Pressure Control Gauge for Gas Cylinders
Bourdon Tube Pressure Gauges Nom. Case Size 50 (2”)
with Inductive Limit Switch Contact Assembly

Model RChE 50-3

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 ¼ B (¼” BSP) (standard) or optional ¼” 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 detection

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

Special Options
● Process connection ¼” BSP or ½” 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)

Pressure range: 0-18 bar, 0-80 bar or 0-250 bar

Process connection: G ¼ B (¼” BSP; = standard) or ¼” 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 ¼ B, I1
● Item 1: RChE 50-3, 250 bar, ¼” NPT, I1
Item 2: Z-129004 (output unit KFA6-SR2-Ex1.W)

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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)

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<thead>
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<th>Nom. Case Size (NCS)</th>
<th>a</th>
<th>b</th>
<th>b1</th>
<th>c</th>
<th>c1</th>
<th>c2</th>
<th>c3</th>
<th>D</th>
<th>G</th>
<th>G1</th>
<th>g</th>
<th>h (\pm)</th>
<th>h1 (\pm)</th>
<th>r</th>
<th>r1</th>
<th>r2</th>
<th>s</th>
<th>SW</th>
<th>Weight (approx.)</th>
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<td>.39</td>
<td>1.32</td>
<td>1.38</td>
<td>.2</td>
<td>.079</td>
<td>.51</td>
<td>.51</td>
<td>13</td>
<td>13</td>
<td>48.5</td>
<td>G 1/4 B</td>
<td>1/8 NPT</td>
<td>56</td>
<td>45</td>
<td>45</td>
<td>22</td>
<td>18</td>
<td>5</td>
<td>10</td>
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<td></td>
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<td>G 1/8 BSP</td>
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<td>2.2</td>
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<td>1.77</td>
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The information in this leaflet is given in good faith, but we reserve the right to make changes without notice.