

## APPROVALS



## FEATURES

- All SS measuring system
- Socket-case, direct welded
- Threaded / Flanged connection
- Over-pressure safety up to 10 times FS max. 40 bar

## APPLICATION

- Liquid & gaseous media
- Corrosive environments
- Oil & Gas applications
- Chemical & Petrochemical
- Machine building
- General plant construction

### Diaphragm element



EN 837-3

### STANDARD PARAMETERS

Accuracy	: CL 1.6
Ambient temperature	: -20...+60°C / -40...+60°C with silicon oil dampening
Service temperature	: 100°C max.
Pressure limits	: Over pressure up to 1.3 FS value : Steady pressure up to FS value : Fluctuating pressure up to 90% of FS value
Weld joint	: TIG argon arc welding

### MATERIAL OF CONSTRUCTION

Sensing element	: Diaphragm
Case & ring material	: AISI 316L SS (Bayonet Type)
Diaphragm	: ≤ 16 bar - AISI 316L SS, > 16 bar Inconel 718
Lower chamber	: AISI 316L SS
Upper chamber	: AISI 304 SS (standard) - AISI 316L SS (option)
Movement mechanism	: AISI 304 SS
Chamber sealing gaskets	: FPM / FKM
Dial	: Aluminum, black graduation on white background
Pointer	: Micro-adjustable, aluminum, black powder coated
Gaskets, Blow off disc & filling plug	: NBR
Window	: Shatterproof safety glass

### STANDARD SPECIFICATIONS

Dial size	: DN100 / DN160
Range	: 0...10 to 0...250 mbar (flange Ø 150 mm)
Range	: 0...0,4 to 0...40 bar (flange Ø 100 mm)
Mounting pattern	: Direct, Bottom connection
Process connection	: 1/2" NPT (M) / 1/2" BSP (M)
Ingress protection	: IP 65 - EN 60529 / IEC 529
Execution	: Dry

### STANDARD SPECIFICATIONS : FILLED VERSION

Window	: Shatterproof safety glass
Dampening liquid	: Glycerin [Service temperature up to 65°C]

### TEMPERATURE EFFECT

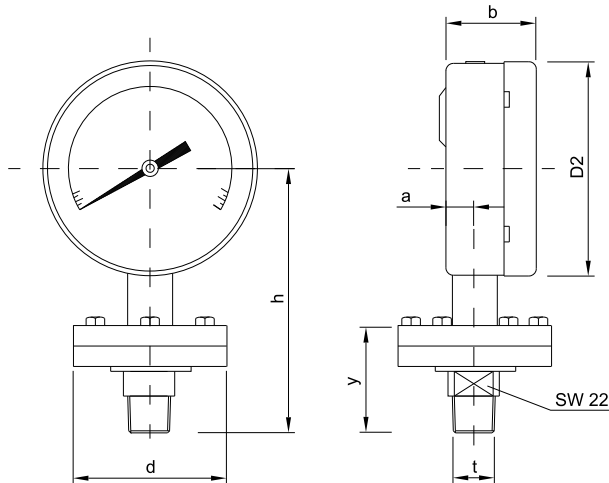
The variation of indication caused by effects of temperature is to be calculated as per the below formula; which is to be added in the specified accuracy while measurement :-

$$\text{Formula: } \pm 0.04 \times (t_2 - t_1) \% \text{ of Full Scale Value}$$

Where  $t_1$  = reference temperature (+20°C) &  $t_2$  = ambient temperature in °C.

## DIMENSIONAL DRAWING

Type B0



Range	DN	d	a	b	D2	t	h±2	y	Weight (Kg)
mbar	100	150	17	52	100	½" BSP or ½" NPT	130	50	2,6
0/10 to 0/16	160	17	52	150	½" BSP or ½" NPT	150	50	3,2	
mbar	100	150	17	52	100	½" BSP or ½" NPT	130	55	2,6
0/25 to 0/250	160	17	52	150	½" BSP or ½" NPT	155	55	3,2	
bar	100	100	17	52	100	½" BSP or ½" NPT	130	55	1,8
0/0.4 to 0/40	160	17	52	150	½" BSP or ½" NPT	155	55	2,2	

Drawings are not to Scale, all dimensions are in mm.  
The weight mentioned are approximate and of standard version. Consult ITEC for other executions.

## RANGE TABLE

### GUIDE TO MAKE RANGE CODE

1. While selecting the dual scales (bar/psi), primary scale bar in "BLACK" and secondary scale psi in "RED" color.
2. **Approximate unit conversion**; 1 bar = 1.019 kg/cm<sup>2</sup> = 14.503 psi = 100 kPa = 750.061 mmHg = 1000 mbar = 10197 mmWC
3. **Equivalent scales** are available in UOMs like mbar, mmWC, Inch WC, kPa/psi or custom dial design, contact ITEC.

### UOM : SINGLE SCALE

UOM	UOM
bar	mbar
psi	mm WC
kPa	Inch WC
kg/cm <sup>2</sup>	

### UOM : DUAL SCALE

UOM	UOM
bar/psi	mmWC/Inch WC
bar/kPa	
kg/cm <sup>2</sup> /psi	

### RANGES : PRESSURE in mbar [POSITIVE]

RANGE	RANGE	RANGE	RANGE
0...10	0...25	0...100	0...250
0...16	0...40	0...160	0...400
0...20	0...60	0...200	0...600

### RANGES : PRESSURE in bar or in kg/cm<sup>2</sup> [POSITIVE / VACUUM]

RANGE	RANGE	RANGE	RANGE	VACUUM
0...1	0...2.5	0...10	0...25	-1...0
0...1.6	0...4	0...16	0...40	
0...2	0...6	0...20		

## ORDERING CODES

### 1. DIAL SIZE

**04** 100 mm / 4"    **06** 160 mm / 6"

### 2. RANGE

**XXXX** Refer "Range Table"

### 3. MOUNTING PATTERN

**B0** Direct, Bottom connection

**14B** 1/2" BSP (M)

**14N** 1/2" NPT (M)

**14M** M20 X 1.5 mm (M)

ANSI B 16.5

**A25** 1 1/2" RF 150#    **A26** 1 1/2" RF 300#

**A31** 2" RF 150#    **A32** 2" RF 300#

EN 1092-1

**D42** DN40 PN10    **D44** DN40 PN25

**D52** DN50 PN10    **D54** DN50 PN25

Other flange and thread sizes and standards available.

### 5. INGRESS PROTECTION

**ER** IP 65

### 6. EXECUTION

**EA** Dry

**EG** Dampening liquid filled, glycerine

**EH** Dampening liquid filled, silicon oil  
[Available with Viton Rubber parts]

### 7. OPTION : ELECTRIC CONTACTS & RELAYS

**MAGNETIC CONTACTS [STANDARD]**

**RATING: 230VAC@1A / 48VDC@0.5A**

**CS1** Break contact (1NC)

**CS2** Make contact (1NO)

**Cs3** 2 x Break contact (2NC)

**CS4** 2 x Make contact (2NO)

**CS5** 1 Break + 1 Make (1NC+1NO)

**CS6** 1 Make + 1 Break (1NO+1NC)

### 7. ELECTRIC CONTACTS & RELAYS

**MAGNETIC CONTACTS [PRECISION]**

**RATING: 230VAC@1A / 48VDC@0.5A**

**CD1** Break contact (1NC)

**CD2** Make contact (1NO)

**CD3** 2 x Break contact (2NC)

**CD4** 2 x Make contact (2NO)

**CD5** 1 Break + 1 Make (1NC+1NO)

**CD6** 1 Make + 1 Break (1NO+1NC)

**CD7** SPDT

**CD8** DPDT

**INDUCTIVE CONTACTS [ATEX / CE Approved]**

**RATING: 8VDC@3mA**

**CI1** Break contact (1NC)

**Ci2** Make contact (1NO)

**CI3** 2 x Break contact (2NC)

**CI4** 2 x Make contact (2NO)

**CI5** 1 Break + 1 Make (1NC+1NO)

**CI6** 1 Make + 1 Break (1NO+1NC)

**RELAY [FOR RATING UP TO 5A]**

**CI9** Booster relay

Gauge accuracy shall be CL 1 & switching accuracy shall be CL 5

### 7. OTHER OPTIONS

**BA** Case & Ring in AISI 316 SS (B0)

**EY** Vacuum safe up to -1 bar

**OQ** Over-pressure up to 5 times of FS

**OR** Over-pressure up to 10 times of FS

[For option OQ & OR max pressure to be 40 bar]

**PC** PTFE lining / coating on wetted parts

**PK** Hastelloy wetted parts

**PM** Monel wetted parts

**TA** 5 - point calibration certificate

**TC** Material test certificate 3.1

**TM** Material test certificate 2.2

**XB** Accuracy CL 1.0

**XF** SS tag plate

**XH** Flushing plug on lower body

**XR** Custom designed dial

**XT** Dial tag marking

**DM** MONEL diaphragm

**DO** HC 276 diaphragm

**PB** PTFE diaphragm

**Ordering Example : P604-04-XXXX-B0-14N-ER-EA**

## COMPATIBLE ACCESSORIES

CODE	DESCRIPTION
A101	Gauge cock
A102	Gauge siphon
A201	Gauge snubber / Pulsation dampener
A202	Gauge saver / Overload protector
A203	Cooling tower

CODE	DESCRIPTION
VXXX	Needle valves
A304	Adaptors
M102	Two valve manifolds
A635	Capillary extension / Impulse tube