in its place until the restoring force of the measuring element exceeds the magnetic force, and the contact opens in a jump.

Specifications

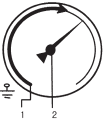
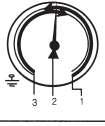
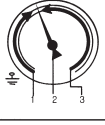
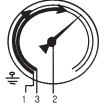
Maximum contact rating with non-inductive (ohmic) load	Electric contacts type pressure gauge model P520 series	
	dry gauges	liquid filled gauges
Maximum voltage	250V	250V
Current ratings:		
Make ratings	1,0 A	1.0 A
Break ratings	1,0 A	1.0 A
Continuous load	0,6 A	0.6 A
Maximum load	30W 50VA	20W 20VA
Material of contact points	Silver-Nickel Alloy (80% Ag / 20%Ni / 10µm) gold-plated	
Ambient operating temperature	-20°C...+70°C	
Max. no. of contacts	2	
Voltage test	Circuit / protective earth conductor - 2000 vac 1 minute	
	Circuit /circuit - 2000 vac 1 minute	

Recommended contact ratings with ohmic and inductive load

Voltage (DIN IEC 38) DC / AC	Electric contacts type pressure gauge model P520 series					
	dry gauges			liquid filled gauges		
	ohmic load		inductive load	ohmic load		inductive load
	DC	AC		DC	AC	
			$\cos \varphi > 0.7$			$\cos \varphi > 0.7$
V	mA	mA	mA	mA	mA	mA
220 / 230	100	120	65	65	90	40
110 / 110	200	240	130	130	180	85
48 / 48	300	450	200	190	330	130
24 / 24	400	600	250	250	450	150

In order to ensure a high switching reliability of the contacts the switching voltage should not be below 24V, also taking environmental influences in the long term into account.

Contact function table

CODE	Wiring Scheme	Contact Function		Wiebrock Code No.	Remark	
		1st Contact	2nd Contact			
Single Contact						
1	Contact make when pointer reaches set point (normally open - NO)			S/M-1	Normally use high alarm system	
3	Contact make when pointer reaches set point (normally close - NC)			S/M-2	Normally use low alarm system	
Double Contact - Common Circuit						
4	1st and 2nd Contact make when pointer reaches set point				S/M-11	Normally use high&hihigh alarm system
6	1st Contact make 2nd Contact break when pointer reaches set point				S/M-12	Normally use failsafe high & low alarm system
2	1st Contact break 2nd Contact make when pointer reaches set point				S/M-21	Normally use high & low alarm system
5	1st and 2nd Contact break when pointer reaches set point				S/M-22	Normally use low & lolow alarm system

Conversion table

PRESSURE CONVERSION CHART

PSI	ATM	kg/cm ²	in.H ₂ O	mmHg	in.Hg	kPa	Bar	mmH ₂ O
1	0.068046	0.070307	27.7276	51.715	2.03602	6.895	0.06895	704.28104
14.696	1	1.0332	407.484	760	29.921	101.325	1.01325	10350.0936
14.2233	0.96784	1	394.38	735.559	28.959	98.096	0.98067	10000
0.036092	0.002454	0.00253	1	1.8651	0.07343	0.249	0.00249	25.4
0.019336	0.001315	0.001359	0.53616	1	0.03937	0.1333	0.001333	13.618464
0.491154	0.0033421	0.03453	13.6185	25.4	1	3.3864	0.033864	345.9099
0.145	0.00987	0.010197	4.0186	7.5006	0.2953	1	0.01	102.07244
14.5038	0.98692	1.01972	402.156	750.062	29.53	100	1	10214.7624
0.00142	0.000097	0.0001	0.03937	0.0734	0.0029	0.0098	0.000098	1

VOLUME CONVERSION CHART

GALLON (U.S.)	CUBIC FEET	CUBIC INCHES	BARRELS (OIL)	CUBIC CM	CUBIC METER	LITER	IMP. GALLON
1	0.1337	231	0.02381	3785	0.003785	3.785	0.8327
7.481	1	1728	0.1781	28320	0.02832	28.32	6.229
0.004329	0.000578	1	0.000103	16.39	0.000016	0.01639	0.003605
42	5.615	9702	1	159000	0.159	158.94	34.97
0.000264	0.000035	0.06102	0.000006	1	0.000001	0.001	0.00022
264.17	35.3144	61023	6.2906	1000000	1	1000	220.1
0.264	0.0353	61.03	0.0629	1000	0.001	1	0.22
1.201	0.1606	277.4	0.0286	4546	0.004546	4.546	1

MASS CONVERSION CHART

lb.	oz.	kg	gm	gal H ₂ O (32F)	long ton	metric tonne	ton
1	16	0.4536	453.6	0.1198	0.000446	0.000453	0.0005
0.0625	1	0.02835	28.35	0.00749	0.000027	0.000028	0.000031
2.205	35.27	1	1000	0.2642	0.009839	0.001	0.001102
0.002205	0.03527	0.001	1	0.000264	0.000000	0.000001	0.000001
8.345	133.5	3.785	3785	1	0.003726	0.003786	0.004171
2240	35840	1016.4	1016363	268.352	1	1.016	1.12
2204.6	35273	1000	1000000	264.11	0.9842	1	1.1023
2000	32000	907.03	909090.9	239.7	0.892857	0.907194	1

DENSITY CONVERSION CHART

lb/ft ³	gm/cm ³	kg/m ³	lb/in ³
1	0.016018	16.0184	0.000578
62.43	1	1000	0.03613
0.06243	0.001	1	0.000036
1728	27.68	27679.8	1