

EURO GAUGE®

ELECTRICAL CONTACTS PRESSURE GAUGE

MODEL : P520 SERIES

WISE®

SERVICE INTENDED

The P520 Series designed for local reading of measured pressure and equipped with electrical contact block that allow all the combinations of contact to be used. The contact block is mounted on the dial. The windows is fitted with a knob for external adjustment of the set points.

NOMINAL DIAMETER

100mm

ACCURACY

±1.0% of Full Scale

SCALE RANGE (kgf/cm², bar, kPa, MPa)

-76cmHg ~ 0 to 0 ~ 2000kgf/cm²

WORKING PRESSURE

Steady : 75% of Full Scale

Over Range Protection : 130% of Full Scale

WORKING TEMPERATURE

Ambient : -20 ~ 65°C

Fluid : -20 ~ 80°C

DEGREE OF PROTECTION

IP65



Standard Features

PRESSURE CONNECTION

Stainless Steel (316SS), OPTION-Monel
Threaded entry, radial or back.

ELEMENT

Stainless Steel (316SS), OPTION-Monel
<100bar : C Type Bourdon Tube
≥100bar : Helical Type Bourdon Tube

CASE & BEZEL RING

Stainless Steel (304SS)
Bayonet Type

WINDOW

Safety Glass

MOVEMENT

Stainless Steel

DIAL

White Aluminium with Black Graduations

POINTER

Aluminium alloy, Black painted

PROCESS CONNECTION

3/8", 1/2" PT, NPT & PF

CONDUIT CONNECTION

M20×1.5P

OPTIONS

Liquid Filling
Electropolished Bezel Ring

ORDERING INFORMATION

BASE MODEL
P520 : ELECTRICAL CONTACT TYPE PRESSURE GAUGE

NOMINAL DIAMETER

4 : 100mm

MOUNTING TYPE (Refer to Mounting type & Dimension)

- A : Bottom entry
- B : Bottom entry & Surface Mounting flange
- G : Lower Back entry
- N : Lower Back entry & panel Mounting flange

CONTACT FUNCTION

“Refer to contact function table”

CONNECTION

- D : 3/8"
- E : 1/2"

CONNECTION TYPE

- B : PF
- C : PT
- D : NPT
- F : BSPT
- G : BSP
- Z : Other

UNIT

Refer to Pressure Unit & Range Table

RANGE

Refer to Pressure Unit & Range Table

PRESSURE CONNECTION
MAT'L & DIALS

- 3 : 316SS & 2 Colors
- 7 : 316SS & 3 Colors,
Available with Compound and
Vacuum Gauges

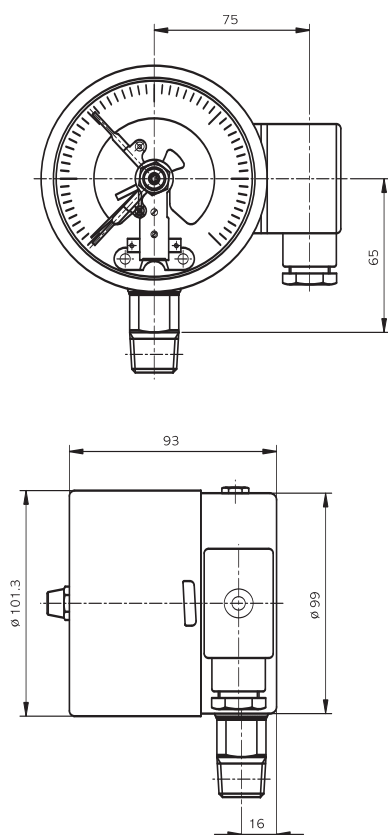
OPTIONS

- 0 : None
- 1 : Accessories
- 2 : Liquid filling

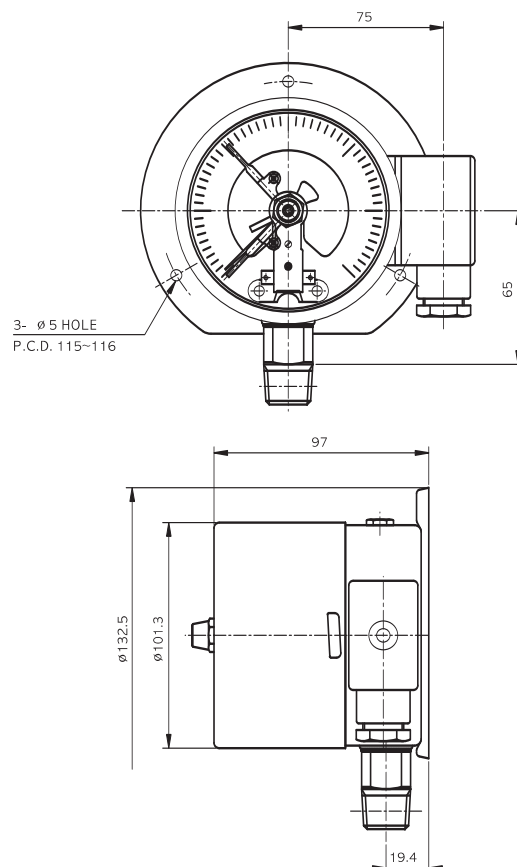
P520	4	A	3	E	D	H	047	3	0	SAMPLE MODEL NUMBER
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P520 : TYPE OF MOUNTING

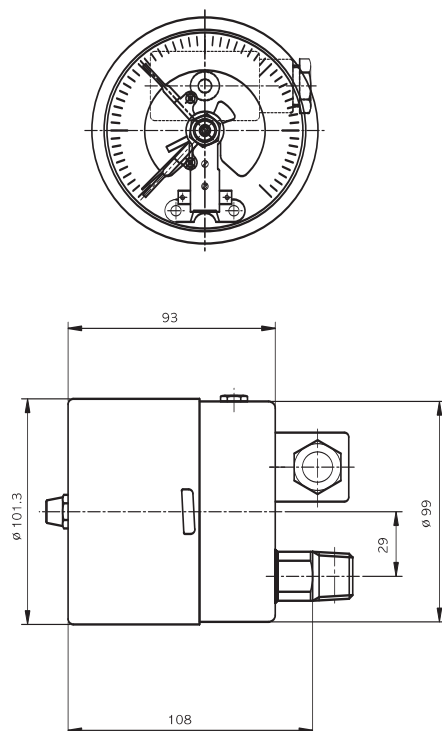
CODE A



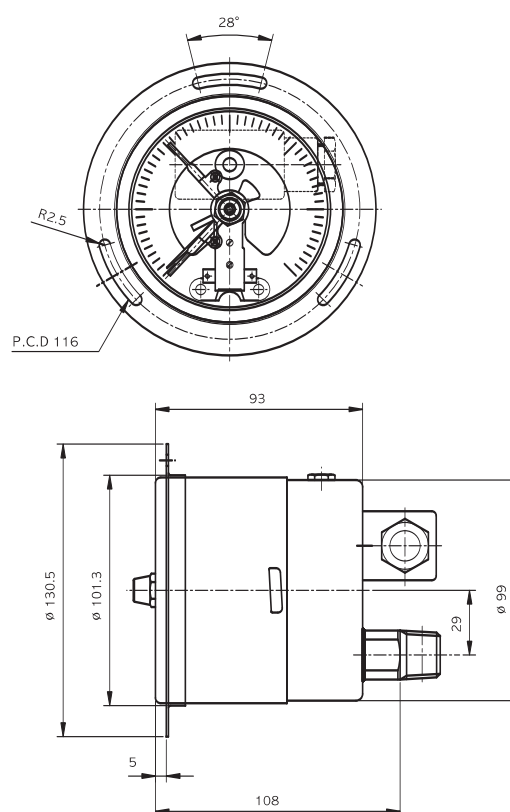
CODE B



CODE G



CODE N



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 300W 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

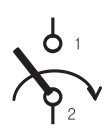
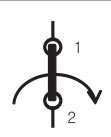
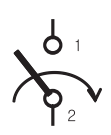
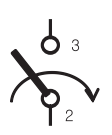
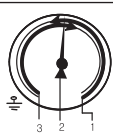
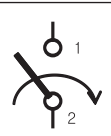
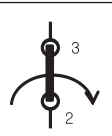
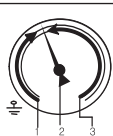
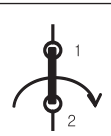
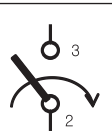
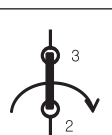
Maximum contact rating with non-inductive (ohmic) load	Electric contacts type pressure gauge model P520 series	
	dry gauges	liquid filled gauges
Maximum voltage	250V	250V
Current ratings:		
Make ratings	1,0 A	1.0 A
Break ratings	1,0 A	1.0 A
Continuos load	0,6 A	0.6 A
Maximum load	30W 50VA	20W 20VA
Material 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 φ > 0.7			cos φ > 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/cm²	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/ft³	gm/cm²	kg/m³	lb/in³
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