# BI

All SS Pressure Gauge Electric contact type (High case version)



#### **Special Features**

- CE & Atex approved electrical contacts
- Stainless steel case & measuring system
- Filled version available
- Standard followed in general EN 837-1

### **Application**

- To control the electrical operation of compressors
- Pumps
- Motors
- Presses
- Hydraulic
- Pneumatic equipments
- Chemicals
- Petrochemical plants



GOST

#### **Specifications**

#### Standard Version: 100 mm

Accuracy : ±1.0% of F. S.

Ambient temperature : -20°C to +65°C

Process temperature : Max. 100°C

Electric wiring : DIN Connector

Contact setting : Over on arc of 270° through a knob placed on front of lens

Operating pressure range : 75% of Scale Value
Over pressure limit : Not Suitable

Case & Bezel : AISI 304 SS (Bayonet Type)

Bourdon : AISI 316L SS

Socket : AISI 316L SS (Directly welded to case)

Movement : AISI 304 SS

Joints : Tig Argon Arc Welding

Protection : IP 65

Dial : Aluminum, black graduation on white background

Pointer : Aluminum, black coloured Fixed

Window : Plexi Glass
Electrical Contacts\* : Refer How to Order

Blow off Disc : Neoprene
Gasket & Filling Plug : Neoprene

### \* Please specify contact set points while ordering.

# Filled version - dielectric oil (option - ZZ)

Accuracy : ±1.6% of F. S.

Ambient Temperature : Maximum 65°C

Process Temperature : +15°C / 65° C

Window : Plexi Glass

Blow off Disc\* : Viton

Gasket & Filling Plug\* : Viton

Dampening Liquids : Dielectric Oil

Other Features : Refer Specification of Standard Version

#### \*BOD, Gasket & Filling plug of Viton

### Temperature effect:

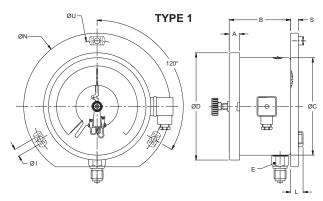
The variation of indication caused by effects of temperature is to be calculated by below formula; which is to be added in the specified accuracy while measurement: Formula:  $\pm 0.04 \times (t2 - t1) \%$  of F. S. where t1 = reference temperature ( $\pm 0.00 \times t2 = t1$ ) and t2 = ambient temperature in °C. Note: The addition of mechanical electric contacts affects the accuracy of instruments such that 1% becomes 1.5%, 1.6% becomes 2.4% etc. (Add the 50% of accuracy; If the contact is of the magnetically assisted type, this value can't be added within the  $\pm 5\%$  of setting point.)



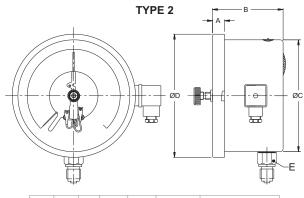
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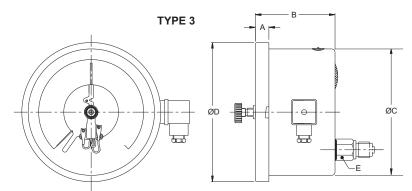
# **Dimensions - standard version**



١	NS	Α	В	øс	ØD	E	ØI	ØN	øυ	L	s	Weight in gram (With Box)
1	00	12.5	90	100	111	A/F 22	6	134	118	15	6	920.0



NS	Α	В	øс	ØD	E	Weight in gram (With Box)
100	12.5	90	100	111	A/F 22	840.0



NS	Α	В	øс	ØD	E	Weight in gram (With Box)
100	12.5	90	100	111	A/F 22	820.0

Notes: • Drawings are not to scale.

- All Dimensions are in mm.
- NS = Nominal Size.

## Range Table

Note: We offer Pressure, Vacuum and Compound ranges in Scales like kPa, MPa, bar, psi, kg/cm² & Dual Scale like kPa with psi, kPa with bar, bar with psi or scales as per the requirement can be provided on request. Following are the example tables for kg/cm² & psi scales

# **Pressure & Compound**

Pressure - sir	nale scale (ki	n/cm² or har)		Compound - single scale (kg/cm² or bar)
1 1633416 - 311	igic scale (k	groin or bary	1	Compound - single scale (kg/cm of bar)
0/1.6	0/10	0/60	0/400	
0/2.5	0/16	0/100	0/600	-1/5
0/4	0/25	0/160	0/1000	-1/9
0/6	0/40	0/250	0/1600	-1/15

## Dual scale (psi with kg/cm²)

psi	kg/cm²	psi	kg/cm²	psi	kg/cm²	psi	kg/cm²
0/25	0/1.6	0/220	0/16	0/1500	0/100	0/10000	0/700
0/35	0/2.5	0/300	0/20	0/2200	0/160	0/15000	0/1000
0/60	0/4	0/400	0/28	0/3000	0/200	0/22000	0/1600
0/100	0/7	0/600	0/40	0/4000	0/280		
0/150	0/10	0/1000	0/70	0/6000	0/400		

#### Accessories (Refer Datasheet for complete specifications)

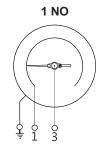
EB Cooling tower ED Over load protector (gauge saver)** EG Snubber EC Gauge cock * Needle valve EH Siphon	
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<sup>\*</sup> Refer catalogue for Valves & Manifolds

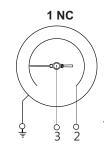
<sup>\*\*</sup> For Pressure Ranges.

## Wiring diagrams for electric contacts

# Single Contact



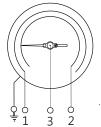
Opening



Closing

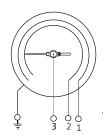
### **Double contact**

1 NO + 1 NC



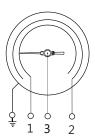
Opening 1 Closing 2

1 NC + 1 NC



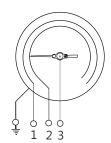
Closing 1 Closing 2

1 NC + 1 NO



Closing 2 Opening 1

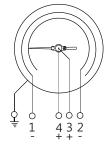
1 NO + 1 NO



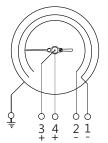
Opening 1
Opening 2

# Independent double contact

1 NO+ 1 NC



1 NC + 1 NC



Closing 1 Closing 2



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How T	Го Order							Example	
Basic I	Model							BI	
Code									
Nomina	al Size					F		V	
Type of	f Mounting					100 mm		Х	
1	Wall, surface, projection mounting	with bo	ottom entry					Х	
2	Direct bottom entry		•						
3	Direct lower back entry								
Elect	ric Contacts (CE & Atex appro	ved)							
	gle insulated magnetic snap actic V AC, 1 Amp.)(48 V DC, 0.5 Amp.				uctive type V AC, 0.4 Amp.)				
RJ	Single; normally closed (1 NC)			YW	Single; normally open (1 NO)				
RK	Double; normally closed + norma	ly open	(1 NC +1 NO)	ΥV	Single; normally				
RL	Single; normally open (1 NO)			YX	Double; normally				
RM	Double; normally open + normally		(1 NO + 1 NC)	YY	Double; normally		XX		
RN	Double; normally closed (both NO	•)		YZ ZA		closed (both NC)			
RO RU	Double; normally open (both NO) ZA Double; normally open + normally closed (1 NO + 1 N Booster with relay for current upto 5 Amp.								
RA	SPDT	JAIIIP	•						
RC	DPDT								
Gauge	Connection								
3BM	3/8" BSP (M) Standard	2NM	1/4" NPT (M)		4TM	½" BSPT (M)			
4BM	½" BSP (M) Standard	4NM	½" NPT (M) S	tandard	4MM	M20 x 1.5 (M)		XXX	
Note :	Connections like Metric/ PT/ PF/	Flaired/	UNF/ G/ R etc	can be	provided on requ	est.			
Range								0/10	
Refer ra	ange table							kg/cm²	
Option	s								
TI	Monel bourdon & socket (Monel v	ersion)	**	TF	Conformity as pe	er NACE standard			
PS	AISI 316 SS case & bezel*		RH	g					
PW	Five point calibration certificate			QB	3				
ZZ	Dielectric oil filled#			FL		ing screw (Monel)	**	XX	
SX	SS tag plate			SA	Internal overpres	•			
TB GH	Helium leak test			SB	Internal vacuum				
GII	Material test certificates***			SF	Movement with	dampening jelly			

<sup>\*</sup> Consult factory for minimum order quantity & delivery. # BOD, gasket & filling plug of viton.

#### Ordering Example: BI . X . X . XX . XXX . 0/10kg/cm<sup>2</sup> . XX

For other optional items, please contact factory for delivery and minimum quantity of order.

Note: Specifications and dimensions given in this product catalogue represents the state of engineering at the time of printing. Modifications may take place and materials specified may be replaced by others without prior notice.

<sup>\*\*</sup>Integral dampening screw will be in monel if ordered. Refer option FL. ## Consult factory for dial design approval.

<sup>\*\*\*</sup> Material test certificates will be provided for wetted parts only with chemical composition testing. For others, Please consult factory.