

# Pressure Control Gauge for Gas Cylinders

**Bourdon Tube Pressure Gauges Nom. Case Size 50 (2")**  Model **RChE 50-3**  
with Inductive Limit Switch Contact Assembly

## Application

Bourdon tube pressure gauges of nom. case size 50 (2") with inductive limit switch contact assembly are applied mainly as pressure control gauges for gas bottles (low level alarm).

## Nominal Case Size

50 mm (2")

## Accuracy Class

2.5

## Pressure Ranges

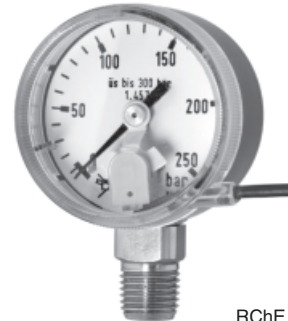
0-18 bar, 0-80 bar or 0-250 bar

## Pressure Limitations

Steady pressure: 75% of full scale value  
Cyclic pressure: 30-65% of full scale value  
Temporary: full scale value;  
with pressure range 0/250 bar over-  
pressure withstanding up to 300 bar

## Temperature Limitations

Ambient temperature: -20 / +60 °C (-4 / +140 °F)  
Medium temperature: max. +60 °C (+140 °F)



RChE 50-3, 250 bar, I1,  
here with 1/4" NPT connection

## Standard Configuration

### Connection

316 stainless steel (1.4571) bottom (standard) or center back (rm),  
G 1/4 B (1/4" BSP) (standard) or optional 1/4" NPT

### Bourdon Tube

316 stainless steel (1.4571), argon arc welded,  
pressure ranges 0/18 bar and 0/80 bar in C-form,  
pressure range 0/250 bar helical

### Movement

Stainless steel

### Dial

Aluminum alloy, black figures, white background

### Pointer

Aluminum alloy black

### Case

304 stainless steel (1.4301)

### Window

Polycarbonate, clipped-in, turnable for limit adjustment

### Safety Features

#### Bottom connection:

Pressure relief with blow-out back part in the back of the case,  
(qualification approval acc. to DIN EN 562)

#### Center back connection:

Blow-out Ø 13 mm at the top of the case, blow-out plug to cut off for  
compensation of internal pressure

Version free of grease and oil; adjusted with dry air; helium leak  
detected

### Limit Switch

Turck inductive, non-touching proximity switch acc. to EN/ICE 60947-  
5-6 (NAMUR), glued to the window from inside, KEMA 01 ATEX  
1264X; green mark at the window indicating the switch point; adjustment  
of the switch point by turning the window over a setting range of 45°,  
starting at the beginning of the scale;

Nom. operating voltage: 8.2 V DC

Drawing of current: active area free  $\geq 3.2$  mA  
active area covered  $\leq 1.0$  mA

Switching frequency: 2500 Hz

Switching hysteresis: 0.08...0.25 mm

Terminal connections: BN (brown) = +  
BU (blue) = -

Switch function: I-1 (breaking at falling pressure)

CE-Marking (EMV): acc. to EN 60947-5-2

### Electrical Connection

1.5 m (59") connection cable, 2-wires, (2 x 0.14 mm<sup>2</sup>, blue coated), with  
strain relief

## Special Options

- Process connection 1/8" BSP or 1/8" NPT, others upon request
- Inlet port restrictor screw stainless steel
- Version for high purity gas services with
  - NPT male thread connection, or
  - stem (made from one piece, 1.4404 / ~AISI 316 L) and female union nut (1.4301/~AISI 304), suitable vor VCR® connection, inlet port with high surface quality
- other pressure ranges upon request
- Special scales such as dual ranges or others

## Accessories

A special output unit is required for inductive limit switches.

For an intrinsically safe circuit we recommend model KFA6-SR2-Ex1, ordering number: **Z-129004**.

## How to Order:

Please specify:

Model and nom case size: **RChE 50**

Ordering number for material  
of the wetted parts: **- 3**

Code letters for  
case configuration: see overleaf;  
bottom connection (without  
additional code letter; = standard)

center back connection = **rm**  
Pressure range: **0-18 bar, 0-80 bar or 0-250 bar**

Process connection: **G 1/4 B (1/4" BSP; = standard)  
or 1/4" NPT, others see above**

Switching function: **I1 (breaking at falling pressure)**

Special options: (see above)

### Examples for Ordering Information:

- RChE 50-3, 0-18 bar, G 1/4 B, I1
- Item 1: RChE 50-3, 250 bar, 1/4" NPT, I1  
Item 2: Z-129004 (output unit KFA6-SR2-Ex1.W)



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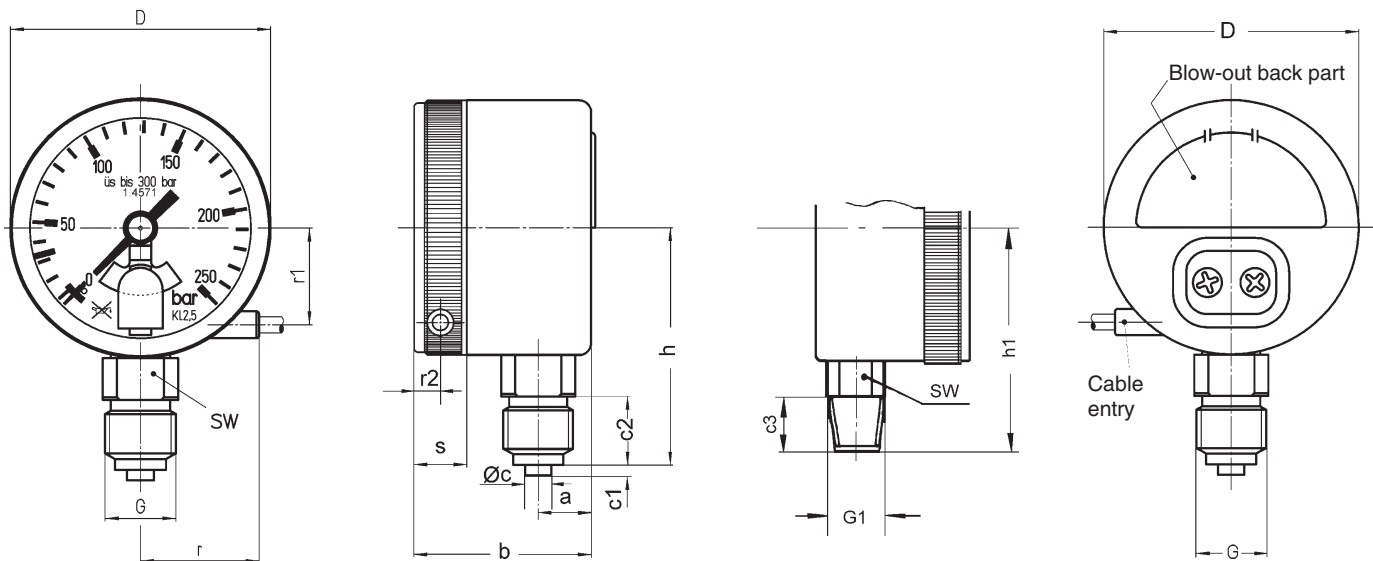
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# Dimensional Drawings, Dimensions and Weight

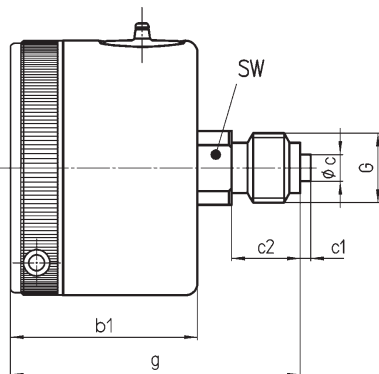
## Bottom connection

(without additional code letter)



## Center back connection

Codes letters: **rm**



## Dimensions (mm / inches) and Weight (kg / lb)

Nom. Case Size (NCS)	a	b	b1	c	c1	c2	c3	D	G	G1	g	h <sup>±1</sup>	h1 <sup>±1</sup>	r	r1	r2	s	SW	Weight (approx.)
50	10	33.5	35	5	2	13	13	48.5	G ¼ B	¼" NPT	56	45	45	22	18	5	10	14	0.100
2"	.39	1.32	1.38	.2	.079	.51	.51	1.91	¼" BSP	¼" NPT	2.2	1.77	1.77	.87	.71	.2	.39	.55	0.22

The information in this leaflet is given in good faith, but we reserve the right to make changes without notice.