

PDM02

Differential Pressure Gauge with Membrane Measuring Element

- for gaseous and liquid media
- housing diameter 100 or 160 mm
- housing made of stainless steel, membrane of stainless steel and FPM/PA
- 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 instruments are always supplied in stainless steel with a membrane made of stainless steel, FKM and PA in 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:

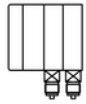
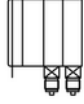
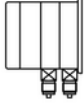
Nominal size: Housing diameter 100 or 160 mm

Materials: housing: st. st. 1.4301,
connection: st. st. 1.4404
membrane/diaphragm: st. st. 1.4404
and FPM/PA
pressure chambers: st. st. 1.4571 with
ventilation
pointer mechanism: brass
pointer: aluminium, black
dial: aluminium, white
sight glass: multi layer safety glass

Designs:

- 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]	Design		
			
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. E. 15G. 0. K75. 0. 0

Differential pressure gauge with membrane measuring system

Models:

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

Materials:

E = stainless steel,
membrane st. st. and FPM/PA
S = special 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“

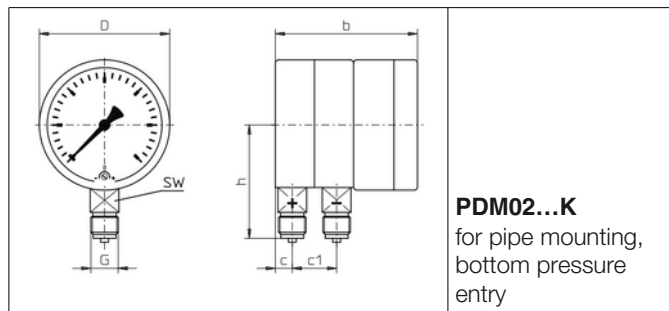
Options and accessories: (multiple selection possible)

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

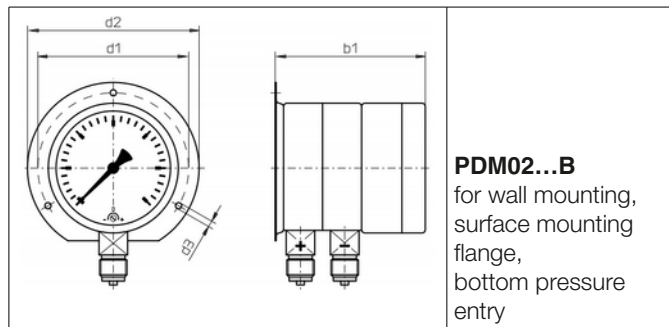
Options and Accessories:

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
DAkkS-calibrateable	K
Externally zero adjustment in window	N

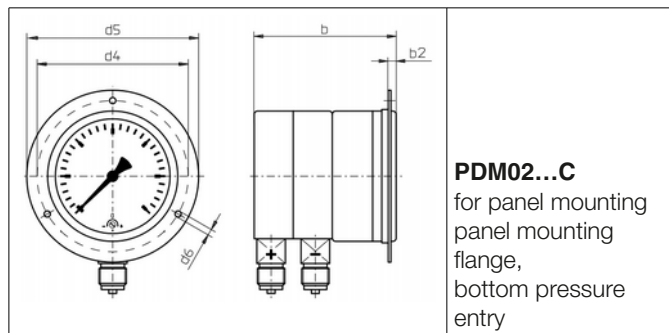
Dimensions:



	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:

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

Working pressure:	steady: 1,0 x full scale value fluctuating: 0,9 x full scale value
Media temperature:	-20 ... +80 °C
Zero point adjustment:	adjusting screw in dial
Accuracy:	class 2,5
Temperature error:	T _{Ref.} : 20 °C rising temp.: +0,3 % FS /10 K falling temp.: - 0,3 % FS /10 K
Ambient temperat.:	-25...+60 °C
Medium temperat.:	Max. 100 °C
Protection class:	IP54



Contacts:

Alarm contact with magnetic snap-action contact:



Technical Data:

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

Contact Types Magnetic Snap-Action Contact:

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

Inductive alarm sensor contacts:



Technical Data:

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

Contact Types Inductive Contacts:

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