

Bourdon Tube Safety Pressure Gauges

Bayonet ring case stainless steel

Safety category S3 according to DIN EN 837-1 up to 1 600 bar



RSCh
RSChG

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 1.0

Case

With bayonet ring, stainless steel 304 (1.4301)

Degree of Protection (DIN EN 60 529/IEC 529)

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

100, 160 mm (4, 6")

Wetted Parts

Type – 3: connection: stainless steel 316L (1.4404)

Bourdon tube: stainless steel 316L (1.4404)

gas-shielded arc welding

≤40 bar (600 psi) c-form

≥60 bar (800 psi) helical form

1600 bar (20 000 psi) NiFe-alloy

helical form

Type – 1: connection: brass

Bourdon tube: ≤40 bar (600 psi)

bronze, c-form

soft-soldered

stainless steel

316L (1.4404)

helical form

silver brazed

Case Configuration

Connection: screwed

Position of the

connection:

- bottom connection

- lower back connection (r)

(for model RSCh 100 – 3)

Mounting device:

- without

- back flange for surface mounting (Rh)

- front flange for panel mounting (Fr)

Pressure Ranges (DIN EN 837-1)

0 – 0.6 bar to 0 – 1 600 bar (0 – 10 psi to 0 – 20 000 psi) for type – 3¹⁾

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

Process Connection

G ½ B (½" BSP)

Window

Laminated safety glass



Movement

Stainless steel

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

Marking , see sectional drawing on page 2

Ordering Information, Standard Pressure Ranges, Options

See pages 3 and 4

Further Options

- Version as refrigeration gauge with temperature scale (NCS 100) (see technical information sheet T01-000-015)
- Case parts 316L (1.4404), NCS 100
- Model RSChG for ambient temperatures down to –40 °C (–40 °F)
- Position of connection radial at 3 o'clock, 9 o'clock, 12 o'clock or other than vertical installation (90°) for unfilled models
- GOST version for Russia and Kazakhstan
- Sour gas resistant version according to NACE

Special Versions Upon Request

- Other process connections, e.g. high pressure connection with male thread (from 0 – 60 bar)
- 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), NCS 160
- Increased degree of protection, e.g. IP65 without case filling
- Other case fillings
- Other position of connection

Accessory

Chemical seals:

see catalogue heading 7

Electrical:

see catalogue heading 9.1

see data sheet 1600.90

Other accessory:

see catalogue heading 11

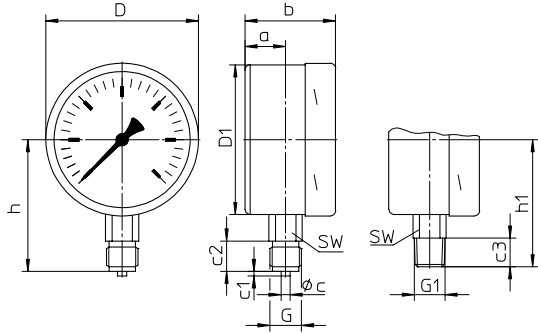
¹⁾ pressure ranges > 1 600 bar according to DIN 16001 see data sheet 1640

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

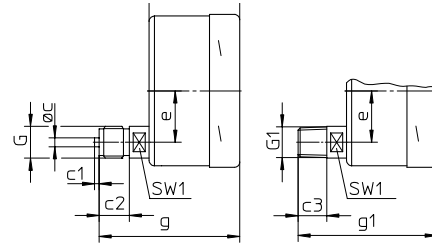
Bottom Connection Lower Back Connection (for NCS 100 only)

without mounting device

without code letters

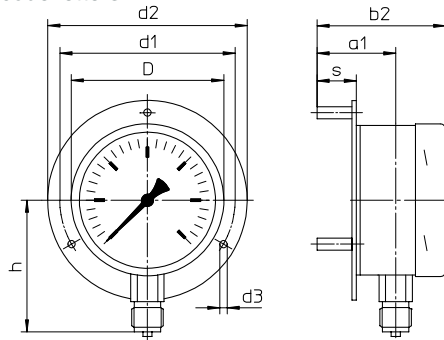


code letter r



with back flange for surface mounting

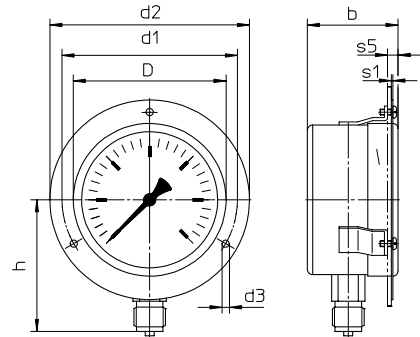
code letters Rh



Version Rh including 3 separate mounting spacers.

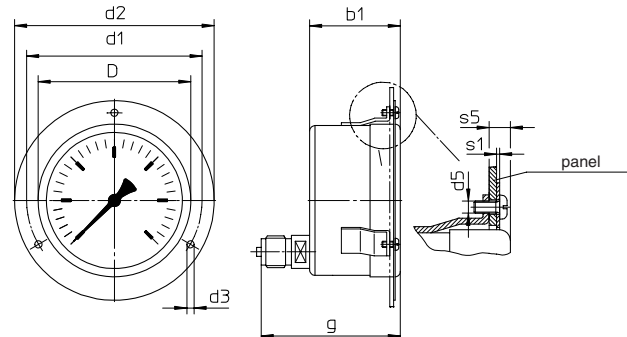
with front flange for panel mounting

code letters Fr



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

code letters rFr

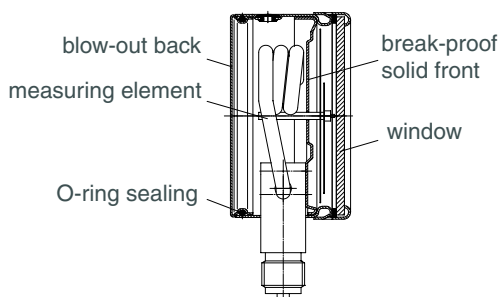


recommended panel cut out NCS 100 $\varnothing 104 \pm 0.5$ mm (4.09 ± 0.02)¹⁾

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	h ^{±1}	h1 ^{±1}
100 4"	27 1.06	52 2.05	60 2.36	60 2.36	85 3.35	6 0.24	3 0.12	20 0.79	19 0.75	101 3.98	99 3.9	116 4.57	132 5.2	4.8 0.19	M4	34 1.34	G 1/2 B M20x1.5	1/2" NPT	93 3.66	92 3.66	87 3.43	84 3.31
160 6"	43 1.69	73 2.87	79 3.11	-	108 4.25	6 0.24	3 0.12	20 0.79	19 0.75	161 6.34	159 6.26	178 7.01	196 7.72	5.8 0.23	M5	-	G 1/2 B M20x1.5	1/2" NPT	-	-	115 4.53	114 4.49

Schematic Drawing



s	s1	s5	SW	SW1	approx. weight ²⁾	
					RSCh	RSChG
26	1	7	22	17	0.65	1.00
1.02	0.04	0.28	0.87	0.67	1.43	2.2
31.5	1.5	9	22	-	1.50	2.95
1.24	0.06	0.35	0.87	-	3.31	6.5

¹⁾ recommended panel cut out for NCS 100 (4") $\varnothing 104 \pm 0.5$ mm (4.09 ± 0.02)
NCS 160 (6") $\varnothing 164 \pm 0.5$ mm (6.46 ± 0.02)
²⁾ data for versions 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 100, 160 mm (4, 6")		100, 160	
Wetted material:	copper alloy			- 1
	stainless steel			- 3
	Monel, 0 – 0.6 bar to 0 – 1 000 bar, movement stainless steel, laminated safety glass, Bourdon tube Monel gas-shielded arc welding, ≤40 bar c-form, ≥60 bar helical form, bottom connection, optionally r			- 6
Case configuration:	case/connection	screwed		without code letters
		welded (RSCh 100 – 3 bottom connection only)		v
	position of the connection	bottom connection		without code letters
		lower back connection (RSCh 100 only)		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 vac.	– 0 psi	
	-0.6 / 0 bar			
	-1 / 0 bar			
	-1 / +0.6 bar	30" Hg vac.	– 15 psi	
	-1 / +1.5 bar	30" Hg vac.	– 30 psi	
	-1 / +3 bar	30" Hg vac.	– 60 psi	
	-1 / +5 bar	30" Hg vac.	– 100 psi	
	-1 / +9 bar	30" Hg vac.	– 160 psi	
	-1 / +15 bar	30" Hg vac.	– 200 psi	
		30" Hg vac.	– 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	0	– 15 000 psi	
	0 – 1 600 bar for type – 3	0	– 20 000 psi	
Process connection:	standard thread	G ½ B	– 1 and – 6 max. 0 – 1 000 bar	G ½ B
	options	½" NPT	– 3 max. 0 – 1 600 bar	½" NPT
		M20x1.5		
		G ¼ B	– 1 max. 0 – 600 bar	G ¼ B
		¼" NPT	– 3 and – 6 max. 0 – 1 000 bar	¼" NPT
		M12x1.5		M 12x1.5
		high pressure connection female thread (from 0 – 60 bar) for ¼" tube, with 60° cone	M16x1.5 ⅜" – 18 UNF	HP connection M 16x1.5 HP connection ⅜" – 18 UNF
Options:	see page 4			
Example:	RSCh 100 – 3 rFr, 0 – 6 bar, G ½ B			

