



The TMP102 All Stainless Steel Pressure Gauge with bourdon tube sensing element offers a robust design with external zero adjustment.

## Applications

- Liquid & gaseous mediums
- Corrosive environments
- Oil & Gas applications
- Chemical & Petrochemical
- Food & Beverages
- Nuclear power plants

## Features

- All SS measuring system
- Socket-case, direct welded
- External zero adjustment
- Dry / liquid filled
- CE marking

## Reference

- EN 837-1
- PED 97/23/EC
- ATEX 2014/34/UE

Standard parameters	
Accuracy	CL 1.0
Ambient temperature	-40 ... + 65°C (without dampening liquid) -20 ... + 65°C (with dampening liquid)
Service temperature	300°C max
Pressure limits	Steady pressure up to FS value Fluctuating pressure up to 90% of FS value Short time 1.3 x FS value for range up to 100 bar Short time 1.15 x FS value for range above 100 bar
Measuring range	-1 ... 0 bar, -600 ... 0 mbar to 0 ... 1600 bar
Weld joints	TIG argon arc welding

## Ordering code

		TMP102 - XX - XXX - XX - XXX - XX - XX - XX							
<b>1. Dial size</b>	100 mm / 4"								
	125 mm / 4½"								
	150 mm / 6"								
	250 mm / 10"								
<b>2. Range</b>	Refer "Range Table"			XXX					
<b>3. Mounting pattern</b>	Direct, Bottom connection							B0	
	Wall/Surface/Projection mounting, Bottom connection							B1	
	2" Pipe/Yoke mounting, Bottom connection							B2	
	Centre, Back connection <sup>2</sup>							R0	
	Lower, Back connection							L0	
<b>4. Process connection<sup>1</sup></b>	¼" BSP (M)								12B
	¼" NPT (M)								12N
	3/8" BSP (M)								13B
	½" BSP (M)								14B
	M20 X 1.5 mm (M)								14M
	½" NPT (M)								14N
<b>5. Ingress protection</b>	IP 65								ER
	IP 66								ES
	IP 67								ET
<b>6. Execution</b>	Dry <sup>5</sup>								EA
	Dry but fillable								EB
	Dampening liquid filled, glycerine								EG
	Dampening liquid filled, silicon oil								EH
<b>7. Other options</b>	Case & Ring in AISI 316 SS (B0)	BA	Dampened movement	GM	Helium leak testing	TL			
	Case & Ring in AISI 316 SS (B1)	BB	Maximum Reading pointer <sup>3</sup>	GW	Material test certificate 2.2	TM			
	Case & Ring in AISI 316 SS (B2)	BC	Knife edge pointer	GX	Tested to NACE standards	TN			
	Case & Ring in AISI 316 SS (R0)	BG	Monel wetted parts	MN	Certification for Oxygen service	TO			
	Case & Ring in AISI 316 SS (L0)	BK	Dial with Ammonia temperature scale	N9	Performance test	TP			
	Dampening screw, Monel	EM	Overrange protection 1.5xFS	OP	C.C. with NABL traceability <sup>6</sup>	TT			
	Dampening screw, AISI 316 SS	EN	High overpressure protection <sup>7</sup>	OS	Accuracy CL 0.5 / CL 0.6 of FS	XA			
	Internal overload stop	EX	Epoxy coating (Case & Ring)	P8	SS tag plate, AISI 304 SS	XF			
	Internal vacuum stop	EY	Receiver gauge <sup>4</sup>	R9	SS tag plate, AISI 316 SS	XG			
	Pointer stop on dial	EZ	Rubber parts, Viton	RA	Electro polished (Case & Ring)	XK			
	Dial with Freon temperature scales	G9	Vent plug, ON-OFF type	RW	Anti-parallax mirror band	XN			
	Plexi glass	GB	5 - point calibration certificate	TA	Custom designed dial	XR			
	Shatterproof safety glass	GC	Material test certificate 3.1	TC	Dial tag marking	XT			
	Toughened glass	GD	CE certificate	TE	ATEX Version <sup>8</sup>	AX			
	AISI 316 SS movement	GL	IBR certification	TI					

<sup>1</sup> For other connections, please contact factory.

<sup>2</sup> Available in DN100 only.

<sup>3</sup> Available in dry version with accuracy CL 1.0 or above.

<sup>4</sup> Please specify the second scale required.

<sup>5</sup> Available with Ingress Protection IP 54 (dust proof) only.

<sup>6</sup> C.C. = Calibration Certificate

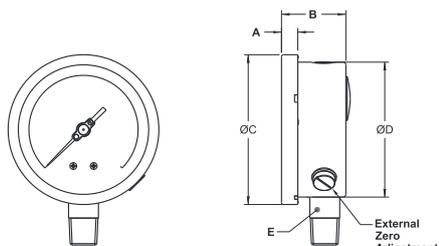
<sup>7</sup> Refer Range V/s Overpressure table.

<sup>8</sup>  II 2 G Ex h IIC T6...T3 Gb X  
II 2 D Ex h IIIC T85°C...T200°C Db X

Specifications			
Material of construction	Sensing element	Bourdon Tube (<100 bar : C - type , >100 bar : Helical)	
	Case & Ring material	AISI 304 SS (Bayonet type)	
	Bourdon tube & Shank	AISI 316L SS (Shank welded directly to case)	
	Movement mechanism	AISI 304 SS	
	Dial	Aluminum, black graduation on white background	
	Pointer	Micro-zero adjustable, aluminum, black powder coated	
	Gaskets, Blow off disc & filling plug	Neoprene / NBR	
	Window	Sheet glass / Shatterproof safety glass	
	Standard specifications	Dial size	DN100 / DN125 / DN150 / DN250
		Range	-1 ... 0 to 0 ... 1600 bar
		Mounting pattern	Direct, Bottom connection
		Process connection	1/2" NPT (M) / 1/2" BSP (M)
		Ingress protection	IP 54 / IP 65
Execution		Dry / Dry but fillable	
Zero adjustment		External screw with locking mechanism	
Standard specifications : dampening liquid filled, glycerin	Window	Safety glass	
	Dampening liquid	Glycerin 99.7% [Service temperature up to 65°C]	
Temperature effect	When temperature of the measuring system deviates from reference temperature (+20°C) max error $\pm 0.4\%$ / 10K of true scale value.		

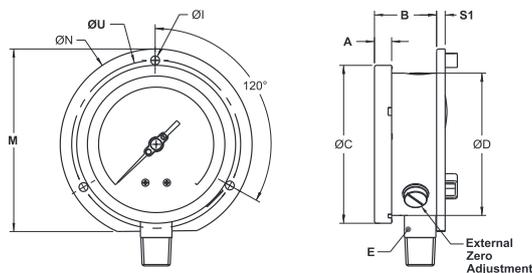
## Dimensions - All dimensions are in mm

### Type B0



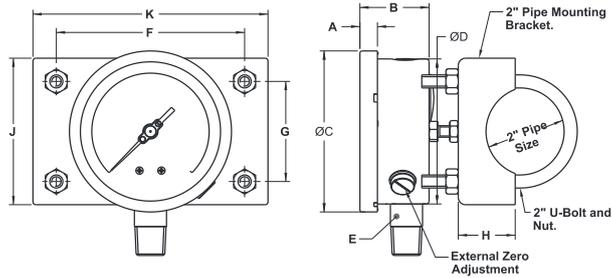
DN	A	B	ØC	ØD	E	Weight (grams)
100	12	48	111	100	SQ.22	506
125	15	48	129	118.5	SQ.22	694
150	15	48	161	149	SQ.22	900
250	18.5	50	263	250	SQ.22	2100

### Type B1



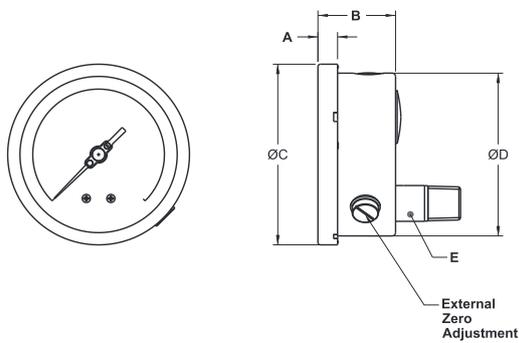
DN	A	B	ØC	ØD	E	ØI	M	ØN	S1	ØU	Weight (grams)
100	12	52	111	100	SQ.22	6	128	134	6	118	613
125	15	50	129	118.5	SQ.22	6	143.5	150	4	137	796
150	15	52	161	149	SQ.22	6	172.4	186	6	168	1080
250	18.5	51.5	263	250	SQ.22	7	286.5	290	1.5	276	2448

**Type B2**



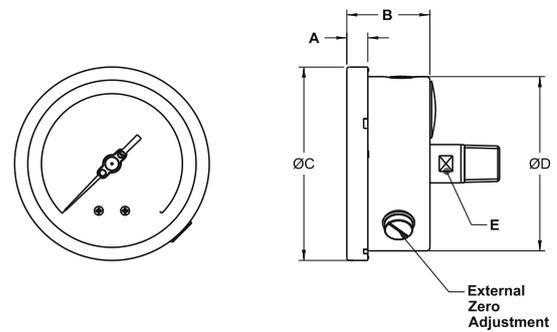
DN	A	B	ØC	ØD	E	ØI	M	ØN	S1	ØU	Weight (grams)
100	12	48	111	100	SQ.22	129	69	39	101	161	1580
150	15	48	161	149	SQ.22	129	69	39	101	161	1974

**Type L0**



DN	A	B	ØC	ØD	E	Weight (grams)
100	12	48	111	100	SQ.22	506
150	15	48	161	149	SQ.22	2100

**Type R0**



DN	A	B	ØC	ØD	E	Weight (grams)
100	12	48	111	100	A/F 17	506
150	15	48	161	149	A/F 17	2100

**Range v/s over range in bar**

RANGE	OVER RANGE
0 ... 1	4
0 ... 1.6	6
0 ... 2.5	10
0 ... 4	16
0 ... 6	25
0 ... 10	40
0 ... 16	48
0 ... 25	75
0 ... 40	80
0 ... 60	120
0 ... 100	200
0 ... 160	320
0 ... 250	500
0 ... 400	800
0 ... 600	1200

Standard Ranges				Standard Ranges		Standard Ranges		Standard Ranges		Standard Ranges	
RANGE	bar	Kg/cm <sup>2</sup>	bar/psi	RANGE	psi	RANGE	kPa	RANGE	MPa	RANGE	mbar
0 ... 0.6	B01	K01	N01	0 ... 10	S01	0 ... 60	E01	-	-	-600 ... 0	B00
0 ... 1	B02	K02	N02	0 ... 15	S02	0 ... 100	E02	0 ... 0.1	M02	-	-
0 ... 1.6	B03	K03	N03	0 ... 25	S03	0 ... 160	E03	0 ... 0.16	M03	-	-
0 ... 2.5	B05	K05	N05	0 ... 35	S05	0 ... 250	E05	0 ... 0.25	M05	-	-
0 ... 4	B06	K06	N06	0 ... 60	S06	0 ... 600	E06	0 ... 0.4	M06	-	-
0 ... 6	B07	K07	N07	0 ... 90	S07	0 ... 600	E07	0 ... 0.6	M07	-	-
0 ... 7	B08	K08	N08	0 ... 100	S08	0 ... 700	E08	0 ... 0.7	M08	-	-
0 ... 10	B09	K09	N09	0 ... 150	S09	0 ... 1000	E09	0 ... 1	M09	-	-
0 ... 16	B11	K11	N11	0 ... 235	S11	0 ... 1600	E11	0 ... 1.6	M11	-	-
0 ... 25	B13	K13	N13	0 ... 365	S13	0 ... 2500	E13	0 ... 2.5	M13	-	-
0 ... 40	B16	K16	N16	0 ... 600	S16	0 ... 4000	E16	0 ... 4	M16	-	-
0 ... 60	B17	K17	N17	0 ... 870	S17	0 ... 6000	E17	0 ... 6	M17	-	-
0 ... 70	B18	K18	N18	0 ... 1000	S18	0 ... 7000	E18	0 ... 7	M18	-	-
0 ... 100	B19	K19	N19	0 ... 1500	S19	0 ... 10000	E19	0 ... 10	M19	-	-
0 ... 160	B21	K21	N21	0 ... 2300	S21	0 ... 16000	E21	0 ... 16	M21	-	-
0 ... 250	B24	K24	N24	0 ... 3600	S24	0 ... 25000	E24	0 ... 25	M24	-	-
0 ... 400	B27	K27	N27	0 ... 6000	S27	0 ... 40000	E27	0 ... 40	M27	-	-
0 ... 600	B29	K29	N29	0 ... 8700	S29	0 ... 60000	E29	0 ... 60	M29	-	-
0 ... 700	B30	K30	N30	0 ... 10000	S30	0 ... 70000	E30	0 ... 70	M30	-	-
0 ... 1000	B31	K31	N31	0 ... 15000	S31	-	-	0 ... 100	M31	-	-
0 ... 1600	B34	K34	N34	0 ... 23200	S34	-	-	0 ... 160	M34	-	-
-1 ... 0	B37	K37	N37	-30 ... 0 <sup>1</sup>	S37	-100 ... 0	E37	-0.1 ... 0	M37	-	-
-1 ... 0.6	B38	K38	N38	-30 ... 10 <sup>1</sup>	S38	-100 ... 60	E38	-0.1 ... 0.06	M38	-	-
-1 ... 1.5	B39	K39	N39	-30 ... 20 <sup>1</sup>	S39	-100 ... 150	E39	-0.1 ... 0.15	M39	-	-
-1 ... 3	B42	K42	N42	-30 ... 45 <sup>1</sup>	S42	-100 ... 300	E42	-0.1 ... 0.3	M42	-	-
-1 ... 5	B43	K43	N43	-30 ... 75 <sup>1</sup>	S42	-100 ... 500	E43	-0.1 ... 0.5	M43	-	-
-1 ... 9	B45	K45	N45	-30 ... 130 <sup>1</sup>	S45	-100 ... 900	E45	-0.1 ... 0.9	M45	-	-
-1 ... 15	B47	K47	N47	-30 ... 220 <sup>1</sup>	S47	-100 ... 1500	E47	-0.1 ... 1.5	M47	-	-
-1 ... 24	B49	K49	N49	-30 ... 350 <sup>1</sup>	S49	-100 ... 2400	E49	-0.1 ... 2.4	M49	-	-

### General notes

- Other scales & measurement units are available.
- Equivalent scales available in kg/cm<sup>2</sup>, psi, kPa, MPa, bar/psi, kPa/bar, kPa/psi or any other special scales.
- Primary scales shall be in "BLACK" and secondary scales shall be "RED".
- Special scales, custom dial designs, OEM/private logo printing is available, details contact our marketing team.
- Any other range codes which are not available in the list shall be confirmed by factory.

### Technical note

- In compound ranges, negative pressures are marked in In Hg, hence for example for -1 to 1 bar the corresponding scale shall be -30" Hg to 15 psi.