

# Bourdon tube pressure gauge, copper alloy

## For tyre pressure measuring instruments per EN 12645

### Model 211.00.160

WIKA data sheet PM 02.44



For further approvals,  
see page 4

#### Applications

- For use in tyre inflation systems for monitoring the tyre pressure during inflating
- Filling stations, garages, service stations

#### Special features

- Design per EN 12645
- Scale ranges: 0 ... 10 bar and 0 ... 30 bar
- Nominal size NS 160 [6"]



Pressure gauge for tyre pressure measuring instruments

#### Description

The model 211.00.160 has been developed specifically to monitor the tyre pressure of vehicles.

This pressure gauge is particularly suited to be integrated in tyre pressure measuring instruments specified in EN 12645. The advantage of this mechanical Bourdon tube pressure gauge is its reliability and long-term stability without the need for auxiliary power.

#### Individual customer versions

Based on many years of experience in manufacturing and development, WIKA is happy to offer support in the construction and production of customer-specific solutions. WIKA's specialists are able to provide best practices for developing customised tyre measuring instruments for local markets.

# Specifications

Basic information	
Standard	EN 12645
Nominal size (NS)	Ø 160 mm [6"]
Connection location	<ul style="list-style-type: none"> <li>■ Lower back mount</li> <li>■ Upper back mount</li> </ul>
Window	<ul style="list-style-type: none"> <li>■ Instrument glass</li> <li>■ Polycarbonate</li> </ul>
Case	Stainless steel, 1.4301 (304)
Ring	Bayonet bezel, stainless steel
	Slip-on bezel, steel, black painted
Mounting	Without
	Panel mounting flange, stainless steel
Movement	Copper alloy

Measuring element	
Type of measuring element	Bourdon tube, C-type
Material	Copper alloy

Accuracy specifications <sup>1)</sup>		
<b>Reference conditions</b>		
Ambient temperature $t_{amb}$	15 ... 25 °C [59 ... 77 °F]	
<b>Maximum permissible error</b>		
0 ... 4 bar	±0.08 bar	
> 4 ... ≤ 10 bar	±0.16 bar	
> 10 bar	±0.25 bar	
<b>Temperature error</b>		
Error limits on deviation from the reference conditions at the measuring system. Formulas below only apply to entries in °C for $t_{amb}$ . → For permissible ambient temperatures $t_{amb}$ see "Operating conditions".		
0 ... 4 bar	$t_{amb} < 15\text{ °C}$	$\pm  0.005 * (15 - t_{amb}) + 0.08  \text{ bar}$
	$t_{amb} > 25\text{ °C}$	$\pm  0.005 * (t_{amb} - 25) + 0.08  \text{ bar}$
> 4 ... ≤ 10 bar	$t_{amb} < 15\text{ °C}$	$\pm  0.005 * (15 - t_{amb}) + 0.16  \text{ bar}$
	$t_{amb} > 25\text{ °C}$	$\pm  0.005 * (t_{amb} - 25) + 0.16  \text{ bar}$
> 10 bar	$t_{amb} < 15\text{ °C}$	$\pm  0.005 * (15 - t_{amb}) + 0.25  \text{ bar}$
	$t_{amb} > 25\text{ °C}$	$\pm  0.005 * (t_{amb} - 25) + 0.25  \text{ bar}$

1) Accuracy specifications per EN 12645

## Scale ranges

bar		kPa	
0 ... 10	0 ... 30	0 ... 1,000	0 ... 3,000

### Further details on: scale ranges

<b>Special scale ranges</b>	Other scale ranges on request
<b>Unit</b>	<input type="checkbox"/> bar <input type="checkbox"/> kPa
<b>Dial</b>	
Scale colour	<input type="checkbox"/> Black <input type="checkbox"/> White
Scale graduation	0.1 bar
Material	<input type="checkbox"/> Aluminium, white <input type="checkbox"/> Aluminium, black
Special scale	Customer-specific dials on request
<b>Pointer</b>	<input type="checkbox"/> Knife edge pointer, aluminium, black <input type="checkbox"/> Knife edge pointer, aluminium, white

### Process connection

<b>Standard</b>	EN 837-1
<b>Size</b>	
EN 837-1	<input type="checkbox"/> G ½ B, male thread <input type="checkbox"/> G ½, female thread
<b>Restrictor</b>	<input type="checkbox"/> Without <input type="checkbox"/> Ø 0.5 mm [0.020"], copper alloy <input type="checkbox"/> Ø 0.6 mm [0.024"], stainless steel
<b>Material (wetted)</b>	
Process connection	Copper alloy
Bourdon tube	Copper alloy

Other process connections on request

### Operating conditions

<b>Medium temperature</b>	-20 ... +60 °C [-4 ... 140 °F]
<b>Ambient temperature range <math>t_{amb}</math></b>	-20 ... +60 °C [-4 ... 140 °F]
<b>Storage temperature range</b>	-40 ... +70 °C [-40 ... 158 °F]
<b>Pressure limitation</b>	
Steady	Full scale value
Fluctuating	0.9 x full scale value
Short time	1.3 x full scale value
<b>Ingress protection per IEC/EN 60529</b>	IP54

## Manufacturer's declaration

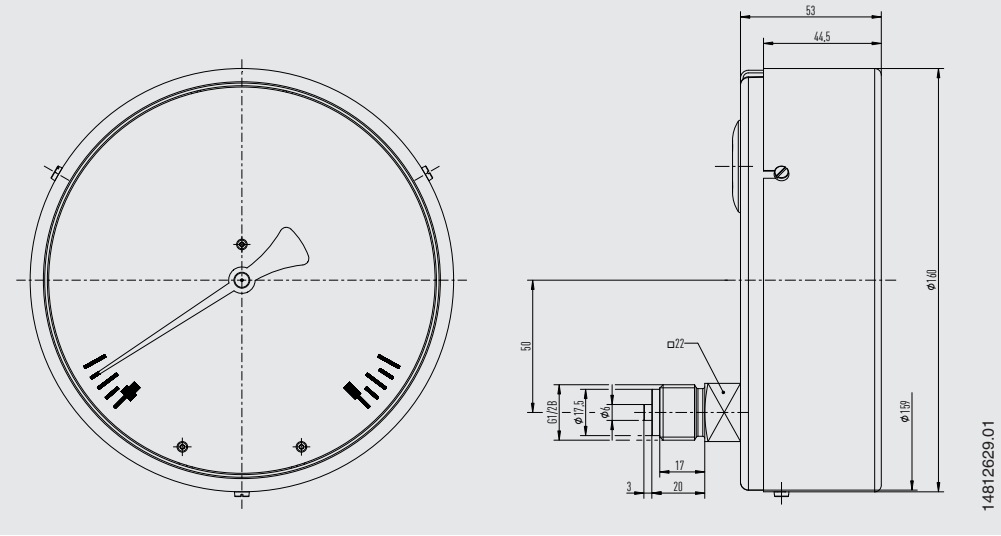
Logo	Description
-	Pressure Equipment Directive (PED) for maximum allowable pressure $PS \leq 200$ bar

## Certificates

Certificates	
<b>Certificates</b>	<ul style="list-style-type: none"><li>■ 2.2 test report per EN 10204 (e.g. state-of-the-art manufacturing, indication accuracy)</li><li>■ 3.1 inspection certificate per EN 10204 (e.g. indication accuracy)</li></ul>
<b>Recommended calibration interval</b>	1 year (dependent on conditions of use)

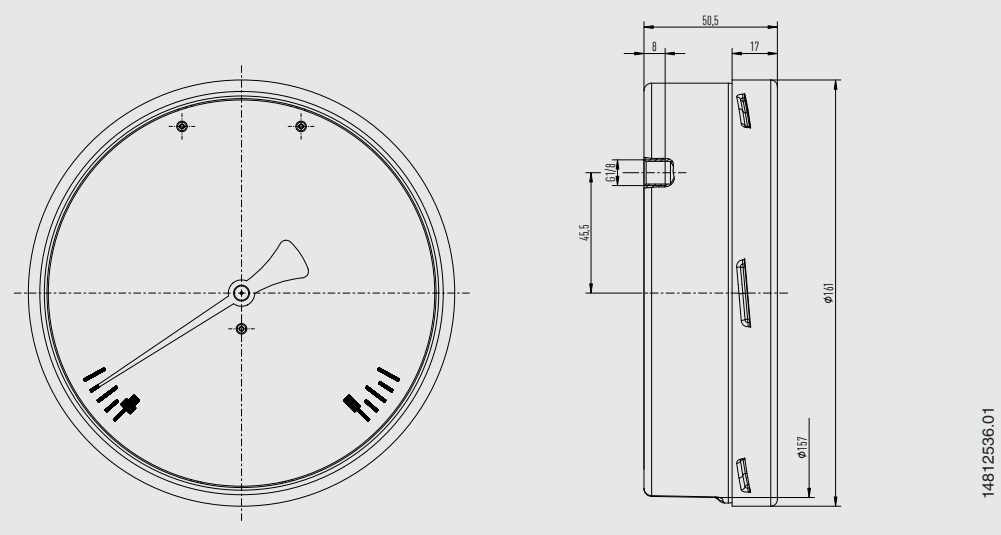
**Dimensions in mm [in]**

**Lower back mount, G 1/2 B**



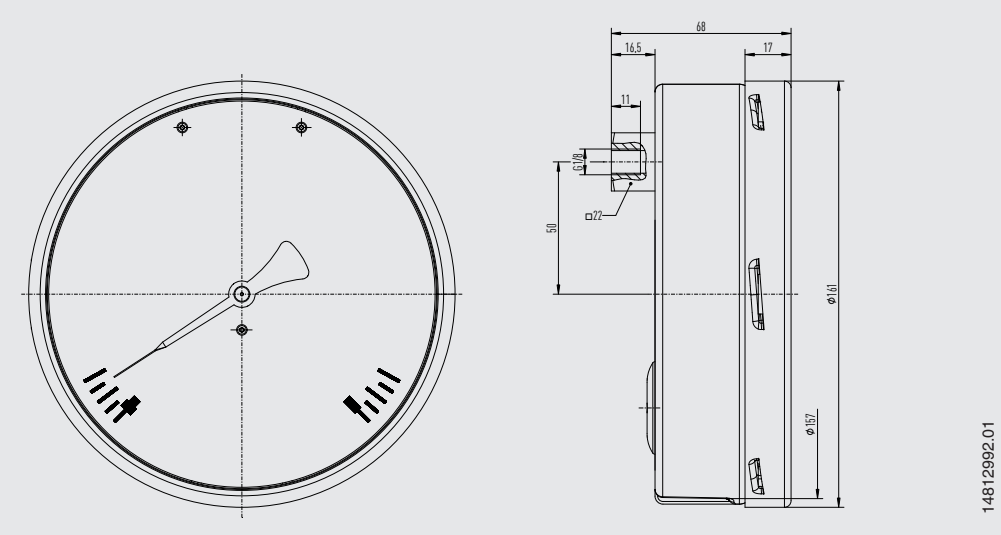
14812629.01

**Upper back mount, G 1/8 internal**




14812536.01

**Upper back mount, G 1/8 external**



14812992.01

## Accessories and spare parts

Model		Description	Order number
	910.17	Seals → See data sheet AC 09.08	-

### Ordering information

Model / Nominal size / Scale range / Process connection / Connection location / Options

© 11/2010 WIKA Alexander Wiegand SE & Co. KG, all rights reserved.  
The specifications given in this document represent the state of the art at the time of publishing.  
We reserve the right to make modifications to the specifications and materials.  
In case of a different interpretation of the translated and the English data sheet, the English wording shall prevail.

