

# PDM02

## Differential Pressure Gauge with Membrane Measuring Element

- for gaseous and liquid media
- housing diameter 100 or 160 mm
- connections made of brass or stainless steel
- measuring range from 0...100 mbar to 0...10 bar
- static pressure max. 25 bar
- high overload protection: max. 25 bar
- versions for all installation variants available
- accuracy class 2,5
- max. temperature 100 °C



### Description:

The PDM02 differential pressure gauge has two measuring chambers, which are separated from each other by a membrane. Different pressures in the two measuring chambers cause the membrane to deflect, which is indicated on the scale by a pointer mechanism.

The pressure gauges are available in two material combinations, the brass and stainless steel version, each in the case sizes 100 or 160 mm. Housing versions for practically all installation situations are available.

### Typical applications:

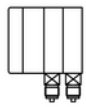
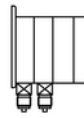
The differential pressure gauge PDM02 is mainly used in the following application areas:

- Filter monitoring
- Petrochemistry
- Oil and gas applications
- Shipbuilding
- general industrial applications

## Models:

<b>Nominal size:</b>	Housing diameter 100 or 160 mm
<b>Materials:</b>	
brass version:	connection: brass pressure chambers, Alu, with exhaust diaphragm: st. steel 1.4404, NBR/PA
st. steel version:	connection: st. steel 1.4404 pressure chambers: st. steel. 1.4571 with exhaust diaphragm: st. steel. 1.4404, FPM/PA
general:	housing: st. steel. 1.4301, pointer mechanism: brass drive shaft, nickel silver pointer: aluminium, black dial: aluminium, white sight glass: multi layer safety glass
<b>Designs:</b>	
Version K:	For pipe mounting, connection at bottom
Version B:	For wall mounting, with three-hole ring at back, connection at bottom
Version C:	For panel mounting, with three-hole ring at front, connection at bottom

## Measuring ranges:

Measuring range [bar]	pipe mounting	wall mounting	panel mounting
			
	Order code		
0...0,1	K63	B63	C63
0...0,16	K64	B64	C64
0...0,25	K65	B65	C65
0...0,4	K66	B66	C66
0...0,6	K67	B67	C67
0...1	K69	B69	C69
0...1,6	K70	B70	C70
0...2,5	K72	B72	C72
0...4	K73	B73	C73
0...6	K74	B74	C74
0...10	K75	B75	C75

## Order Code:

**Order number:** PDM02. 10. M. 15G. 0. K75. 0. 0

**Differential pressure gauge with membrane measuring system**

### Models:

10 = housing diameter 100 mm  
16 = housing diameter 160 mm

### Material version:

M = brass version  
E = stainless steel version

### Process connection:

15G = 2 x G 1/2 B  
15N = 2 x 1/2" NPT AG  
S = special connection

### Vibration damping:

0 = without  
1 = with oil filling (glycerine on request)

### Design and measuring range:

K63...C75 = see table „Measuring Ranges“

### Additional electrical equipment:

0 = without  
xxx = see table „Contact Types“

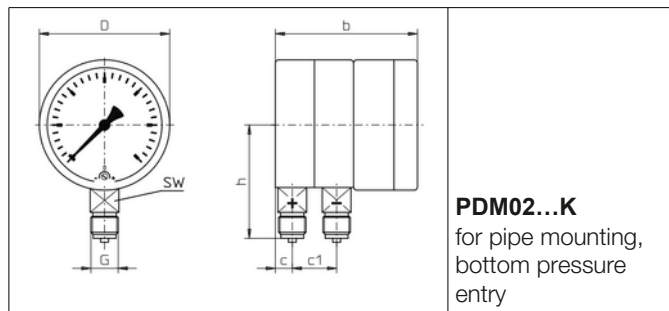
### Options and accessories: (multiple selection possible)

0 = without  
xxx = see table „Options and Accessories“

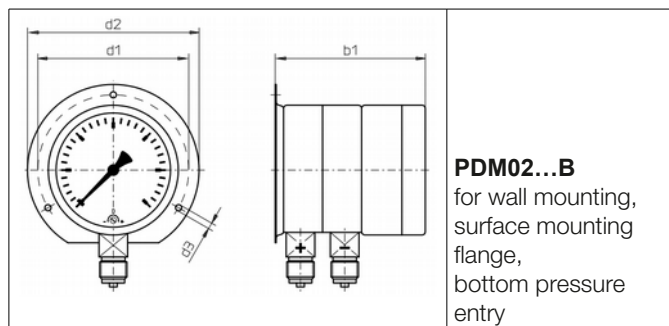
## Options and Accessories:

Description	Code
Polished front ring	FP
Degreased pressure element for oxygen	S
Silicon free pressure element	SF
Glycerine filling	G
Restrictor screw in connector	D
Red mark on dial	M
Red mark pointer in window	MS
Red mark pointer on dial	MZ
One-way reset maximum pointer	Z1
Two-way reset maximum pointer	Z2
DAkS-calibrateable	K
Externally zero adjustment in window	N

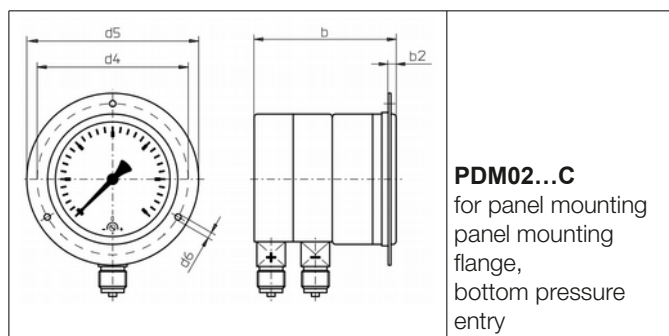
## Dimensions:



	Dimensions [mm]	
	Ø 100	Ø 160
D	100	160
b	112	112
G	G ½ B	G ½ B
h	87	116
c	13	13
c1	34	34



	Dimensions [mm]	
	Ø 100	Ø 160
d2	132	132
d1	116	116
d3	4,8	4,8
b1	118,5	118,5



	Dimensions [mm]	
	Ø 100	Ø 160
d5	132	196
d4	116	178
d6	4,8	5,8
b	112	112
b2	6	6

## Technical Data:

<b>Housing:</b>	round stainless steel housing 1.4301, d = 100 or 160 mm
<b>Process connection:</b>	2 x G ½ B or 2 x 1/2" NPT successive (marking +/-) other connections on request
<b>Measuring ranges:</b>	see table „Measuring Ranges“
<b>max. static pressure:</b>	25 bar
<b>Overload protection:</b>	+ and - pressure chamber, maximal 25 bar

<b>Working pressure:</b>	
steady:	1,0 x full scale value
fluctuating:	0,9 x full scale value

**Media temperature:** max. 100 °C

**Ambient temperat.:** -25...+60 °C

<b>Temperature error:</b>	T <sub>Ref.</sub> : 20 °C
rising temp.:	+0,3 % FS /10 K
falling temp.:	- 0,3 % FS /10 K

**Zero point adjustment:** adjusting screw in dial

**Accuracy:** class 2,5

**Protection class:** IP54

## Contacts:

Alarm contact with magnetic snap-action contact:



### Technical Data:

<b>Contact arm bearing:</b>	Ruby stones
<b>Contact material:</b>	AG80 Ni20 10 µm, gold plated
<b>Number of contacts:</b>	max. 4
<b>Voltage:</b>	$U_{\text{effmin}}$ : 24 V $U_{\text{effmax}}$ : 250 V
<b>Current rating:</b>	make rating: 1,0 A break rating: 1,0 A continuous load: 0,6 A
<b>Accuracy:</b>	ca. 2-5 % FS
<b>Ambient temperature:</b>	-20...+140 °C

### Contact Types Magnetic Snap-Action Contact:

Function	Wiring scheme	Configuration	Type
N/O			<b>M1</b>
N/C			<b>M2</b>
SPDC			<b>M3</b>
1. N/O 2. N/O			<b>M11</b>
1. N/O 2. N/C			<b>M12</b>
1. N/C 2. N/O			<b>M21</b>
1. N/C 2. N/C			<b>M22</b>
1. SPDC 2. SPDC			<b>M33</b>
1. N/C 2. N/C 3. SPDC			<b>M221</b>

Inductive alarm sensor contacts:



### Technical Data:

<b>Contact arm bearing:</b>	Ruby stones
<b>Number of contacts</b>	max. 4
<b>Operating voltage:</b>	5...25 V <sub>DC</sub>
<b>Nominal voltage:</b>	8 V <sub>DC</sub> (Ri ca. 1 kOhm)
<b>Current consumption:</b>	active surface free: ≥ 3 mA active surface damped: ≤ 1 mA
<b>Accuracy:</b>	< 0,5 % FS
<b>Ambient temperature:</b>	-25...+100 °C

### Contact Types Inductive Contacts:

Function	Wiring scheme	Configuration	Type
N/O			<b>I1</b>
N/C			<b>I2</b>
1. SPDC 2. SPDC			<b>I11</b>
1. N/O 2. N/C			<b>I12</b>
1. N/C 2. N/O			<b>I21</b>
1. N/C 2. N/C			<b>I22</b>
1. N/C 2. N/C 3. SPDC			<b>I221</b>