

# Combi Gauges for Rail Cars

According to DIN 38 030:2009-02

With one measuring unit

Rg...Fz  
RChg...Fz

## Application

Pressure gauges NCS 60 Model Rg 60 – 1 Fz rmBFR,  
NCS 80 Model RChg 80 – 1 Fz rmBFR,  
NCS 100 Model RChg 100 – 1 Fz rmBFR  
are applied in rail cars, especially for air brake systems and comply with the standard DIN 38 030:2009-02.  
The instruments are provided with u-clamps for panel mounting and with direct and indirect lighting as combi gauges.

## Standard Version

### Accuracy

Class 1.6 NCS 60  
Class 1.0 NCS 80, 100

### Position of Installation

70° – 90° (position of adjustment 80°)

### Case

NCS 60 galvanised steel  
NCS 80, 100 stainless steel 304 (1.4301)  
with crimped-on ring, aluminum, black anodised

### Temperature Limitation

Storage temperature –40 °C to +70 °C (–40 °F to +158 °F)  
Ambient temperature –40 °C to +60 °C (–40 °F to +140 °F)  
Medium temperature max. +60 °C (+140 °F)

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

RChg IP54 in front of the panel  
Rg IP31

### Blow-out Device

Blow-out plug in the back of the case

### Lighting

Direct 1 light bulb BA9s 24 V/2 W and  
Indirect via light slits in the case

### Nominal Case Sizes

60, 80, 100 mm (2.36, 3, 4")

### Wetted Parts

Connection brass  
Bourdon tube bronze, soft soldered, c-form

### Case Configuration

Position of the connection centre back connection (rm)  
Mounting device u-clamp for panel mounting (BFR)

### Pressure Ranges

0 – 6, 0 – 10 and 0 – 12 bar

### Process Connection

NCS 60 M 12x1.5 with chuck cone for cutting ring  
L6 according to DIN EN ISO 8434-1  
NCS 80, 100 M 16x1.5 with chuck cone for cutting ring  
L10 according to DIN EN ISO 8434-1

Including restrictor screw in the pressure inlet port,  
orifice Ø 0.8 mm (0.03")

### Window

Reflex-reduced laminated safety glass



### Movement

Brass/German silver

### Dial

Aluminum black, scale white, stop pin at 0 bar (zero stop)

### Pointer

Aluminum, colour yellow (RAL 1016)

### Safety Category According to DIN EN 837-1

S1 pressure gauges with blow-out device

## Options

- Instruments without combi lighting, i.e. only direct lighting, only indirect lighting or unlit
- Other pressure ranges, e.g. 0 – 16 bar
- Other than 70° – 90° installation
- Process connection with cutting ring and union nut
- Restrictor screw brass, orifice Ø 1.0 mm (0.04"), in the pressure inlet port
- Other pointer colours, e.g. luminous bright red (RAL 3026) or white (RAL 9010)
- Dial inscription (ZA) as required, colours matching the pointer
- Coloured marks matching the pointer
- LED lighting BA9s, 18–32 V, white or green

## Special Versions Upon Request

- Other process connections
- LED lighting BA9s for operating voltages of more than 32 V up to max. 130 V

## Ordering Information

Please specify in your order:

**Basic model** Rg 60 – 1 Fz rmBFR  
RChg 80 – 1 Fz rmBFR  
RChg 100 – 1 Fz rmBFR  
**Pressure range** 0 – 6 bar, 0 – 10 bar, 0 – 12 bar  
**Process connection** L6 (NCS 60)  
L10 (NCS 80, 100)  
**Specifics** see above

**Example** RChg 80 – 1 Fz rmBFR, 0 – 12 bar,  
L10, ZA: "brake cylinder" white

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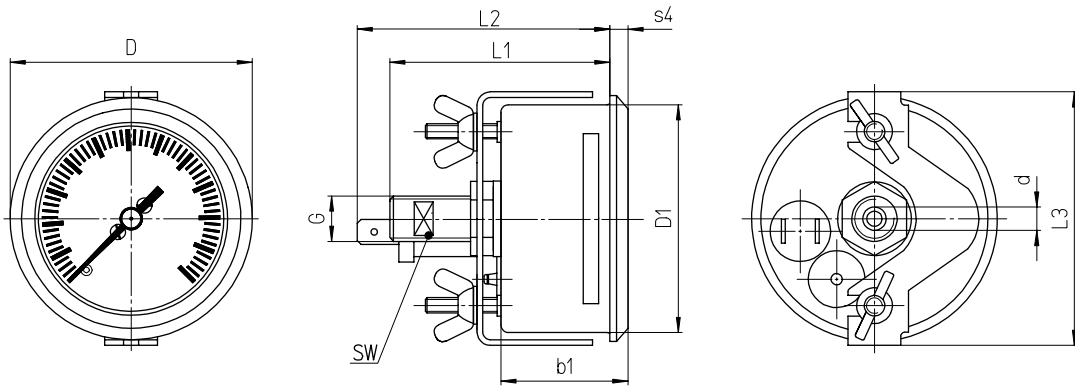
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**1901**

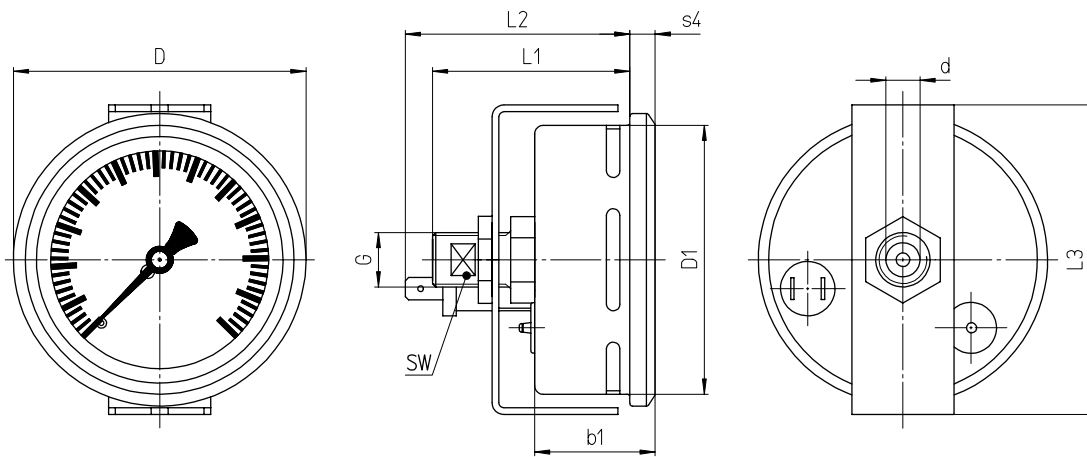
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# Case Configuration, Dimensional Data and Weight

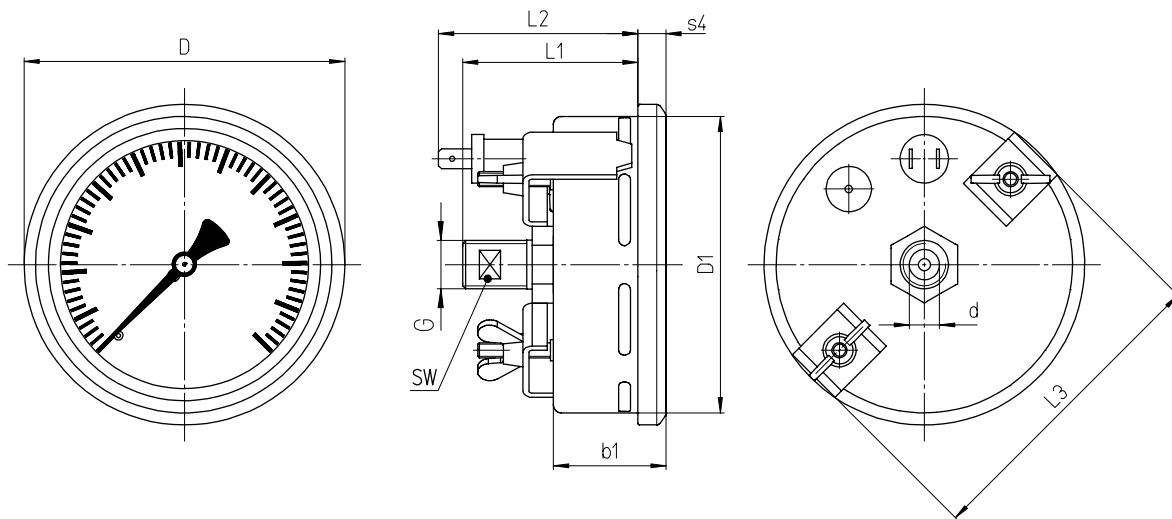
## Rg 60 – 1 Fz rmBFR



## RChg 80 – 1 Fz rmBFR



## RChg 100 – 1 Fz rmBFR



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

NCS	b1	D	D1	process connection DIN EN ISO 8434-1 d <sup>B11 1)</sup>		L1	L2	L3	s4	SW	recommended panel cut out Ø	approx. weight
60	33	65	59	L6	M12x1.5	59	67	67	5	8	61 ± 0.5	0.20
2.36	1.3	2.56	2.32			2.32	2.64	2.64	0.2	0.31	2.4 ± 0.02	0.44
80	35.5	86	79	L10	M16x1.5	58	66	91	7.5	13	81 ± 0.5	0.35
3	1.4	3.39	3.11			2.28	2.6	3.58	0.3	0.51	3.19 ± 0.02	0.77
100	37	106	99	L10	M16x1.5	57	65	101	10	0.51	102 ± 1	0.39
4	1.46	4.17	3.9			2.24	2.56	3.98	0.39	0.51	4.02 ± 0.04	0.86

<sup>1)</sup> Tolerance class according to ISO 286-2