

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)

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 ≥ 3.2 mA
active area covered ≤ 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 mm², blue coated), with
strain relief



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

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)

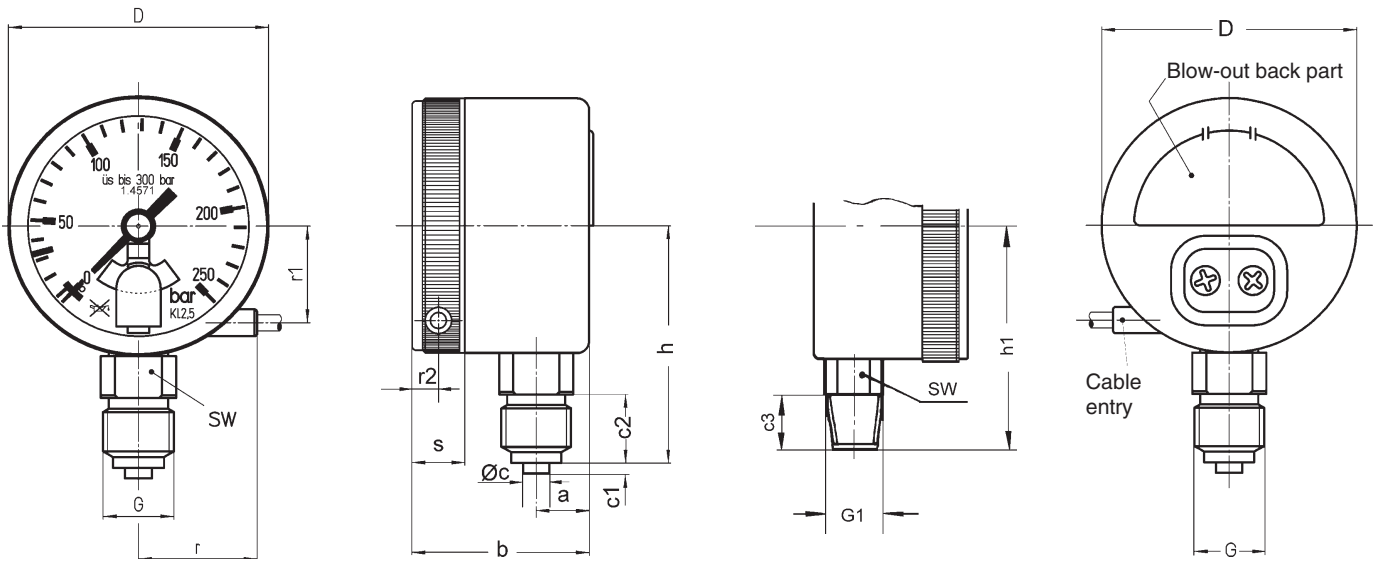
Examples for Ordering Information:

- 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)

Dimensional Drawings, Dimensions and Weight

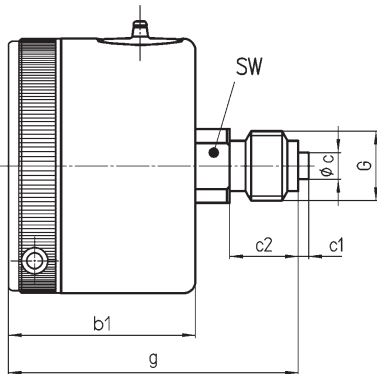
Bottom connection

(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 ^{±1} | h1 ^{±1} | 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 |