

**EURO GAUGE®**  
**ELECTRICAL CONTACTS PRESSURE GAUGE**  
**MODEL : P520 SERIES**



**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 (MPa, kPa, bar)**

-0.1 ~ 0 to 0 ~ 200MPa

**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  
 <10MPa : C Type Bourdon Tube  
 ≥10MPa : 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**

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**

- I : MPa
- J : kPa
- H : bar

**RANGE**

Refer to Pressure Unit & Range Table

**PRESSURE CONNECTION MAT'L & DIALS**

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

**OPTIONS**

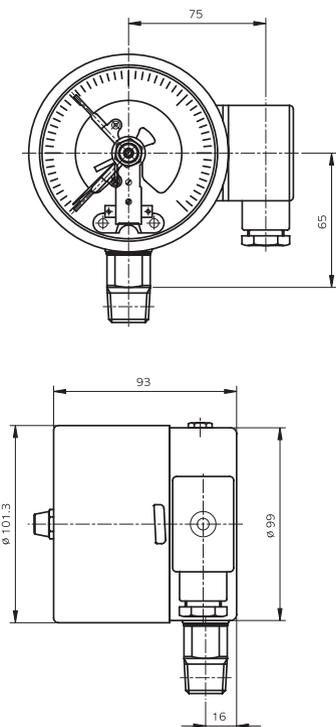
- 0 : None
- 1 : Accessories
- 2 : Liquid filling



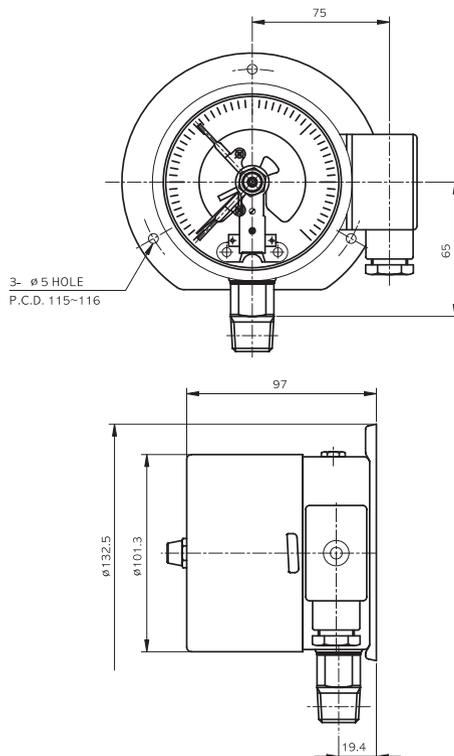
**SAMPLE MODEL NUMBER**

**P520 : TYPE OF MOUNTING**

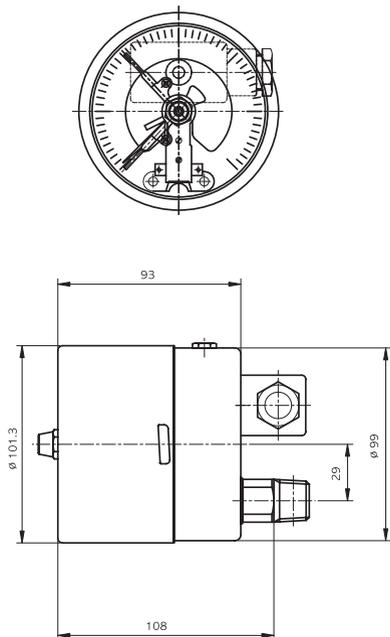
CODE A



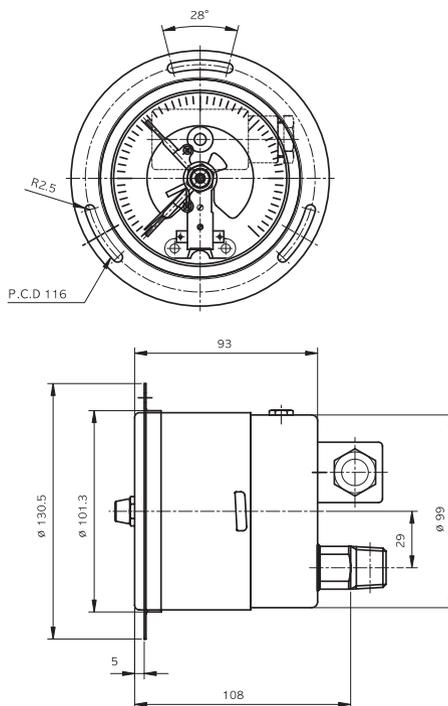
CODE B



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

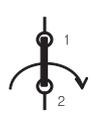
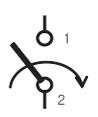
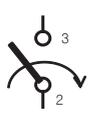
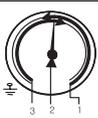
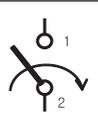
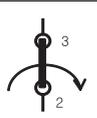
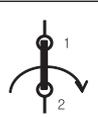
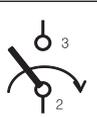
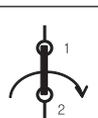
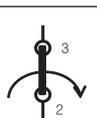
<b>Maximum contact rating with non-inductive (ohmic) load</b>	Electric contacts type pressure gauge model P520 series	
	dry gauges	liquid filled gauges
<b>Maximum voltage</b>	250V	250V
<b>Current ratings:</b>		
<b>Make ratings</b>	1,0 A	1.0 A
<b>Break ratings</b>	1,0 A	1.0 A
<b>Continuos load</b>	0,6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

### Recommended contact ratings with ohmic and inductive load

<b>Voltage (DIN IEC 38) DC / AC</b>	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 $\phi$ > 0.7			cos $\phi$ > 0.7
<b>V</b>	mA	mA	mA	mA	mA	mA
<b>220 / 230</b>	100	120	65	65	90	40
<b>110 / 110</b>	200	240	130	130	180	85
<b>48 / 48</b>	300	450	200	190	330	130
<b>24 /24</b>	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			
<b>Single Contact</b>						
<b>1</b>	Contact make when pointer reaches set point ( normally open - NO )				S/M-1	Normally use high alarm system
<b>3</b>	Contact make when pointer reaches set point ( normally close - NC )				S/M-2	Normally use low alarm system
<b>Double Contact - Common Circuit</b>						
<b>4</b>	1st and 2nd Contact make when pointer reaches set point				S/M-11	Normally use high&hihigh alarm system
<b>6</b>	1st Contact make 2nd Contact break when pointer reaches set point				S/M-12	Normally use failsafe high & low alarm system
<b>2</b>	1st Contact break 2nd Contact make when pointer reaches set point				S/M-21	Normally use high & low alarm system
<b>5</b>	1st and 2nd Contact break when pointer reaches set point				S/M-22	Normally use low & lolow alarm system

## PRESSURE UNIT & RANGE TABLE

RANGE & CODE	UNIT & CODE			NOMINAL DIAMETER	
	H : bar	I : MPa	J : kPa	100mm	160mm
026	-1	-0.1	-100	o	o
040	0,5	0,05	50	X	X
041	1	0,1	100	o	o
133	1,6	0,16	160	o	o
042	2	0,2	200	o	o
134	2,5	0,25	250	o	o
043	3	0,3	300	o	o
044	4	0,4	400	o	o
045	6	0,6	600	o	o
047	10	1	1000	o	o
050	15	1,5	-	o	o
143	16	1,6	-	o	o
051	20	2	-	o	o
052	25	2,5	-	o	o
054	35	3,5	-	o	o
151	40	4	-	o	o
055	50	5	-	o	o
056	60	6	-	o	o
057	70	7	-	o	o
058	100	10	-	o	o
059	150	15	-	o	o
060	160	16	-	o	o
062	250	25	-	o	o
064	350	35	-	o	o
065	400	40	-	o	o
066	500	50	-	o	o
067	600	60	-	o	o
068	700	70	-	o	o
070	1000	100	-	o	o
074	1600	160	-	X	X
075	2000	200	-	X	X
027	+1	+0,1	+100	o	o
127	-1~1,6	-0,1~0,16	-100~160	o	o
028	-1~2	-0,1~0,2	-100~200	o	o
129	-1~2,5	-0,1~0,25	-100~250	o	o
029	-1~3	-0,1~0,3	-100~300	o	o
030	-1~4	-0,1~0,4	-100~400	o	o
010	-1~5	-0,1~0,5	-100~500	o	o
031	-1~6	-0,1~0,6	-100~600	o	o
014	-1~9	-0,1~0,9	-100~900	o	o
032	-1~10	-0,1~1	-100~1000	o	o
033	-1~15	-0,1~1,5	-100~1,5Mpa	o	o
034	-1~20	-0,1~2	-100~2Mpa	o	o
035	-1~25	-0,1~2,5	-100~2,5Mpa	o	o

o : AVAILABLE x : NOT AVAILABLE