

Bourdon Tube Safety Pressure Gauges

Bayonet ring case stainless steel

Safety category S3 according to DIN EN 837-1



RSCh 63
RSChG 63

Standard Versions

Information on general and metrological features (e.g. load limits/temperature resistance) and standard pressure ranges/scale divisions can be found in model overview 1000.

Accuracy (DIN EN 837-1)

Class 1.6

Class 2.5 for pressure ranges 0 – 600 bar and 0 – 1 000 bar
(0 – 10 000 psi and 0 – 15 000 psi)

Case

With bayonet ring, stainless steel 304 (1.4301)

Degree of Protection (DIN EN 60529 / IEC 60529)

IP54

IP65 for model RSChG

Blow-out Device

Blow-out back; when pressure increases in the case, the entire case back separates, allowing full relief

Case Ventilation

Model RSChG without ventilation, but with internal pressure compensation via pressure equalising membrane

Case Filling

Model RSChG glycerin

Nominal Case Size

63 mm (2½")

Wetted Parts

Type – 3	connection	stainless steel 316L (1.4404)
	Bourdon tube	stainless steel 316L (1.4404)
		gas-shielded arc welding
		≤ 60 bar (800 psi) c-form
		≥ 100 bar (1 500 psi) helical form
Type – 1	connection	brass
	Bourdon tube	bronze
		≤ 40 bar (600 psi) c-form
		soft-soldered
		≥ 60 bar (800 psi) helical form
		silver brazed

Case Configuration

Connection screwed

Position of the connection
 - bottom connection
 - lower back connection (r)
 (for model RSCh 63 – 3 and 63 – 6)

Mounting device
 - without
 - back flange for surface mounting (Rh)
 - front flange for panel mounting (Fr)

Pressure Range (DIN EN 837-1)

0 – 0.6 bar to 0 – 1 000 bar (0 – 10 psi to 0 – 15 000 psi) for type – 3
 0 – 0.6 bar to 0 – 600 bar (0 – 10 psi to 0 – 10 000 psi) for type – 1

Process Connection

G ¼ B, ¼" NPT or M 12x1.5

Window

Laminated safety glass

Movement

Stainless steel for type – 3
 Brass / German silver for type – 1



Dial

Aluminum white, scale black

Pointer

Aluminum black

Safety Category According to DIN EN 837-1

S3, safety pressure gauge with break-proof solid front and blow-out back

proved: pressure ranges up to 1 000 bar (15 000 psi) (type – 3)
 up to 600 bar (10 000 psi) (type – 1)

bottom connection RSCh and RSChG

lower back connection RSCh 63 – 3

marking see schematic drawing on page 2

Ordering Information, Standard Pressure Ranges, Options

See pages 3 and 4

Further Options

- Ultrapure gas version (see technical information sheet T01-000-033)
- Increased measurement accuracy
- Version as refrigeration gauge with temperature scale (see technical information sheet T01-000-015)
- Model RSChG for ambient temperatures down to –40 °C (–40 °F)
 For ambient temperatures below –20 °C (–4 °F) we recommend: pressure gauges with crimped-on ring case models RChg or RChgG
- Position of connection radial at 3 o'clock, 9 o'clock, 12 o'clock or other than vertical installation (90°)
- Sour gas resistant version according to NACE

Special Versions Upon Request

- Other process connections
- Other pressure ranges and / or special scales, e.g. dual scale bar / psi, coloured fields or ranges, dial inscriptions, negative scale
- Case parts 316L (1.4404)
- Increased degree of protection, e.g. IP65 without case filling
- Other case fillings
- Other position of connection
- Certificates and approvals, e.g. GOST (see also website)

Accessories

Chemical seals	see catalogue heading 7
Electrical	see catalogue heading 9.1 see data sheet 1610.91ff.
Other accessory	see catalogue heading 11

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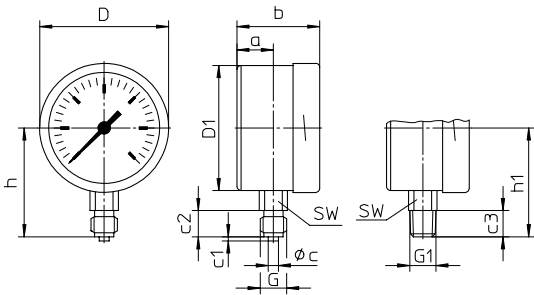
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Case Configurations, Code Letters, Dimensional Data and Weight, Schematic Drawing

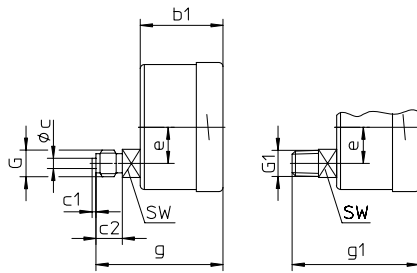
Bottom Connection Lower Back Connection (type - 3 and - 6 only)

without mounting device

without code letters

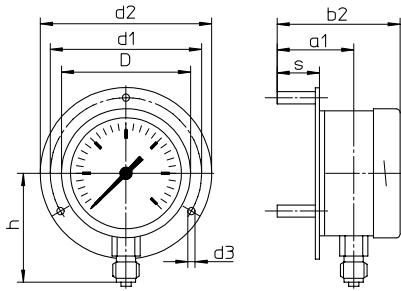


code letter r



with back flange for surface mounting

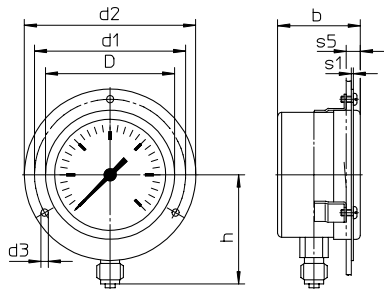
code letters Rh



version Rh including 3 separate mounting spacers

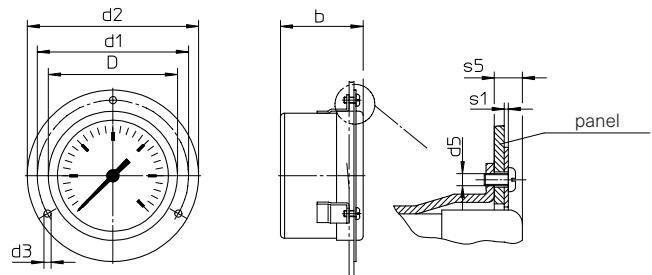
with front flange for panel mounting

code letters Fr



available upon request, however not recommended according to DIN EN 837-1

code letters rFr



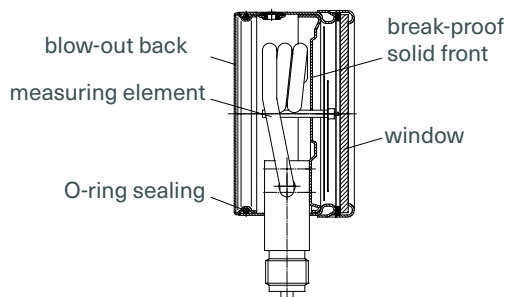
recommended panel cut out $\varnothing 67 \pm 0.5$ mm (2.64 ± 0.02 ")

Dimensional Data (mm / inch) and Weight (kg / lb)

NCS	a	a1	b	b1	b2	c	c1	c2	c3	D	D1	d1	d2	d3	d5	e	G	G1	g	g1
63	18	38	41	41	61	5	2	13	13	64	62	75	85	3.6	M3	18	G 1/4 B	1/4" NPT	63	63
2 1/2"	0.71	1.5	1.61	1.61	2.4	0.2	0.08	0.51	0.51	2.52	2.44	2.95	3.35	0.14		0.71	M 12x1.5		2.48	2.48

h ^{±1}	h1 ^{±1}	s	s1	s5	SW	approx. weight ¹⁾	
						RSCh	RSChG
54	54	21	1	7	14	0.18	0.25
2.13	2.13	0.83	0.04	0.28	0.55	0.4	0.55

Schematic Drawing



¹⁾ data for version without mounting device

Ordering Information

Basic Model	Bourdon Tube Safety Pressure Gauge with Bayonet Ring Case		RSCh
Case filling	without		without code letters
	glycerin		G
	fillable version		(G)
Nominal case size	case Ø 63 mm (2½")		63
Wetted material	copper alloy		- 1
	stainless steel		- 3
	Monel, 0 - 1 to 0 - 1 000 bar (0 - 15 to 0 - 15000 psi), movement stainless steel, laminated safety glass, Bourdon tube Monel gas-shielded arc welding, ≤ 60 bar (≤ 800 psi) c-form, ≥ 100 bar (≤ 1500 psi) helical form, bottom connection, optional r		- 6
Case configuration	case / connection	screwed	without code letters
	position of the connection	bottom connection	without code letters
		lower back connection (for RSCh - 3 / - 6)	r
mounting device	without		without code letters
	back flange for surface mounting		Rh
	front flange for panel mounting		Fr
Pressure ranges	-1 200 / 0 mbar	-30" Hg - 0 psi	
	-0.6 / 0 bar		
	-1 / 0 bar		
	-1 / +0.6 bar	-30" Hg - 15 psi	
	-1 / +1.5 bar	-30" Hg - 30 psi	
	-1 / +3 bar	-30" Hg - 60 psi	
	-1 / +5 bar	-30" Hg - 100 psi	
	-1 / +9 bar	-30" Hg - 160 psi	
	-1 / +15 bar	-30" Hg - 200 psi	
		-30" Hg - 300 psi	
	0 - 0.6 bar	0 - 10 psi	
	0 - 1 bar	0 - 15 psi	
	0 - 1.6 bar		
	0 - 2.5 bar	0 - 30 psi	
	0 - 4 bar	0 - 60 psi	
	0 - 6 bar	0 - 100 psi	e.g. 0 - 6 bar
	0 - 10 bar	0 - 160 psi	
	0 - 16 bar	0 - 200 psi	
		0 - 300 psi	
	0 - 25 bar	0 - 400 psi	
	0 - 40 bar	0 - 600 psi	
	0 - 60 bar	0 - 800 psi	
		0 - 1 000 psi	
	0 - 100 bar	0 - 1 500 psi	
	0 - 160 bar	0 - 2 000 psi	
		0 - 3 000 psi	
	0 - 250 bar	0 - 4 000 psi	
	0 - 5 000 psi		
0 - 400 bar	0 - 6 000 psi		
0 - 600 bar	0 - 10 000 psi		
0 - 1 000 bar	for types - 3 and - 6 0 - 15 000 psi		
Process connection	standard thread	G ¼ B	G ¼ B
		¼" NPT	¼" NPT
		M 12x1.5	M 12x1.5
options		G ½ B ¹⁾ for type - 1	G ½ B
		½" NPT ²⁾ for type - 3	½" NPT
Options	see page 4		

Example

RSCh 63 - 3 rFr, 0 - 6 bar, G ¼ B

¹⁾ max. 0 - 400 bar (0 - 6 000 psi)
²⁾ max. 0 - 600 bar (0 - 10 000 psi)

Ordering Information, Further Options

These options are to be ordered in written form. Please contact us to ensure compatibility when combining options.

Adjustable pointer

Red mark on the dial

Stationary red pointer on the dial
adjustable with removable ring

Receiver gauge 0.2 – 1 bar (3 – 15 psi)
scale 0 – 100 % linear or square

Special adjustment reference points = odd values, e.g. 100 KN = 8.735 bar

Window polycarbonate (PC)

Movement stainless steel for type – 1 (standard for – 3 and – 6)

Case ventilation no. 22 for outdoor installation

Case polished

Bayonet ring polished

Leak test of the measuring unit with helium leak detection up to 10^{-9} mbar l/s
for types – 3 and – 6

Wetted parts free of grease and oil adjustment \leq 250 bar (3000 psi) with dry air, $>$ 250 bar (3000 psi) with distilled water
up to 0 – 600 bar (0 – 10000 psi) dial marking: symbol crossed out oil can

Oxygen version free of grease and oil as above, additional restrictor screw in the inlet port,
up to 0 – 600 bar (0 – 10000 psi)²⁾ orifice \varnothing 0.3 mm (0.01"), dial inscription: oxygen

Silicone-free version

Restrictor screw orifice \varnothing 0.8 mm (0.03")
in the pressure inlet port orifice \varnothing 0.6 mm (0.02") (not for Monel)
material: brass, stainless steel or Monel orifice \varnothing 0.3 mm (0.01") (not for Monel)

Instrument tag stainless steel plate 12 x 55 mm (0.47 x 2.17"), wire mounting
sticker on the case coverage

Special Versions: Please describe your requirements in cleartext!

¹⁾ for instruments without case filling