

Bourdon tube pressure gauge, high quality design case with liquid filling, (IP66) Type series BA4240(50)/BA4340(50)



Application area

- Machinery construction
- Chemical and petrochemical industry
- General process technology
- Shipping

Features

- Bourdon tube pressure gauge
- Nominal ranges -0.6...0 bar to -1...24 bar, 0...0.6 to 0...1000 bar
- High quality case with bajonet ring NS 100/160 with internal pressure compensation diaphragm per EN 837-1-S1
- Case and measuring element of stainless steel
- Degree of protection IP 66
- Accuracy class 1.0 or 1.6 per EN 837-1

Options

- Approvals/Certificates
 - Explosion protection (ATEX/UKEX) for mechanical devices
 - Material certificate per EN 10204
 - Calibration certificate per EN 10204
- As per UKCA regulations
- Mounting: Front flange for flush mounting, rear flange for surface mounting
- Connection to Zone 0 by using the flame arrester MF21xx, see data sheet D6-025

Application

The case is liquid filled and suitable especially for applications with high dynamic pressure pulsations or vibrations. An integrated pressure compensating diaphragm compensates the temperature related change of volume of the liquid filling. This high quality stainless steel version is suitable for measuring gaseous, liquid and aggressive media.

Technical data

Constructional design / case

Design:	High quality case with bajonet ring per EN 837-1 S1, material: stainless steel mat.-no. 1.4301 (304); with blow-out device (material: PUR) and internal pressure compensation diaphragm (material: silicone)	
Nominal size:	NS 100 or NS 160	
Degree of protection per EN 60529:	IP 66	
Case filling:	Glycerine-water Further filling liquids upon request.	
Pressure compensation:	To atmosphere via internal pressure compensation diaphragm	
Case seal:	Material gasket: NBR	
Window:	Non-splintering laminated glass. Option: Non-splintering plastic (Macro-lon)	
Measuring element:	Bourdon tube < 60 bar: c-type ≥ 60 bar: spiral	
Movement:	Stainless steel	
Scale:	Pure aluminium, white with black inscription Option: with red marking, special scale upon request.	
Pointer:	Pure aluminium, black. Option: with micro adjustment for zero point correction.	
Mounting:	Via process connection. Optional with flange for surface mounting or for flush mounting with DIN mounting flange.	
Weights:	NS 100:	approx. 0.9 kg
	NS 160:	approx. 1.8 kg

Process connection

Design:	Per EN 837-1. G1/2 B, 1/2" NPT or M20 x 1.5, bottom or back eccentric connection. Optional with throttle screw for system damping, further process connections upon request
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Material wetted parts

Measuring element:	Bourdon tube and shanks stainless steel mat.-no. 1.4571 / 1.4404 (316Ti / 316L)
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Nominal range

See order details, further ranges upon request

Overload limit:	standard: 1.3 times higher overload protection see order details
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For information on definitions of terms regarding the Pressure Equipment Directive, see Technical Instruction TA_068.

Accuracy

Accuracy class:	1.0 per EN 837-1 (for nominal ranges < 1000 bar) 1.6 per EN 837-1 (for nominal range 1000 bar)
Temperature influence:	Max. ± 0.4% / 10K of measuring span per EN 837-1

Temperature ranges

Ambient:	-20...70 °C
Media: ^{1,2}	-40...200 °C
Storage:	-40...70 °C

¹ Nominal range ≤ 1 bar up to 100 °C

² Nominal range > 600 bar up to 150 °C

Extended temperature range upon request

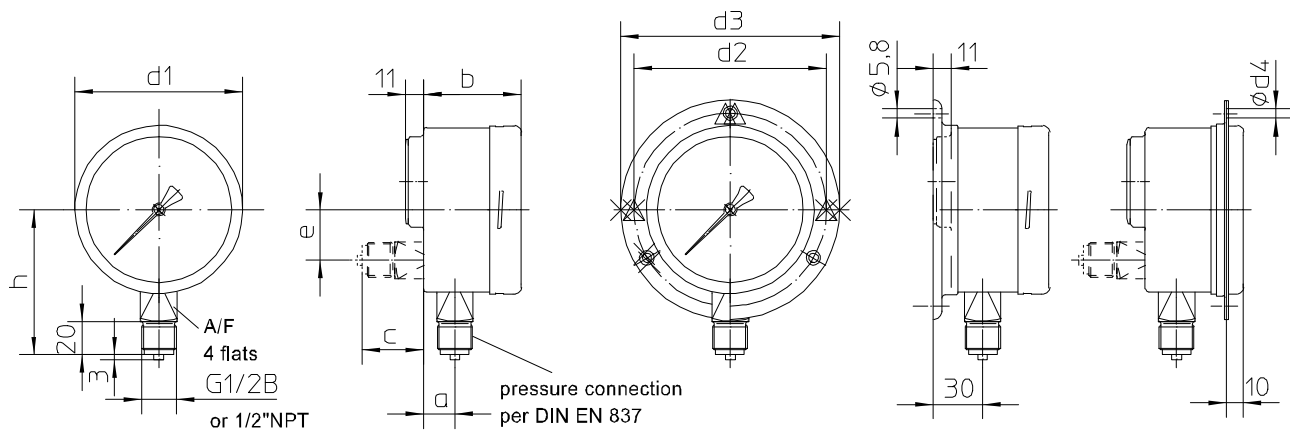
Tests and certificates

Explosion protection:	Ex-protection (ATEX/UKEX) for mechanical devices ⊕ II 2G Ex h IIC T1...T6 Gb X ⊕ II 2D Ex h IIIC Txx°C Db X
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Further details see Ex Instructions XA_005.

Information on other models see order details or upon request.

Dimensions



dimensions (mm)										
case	d1	a	b	d2	d3	d4	e	h	c	A/F
NS 100	100	21	59	116	132	4,8	30	87	37	22
NS 160	160	21	59	178	196	5,8	60	120	37	22

Order details

Bourdon tube pressure gauge, NS 100/160, high quality design case with liquid filling (IP 66), Type series BA42../BA43..

Order details BA42../BA43			
BA4240	case design with glycerin/water-case filling IP 66	NS 100	process connection bottom
BA4250			process connection at back
BA4340		NS 160	process connection bottom
BA4350			process connection at back
A2...	process connection	G1/2 B	
B2...		1/2" NPT	
C2...		M 20 x 1.5	
085	nominal range [bar]	-0.6...0	
086		-1...0	
087		-1...0.6	
088		-1...1.5	
089		-1...3	
090		-1...5	
091		-1...9	
092		-1...15	
093		-1...24	
052		0...0.6	
053		0...1	
054		0...1.6	
055		0...2.5	
056		0...4	
057		0...6	
058		0...10	
059		0...16	
060		0...25	
061		0...40	
062		0...60	
063		0...100	
064		0...160	
065		0...250	
066		0...400	
068		0...600	
070		0...1000 ¹	

Additional features (to be indicated if required)		
S30	Ex –protection (ATEX/UKEX) for mechanical devices ²	 II 2G Ex h IIC T1...T6 Gb X
		 II 2D Ex h IIIC Txx°C Db X
H2	overload protection	2 times (measuring range 1...4 bar)
H3		2 times (measuring range 6...40 bar)
H4		1.5 times (measuring range 60...160 bar)
I2	pointer	with micro adjusting advice
R2	window	non-splintering glass with maximum pointer
R3		non-splintering glass with adjustable reference pointer
R12		Polycarbonate with maximum pointer ³
R13		Polycarbonate with adjustable reference pointer ³
T2	marking	on scale (please specify)
T3		fixed reference pointer (please specify)
U2	system damping	0.3 mm restrictor screw
U3		0.6 mm restrictor screw
U4		1.0 mm restrictor screw
V2	mounting	rear flange for surface mounting
V3		front flange for flush mounting
W1020	material certificate	per EN 10204-3.1, wetted parts
W1204	calibration certificate	per EN 10204-3.1, 3 measuring points
W1201		per EN 10204-3.1, 5 measuring points
W2660	as per UKCA regulations	

Order code (example): BA4240 – A2057 – T2 – V2 – ...

¹ accuracy class 1.6 as per EN 837-1

² for devices with non-splintering glass only

³ not for devices with Ex-protection