1720 SERIES INDUCTIVE CONTACT PRESSURE GAUGE
MODEL:1720

Applications:

1720 series inductive contact gauge is suitable for use in hazardous areas Zone 1 and Zone 2. Power supply must be made by means of a power sources certified intrinsically safe. Inductive contacts are also recommended for critical non hazardous applications where an utmost of failsafe heavy duty operation is required. In combination with liquid instruments, there contacts are particularly suitable for process control circuits in the chemical and petroleum industry.

Specifications:

Nominal sizes:

4”, 6”

Connection:

BSP 1/2” for 4”, 6”

Construction:

Bourdon tube type for pressure range no less than 1bar
Diaphragm type for pressure range less than 1bar

Control way: Inductive alarm contact, see Table 1 for the way of output

Accuracy:

Bourdon tube type: 4”: Cl 1,6; 6: Cl 1,6 or Cl 1,0
Diaphragm type: 4”: Cl 2.5 or Cl 1,6; 6”: Cl 1,6
Protection class: IP 54 or IP65 (for liquid fillable type)

Scale Range, according to EN 837-1/5

Pressure ranges: to 4/6/10/16/25/40/60kpa

0.6/1/1.6/2.5/4/6/10/16/25/40/60/100/160/250/400/600bar

Vacuum range: -1 to 0 bar, -60/-40/25/16/10/6/4kpa-0

Compound pressure: -1 to 0.6/1.5/3/5/9/15/24 bar, -4-6/-6-10/-10-6/-40-60/-60-40kpa

Operating Temperature:

Ambient: -20^{0}C to 70^{0}C, medium: 100^{0}C maximum

Material Specification:

Case : 304 stainless steel case and DIN bayonet ring

Window: instrument glass

Wetted parts: 316 stainless steel bourdon tube and connection

Movement: 304 stainless steel

Table 1: Inductive contact function

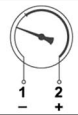
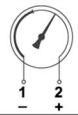
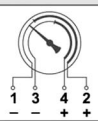
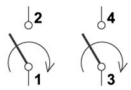
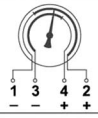
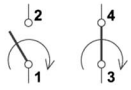
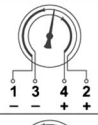
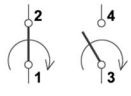
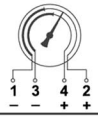
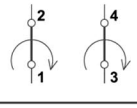
Single contacts			
Wiring scheme 1)	With **clockwise** pointer motion the metal flag:	Contact function (principle)	Model code and **function index** of contacts
	disengages from sensor	Contact makes (NO-normally open) 	831.**1** (.5)
	merges with sensor	Contact breaks (NO-normally closed) 	831.**2** (.4)
Double contacts			
	disengages 1st and 2nd	1st and 2nd contact make 	831.**11** (.55)
	1st disengages, 2nd merges	1st contact make, 2nd contact breaks 	831.**12** (.54)
	1st merges, 2nd disengages	1st contact breaks, 2nd contact makes 	831.**21** (.45)
	1st and 2nd merges with sensor	1st and 2nd contact breaks 	831.**22** (.44)

Table 2: Inductive alarm sensor operating principle

Table 3: The Choice of Safety control units for inductive contacts

Specifications for	Model 904.28	Model 904.29	Model 904.30 fail safe
control units	KFA6-SR2- Ex1.W	KFA6-SR2- Ex2.W	KHA6-SH- Ex1
Power supply			
Line voltage 1)	AC 230V ± 0%,45... 65Hz	AC 230V ± 0%,45... 65Hz	AC 85 ... 53 V ,45 ... 5 Hz
Consumption	1VA	1.3VA	3 VA
Input			
No. of contacts	1	2	1
Voltage (reactive)	DC8V	DC 8V	DC 8.4 V
Maximum current	8mA	8Ma	11.7 mA
Contact actuation	1.2mA ≤ Is ≤ 2.1mA	1.2mA ≤ Is ≤ 2.1mA	2.1 mA ≤ Is ≤ 5.9 mA
Contact hysteresis	ca. 0.2mA ca. 0.2mA		
Control line impedance	100 Ohm	100 Ohm	50 Ohm
Ex-IS data (as PTB-certified)	PTB 00 ATEX 2081	PTB 00 ATEX 2081	PTB 00 ATEX 2043
Voltage	Uo ≤ DC 10.6V	Uo ≤ DC 10.6V	Uo ≤ DC 9.6 V
Current	Io ≤ 19.1mA	Io ≤ 19.1mA	Io ≤ 19.1 mA
Power rating	Po ≤ 51mW	Po ≤ 51mW	Po ≤ 55 mW
IS-classification	[EEx ia] IIC	[EEx ia] IIC	[EEx ia] IIC
Ext. capacitance	2.9 μf	2.9 μf	650 μF
Ext. inductance	100mH	100mH	5 mH
Output			
Relay contacts	1 SPDT	1 ea. SPDT	1safety directed relay output
Contact rating AC	253 V,2 A,500 VA, COS φ>0.7	253 V,2 A,500 VA, COS φ>0.7	250 V, 1 A, COS φ>0.7
Contact rating DC	40 V, 2 A; ohmic	40 V, 2 A; ohmic	24 V, 1A; ohmic
Delay making circuit	approx. 20 ms	approx. 20 ms	20 ms
Delay breaking circuit	approx. 20 ms	approx. 20 ms	20 ms
Max. ON-OFF frequency	10 Hz	10 Hz	5 Hz
Operating conditions			
Min. temperature	-20 °C	-20 °C	-20 °C
Max. temperature	+60 °C	+60 °C	+60 °C
Max. humidity	max. 75%	max. 75%	max.75%
Ingress protection	IP 20 (EN 60 529/ IEC529)	IP 20 (EN 60 529/ IEC529)	IP 20 (EN 60 529/ IEC529)
Enclosure			
Style	Surface mounting	Surface mounting	Surface mounting
Dimensions per drawing	Form D, page 11	Form F, page 11	Form E, page 11
Mounting	Snap-fit on 35 mm * 7.5mm(EN 50 022) rail. Direct mounting feasible.		
Weight	approx. 0.15kg	approx. 0.15 kg	approx. 0.28 kg
Product no.	2014505	2014521	2014548

Options:

NPT, BSPT or other process connection

Non-standard dial range

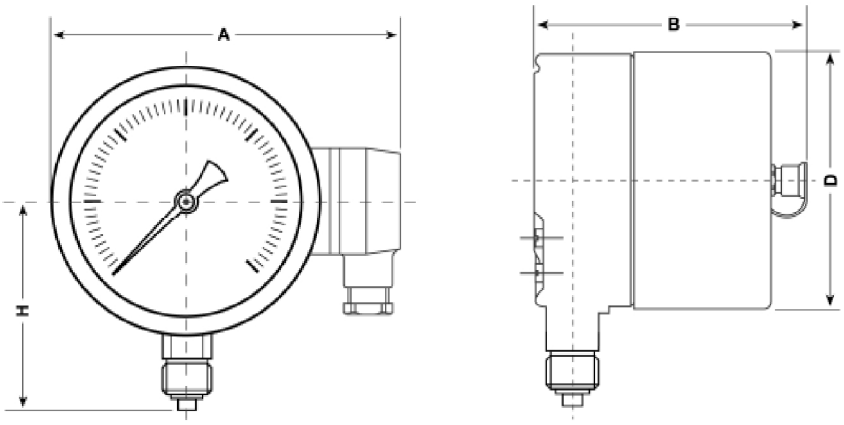
Diaphragm seal in thread or flange end

Special Liquid filled

*1721 Series with diaphragm

DIMENSION:

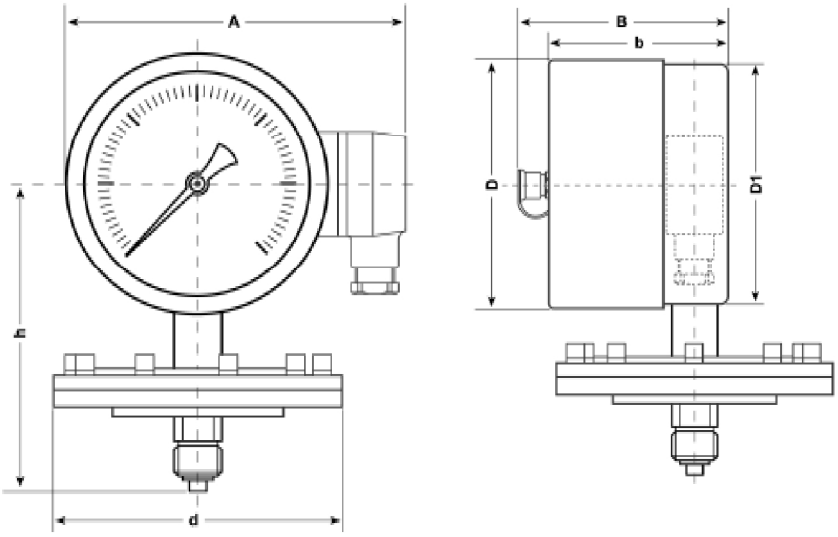
1720 Series



DIAL SIZE	A	H	B	D
4”	⌀136	99	99	101
6”	⌀204	125	101	161

dimensions are approximate and can be changed wthout prior notice

1721 Series



DIAL SIZE	kPa	d	b	D1	h
4”	⩽ 25	⌀100	88	99	165
6”	⩽ 25	⌀100	90	159	165
4”	⩾ 40	⌀160	88	99	135
6”	⩾ 40	⌀160	90	159	135

dimensions are approximate and can be changed wthout prior notice