

# Combi Gauges for Rail Cars

According to DIN 38 030:2009-02

With two Measuring Units

Models **DRg...Fz**  
**DRChg...Fz**

## Application

Pressure gauges **NCS 60** Model **DRg 60-1 Fz rmBFr**,  
**NCS 80** Model **DRChg 80-1 Fz rmBFr**,  
**NSC 100** Model **DRChg 100-1 Fz rmBFr**,

are used for the measurement of two different pressures and are applied for rail cars, especially for pneumatic brake systems. The instruments are provided with u-clamps for panel mounting and they combine direct and indirect lighting.

## Construction

The pressure gauges are provided with two independently working bourdon tube measuring systems. Each system has a separate pressure connection. A movement with separate pointer shafts transfers the pressure caused motion of the bourdon tubes onto the particular pointer.

## Standard Version according to DIN 38 030:2009-02

### Accuracy

Class 1.6: NCS 60 separate for each measuring system  
Class 1.0: NCS 80, 100 separate for each measuring system

### Position of Installation

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

### Case

NCS 60 (2.36") steel, galvanised  
NCS 80, 100 (3", 4") 1.4301 (304 stainless steel)  
with crimped-on ring, aluminum, black anodised

### Case Protection Type (EN 60529 / IEC 529)

IP 54 in front of the panel

### Blow-out Device

Blow-out plug in the back of the case

### Lighting

Directly 1 x BA9s 24 V / 2 W and  
indirectly by lighting apertures in the case

### Nominal Case Sizes (NCS)

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

### Wetted Parts

Connections: brass  
Bourdon tubes: bronze, soft soldered, c-form

### Case Configuration

Position of the connection: centre back connection (rm),  
parallel one above the other  
Mounting device: u-clamp for panel mounting (BFr)

### Pressure Ranges

0-6, 0-10 and 0-12 bar

### Process Connection

NCS 60: 2 x M 12 x 1.5 with chuck cone for cutting ring  
L 6 according to DIN EN ISO 8434-1  
NCS 80, 100: 2 x M 16 x 1.5 with chuck cone for cutting ring  
L 10 according to DIN EN ISO 8434-1

Including restrictor screw in each pressure inlet port,  
orifice Ø 0.8 mm (0.03").  
Each process connection is marked with a coloured spot, matching  
the colour of the pointer.

### Window

Reflex-reduced laminated safety glass

### Movement

Brass / German silver



### Dial

Aluminum black, white scale, with zero stop (stop pin)

### Pointers

2 x aluminum, 1 pointer yellow (RAL 1016), 1 pointer red (RAL 3026)

### Safety Category according to EN 837-1

S1 pressure gauges with blow-out device

## Options and others

- Instrument without combination of lighting, meaning either direct or indirect lighting
- Other pressure ranges, e.g. 0-16 bar
- Other than 70° - 90° installation
- Process connection with cutting ring and union nut
- Other process connections upon request
- Restrictor screw brass, orifice Ø 1.0 mm (0.04"), in the inlet port
- Other colours for pointer, e.g. white (RAL 9010)
- Dial inscription (ZA), according to your demand in terms of colour matching the pointer
- Coloured marks matching the pointers
- LED lighting for operating voltages of more than 32 V up to max. 130 V for NCS 80 and 100
- BA9 LED 24-32 V, 48-75 V, 110-150 V

## Ordering Information:

Model: **DRg 60-1 Fz rmBFr**  
**DRChg 80-1 Fz rmBFr**  
**DRChg 100-1 Fz rmBFr**

Pressure range: **0-6 bar, 0-10 bar, 0-12 bar**

Process connections: **L6 (NCS 60)**  
**L10 (NCS 80, 100)**

Colour of pointer: front pointer: **red or yellow**  
rear pointer: **red or yellow**

Specifics: e.g. dial inscriptions (**ZA**),  
other position of installation etc.  
(see above)

### Example:

- DRChg 80-1 Fz rmBFr, 0-12 bar, L 10, front pointer red, rear pointer yellow



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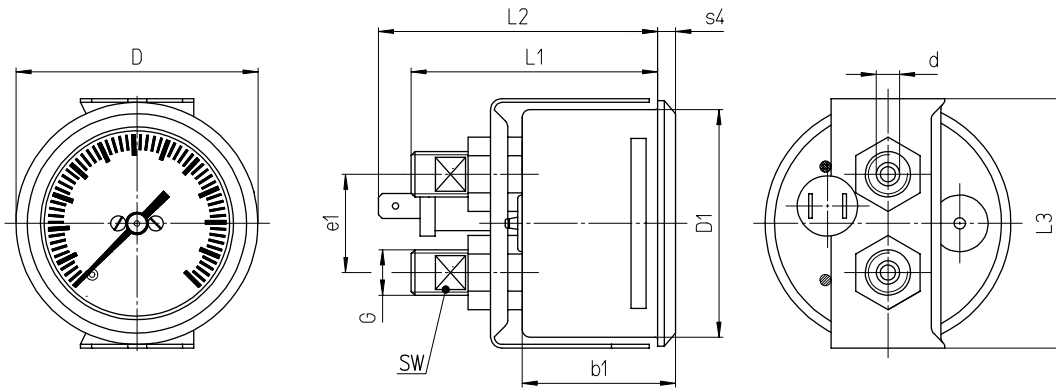
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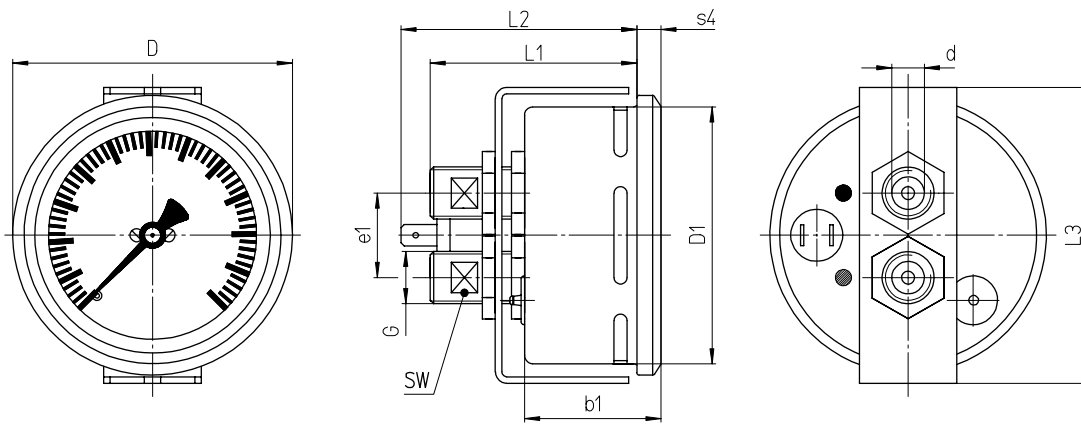
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# Case Configuration, Dimensions and Weight

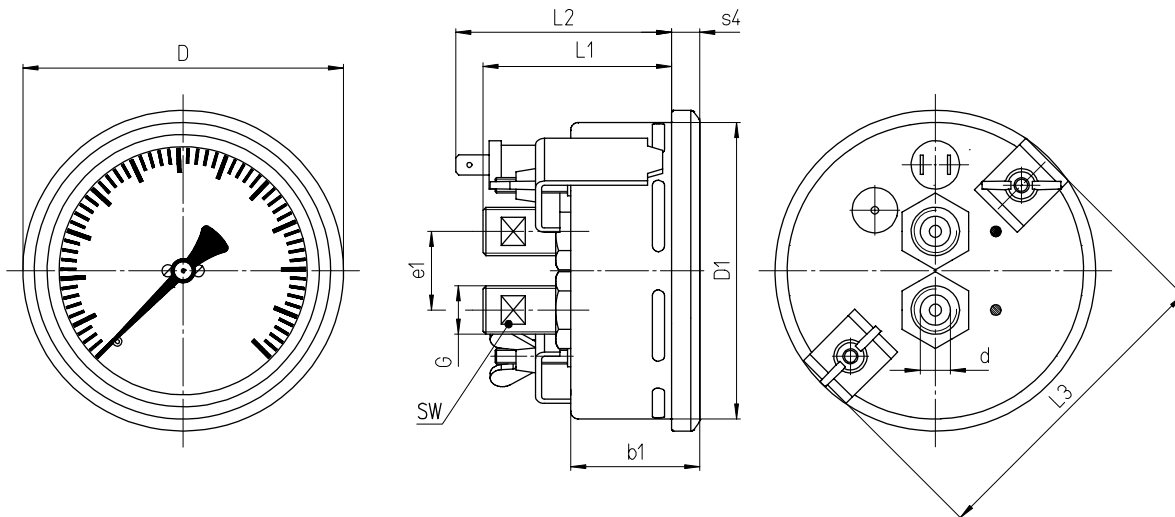
## DRg 60-1 Fz rmBFr



## DRChg 80-1 Fz rmBFr



## DRChg 100-1 Fz rmBFr



### Dimensional data ( mm / inches ) and weights ( kg / lb )

NCS	b1	D	D1	Process connections EN ISO 8434-1		e1	L1	L2	L3	s4	SW	recommended panel cut out Ø	Weight (approx.)
				$d^{B(1)1}$	G								
60	40	65	59	L6	M 12 x 1.5	26	65	74	67	5	8	61 ± 0.5	0.29
<b>2.36</b>	<b>1.57</b>	<b>2.56</b>	<b>3.32</b>	<b>.24</b>			L6	<b>2.56</b>	<b>2.91</b>	<b>2.64</b>	<b>.2</b>	<b>.31</b>	<b>2.4 ± 0.02</b>
80	41.5	86	79	L10	M 16 x 1.5		63	72.5	91	7.5	13	81 ± 0.5	0.49
<b>3</b>	<b>1.63</b>	<b>3.39</b>	<b>3.11</b>	<b>.39</b>		L10	<b>2.48</b>	<b>2.85</b>	<b>3.58</b>	<b>.3</b>	<b>.51</b>	<b>3.19 ± 0.02</b>	<b>1.08</b>
100	43	106	99				62	71	104	10		102 ± 1	0.55
<b>4</b>	<b>1.69</b>	<b>4.17</b>	<b>3.89</b>				<b>2.44</b>	<b>2.8</b>	<b>4.09</b>	<b>.39</b>		<b>4.02 ± 0.04</b>	<b>1.21</b>

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

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