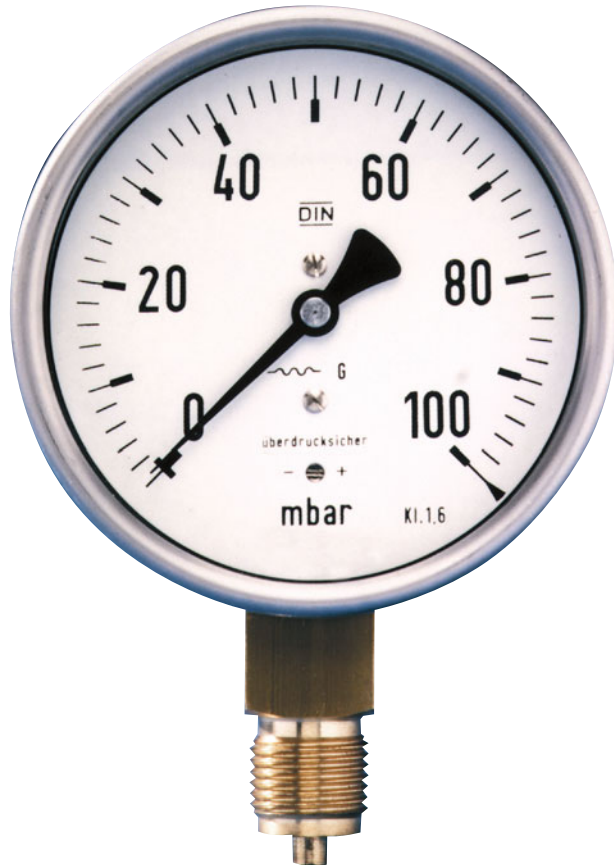


PMK04

Capsule-Element Pressure Gauge

- Accuracy class 1.6
- Millibar ranges
- Corrosion resistant
- Zero-point correction



Description:

PMK04 series capsule-element pressure gauges are intended to measure small negative and positive pressures of gases and fluids. The measuring element in this type of device consists of two welded diaphragm halves which, when pressurized from the inside, operate a pointer mechanism that indicates the pressure on an aluminum scale. These gauges are also available in brass and stainless steel versions. The overload protection of 25 mbar amounts to six times the value of the full scale reading. For larger measuring ranges, the overload protection amounts to ten times the full-scale value. The devices are available in steel housings of nominal sizes 63, 100 or 160 with connections at the bottom of the gauge or centered on the back of the housing. Other designs are available upon request.

Applications:

Capsule element pressure gauges are best suited for measuring very low pressures. All DIN categories are available, in ranges of from between 0 to 6 mbar up to 0 to 600 mbar positive pressure or from -25 to 15 mbar to -400 to 0 mbar negative pressure. Typical applications for these gauges are found in medical technology, air conditioning systems, gas generation or in laboratories. Such applications may include leak testing, filter condition monitoring, exhaust/combustion gas measurements or, with the stainless steel version, monitoring of caustic/corrosive fluids.

Designs with Round Gauge Housing:

Nominal Sizes: Housing diameter 60, 100 or 160 mm

Materials:

PMK04.x.M: Housing of stainless steel 1.4301, measuring element of copper alloy, connection of brass

PMK04.x.E: Housing of stainless steel 1.4301, measuring element and connection of stainless steel 1.4571

Process Connection: G1/4 A (NG63)
G1/2 A (NG100, NG160)

Measuring Ranges:

Measuring range (mbar)	Order code					
for all nominal sizes						
- 25...+15	A109	B109	C109	D109	E109	F109
- 20...+ 40	A110	B110	C110	D110	E110	F110
- 40...+20	A210	B210	C210	D210	E210	F210
- 6...0	A05	B05	C05	D05	E05	F05
- 10...0	A06	B06	C06	D06	E06	F06
- 16...0	A07	B07	C07	D07	E07	F07
- 25...0	A08	B08	C08	D08	E08	F08
- 40...0	A09	B09	C09	D09	E09	F09
- 60...0	A10	B10	C10	D10	E10	F10
-100...0	A11	B11	C11	D11	E11	F11
-160...0	A12	B12	C12	D12	E12	F12
- 250...0	A13	B13	C13	D13	E13	F13
- 400...0	A14	B14	C14	D14	E14	F14
0...6 ¹	A57	B57	C57	D57	E57	F15
0...10 ²	A58	B58	C58	D58	E58	F58
0...16	A59	B59	C59	D59	E59	F59
0...25	A60	B60	C60	D60	E60	F60
0...40	A61	B61	C61	D61	E61	F61
0...60	A62	B62	C62	D62	E62	F62
0...100	A63	B63	C63	D63	E63	F63
0...160	A64	B64	C64	D64	E64	F64
0...250	A65	B65	C65	D65	E65	F65
0...400	A66	B66	C66	D66	E66	F66
0...600	A94	B94	C94	D94	E94	F94

1) in NG 160 only

2) in NG 100 and NG 160 only

Model Coding:

Order number: PMK04. 10. M. 3. 1. A57. 0

Capsule-element pressure gauge

Design:

06 = 60 mm
10 = 100 mm
16 = 160 mm
S = Special version

Materials:

M = Stainless steel housing, brass connection
E = Stainless steel housing, stainless steel connection
S = Special material (please specify in writing)

Process connection:

1 = G 1/4 A bottom (only for NG63)
2 = G 1/4 A centered on back (only for NG63)
3 = G 1/2 A bottom
4 = G1/2 A centered on back
9 = Custom connection

Vibration dampening:

1 = None
2 = Filled with glycerin (NG100, NG160 only)

Design and measuring ranges:

A109...F94 = see "Measuring Ranges" table

Options and accessories (more than one may be selected)

0 = None
xx = see "Options and Accessories" table

Technical Details:

Housing:

Round gauge housing of stainless steel, d = 60, 100, 160 mm
Protection type: IP45

Vibration dampening:

Brass version:

glycerin-filled gauge
NG100 and NG160
> 25 mbar, class 2.5

Stainless steel version:

glycerin-filled gauge
NG100 and NG160
> 25 mbar, class 2.5 with pressure-relief opening

Measuring element:

PMK04.x.M:

capsule-type element of copper alloy

PMK04.x.E:

capsule-type element of stainless steel 1.4571, welded

Pointer element:

PMK04.x.M:

moving parts of nickel silver

PMK04.x.E:

stainless steel 1.4571 / 1.4301

Dial face:

white aluminum, black characters, as per EN 837-1

Viewing window:

PMK04.x.M:

NG63: plexiglas.
NG100, NG160: instrument glass

PMK04.x.E:

NG63: plexiglas
NG100, NG160: multilayer safety glass

Accuracy:

Class 1.6

Maximum liquid

temperature:

100°C

Overload capacity:

< 25 mbar: 6x full scale value
>/ = 25 mbar: 10x full scale value

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Designs with square and profile housing:

Nominal Sizes: Housing diameter
72x72, 96x96, 144x144,
144x172, 192x196

Materials:
PMK04.x.M: Housing of plastic, measuring
element of copper alloy,
connection of brass

Process connection: G1/2 A

Measuring Ranges:

Measuring range (mbar)	Order code				
					
	for all nominal sizes				
- 25...+15	G109	H109	K109	L109	M109
- 20...+ 40	G110	H110	K110	L110	M110
- 40...+20	G210	H210	K210	L210	M210
- 6...0	-	H05	K05	L05	M05
- 10...0	-	H06	K06	L06	M06
- 16..0	-	H07	K07	L07	M07
- 25...0	G08	H08	K08	L08	M08
- 40...0	G09	H09	K09	L09	M09
- 60...0	G10	H10	K10	L10	M10
-100...0	G11	H11	K11	L11	M11
-160...0	G12	H12	K12	L12	M12
- 250..0	G13	H13	K13	L13	M13
- 400..0	G14	H14	K14	L14	M14
0...6	-	H57	K57	L57	M57
0...10	-	H58	K58	L58	M58
0...16	-	H59	K59	L59	M59
0...25	G60	H60	K60	L60	M60
0...40	G61	H61	K61	L61	M61
0...60	G62	H62	K62	L62	M62
0...100	G63	H63	K63	L63	M63
0...160	G64	H64	K64	L64	M64
0...250	G65	H65	K65	L65	M65
0...400	G66	H66	K66	L66	M66
0...600	G94	H94	K94	L94	M94

Note: all profile housings are available with sideways or vertical scale.

Model Coding:

Order number: **PMK04. Q07. M. 1. 1. G12. 0**

Capsule-type element pressure gauge

Design:
Q07 = 72x72 mm
Q09 = 96x96 mm
Q14 = 144x144 mm
P14 = 144x72 mm
P19 = 192x96 mm

Materials:
M = Plastic housing, brass connection
S = Special material (please specify in writing)

Process connection:
1 = G1/2 A at back

Vibration dampening:
1 = none

Design and measuring ranges:
G109...M94 = see "Measuring Ranges" table

Options and accessories (more than one may be selected)
0 = None
xx = see "Options and Accessories" table

Technical Details:

Housing: Square gauge housing, profile housing of glass-fiber-reinforced plastic
Protection type IP45

Measuring element:
PMK04.x.M: capsule-type element of copper alloy

Pointer element:
PMK04.x.M: moving parts of nickel silver

Dial face: white aluminum, black characters, to EN 837-1

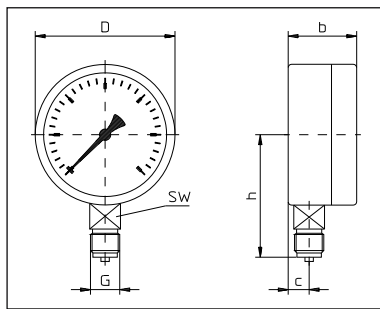
Viewing window:
PMK04.x.M: plastic (Lexan)

Accuracy: Class 1.6

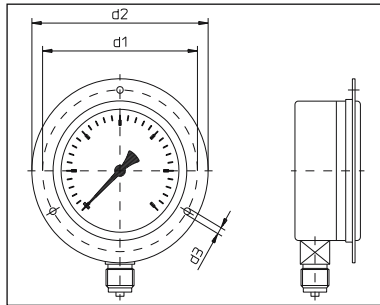
Maximum liquid temperature: 100 °C

Overload capacity: < 25 mbar: 6x full scale value
>/ = 25 mbar: 10x full scale value

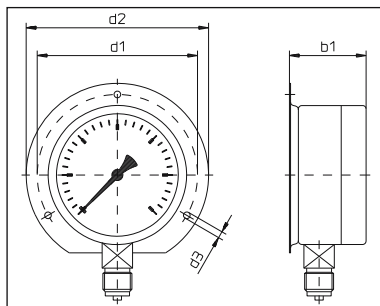
Designs:



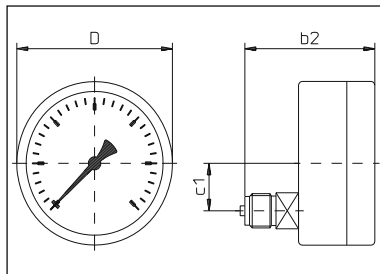
Design A:
Connection at bottom



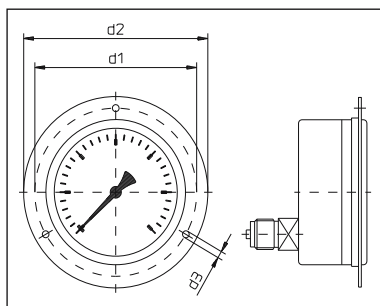
Design B:
Connection on
bottom, rim at front



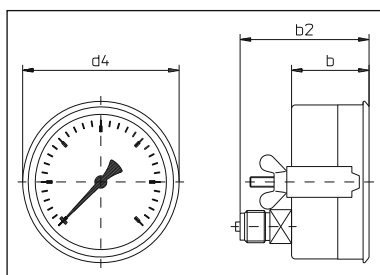
Design C:
Connection on
bottom, rim at back



Design D:
Connection on back



Design E:
Connection on back,
rim at front



Design F:
Connection on back,
triangular front ring
and retaining clip

Dimensions of Round Gauge Housing:

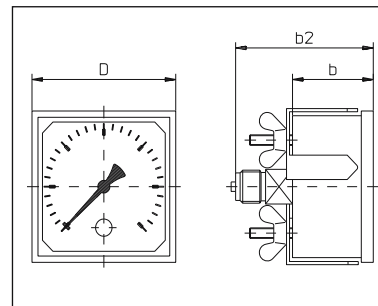
Measure- ment:	Dimensions in mm		
	NG 63 MS/VA	NG100	NG160
b	42/28.5	50	50
b1	46/46.5	56	56
b2	55/32.5	86.5	88
b5	57	86.5	88
b6	37	50	50
c	11/11	15	14.5
D	64/64	100.8	161.3
d1	75/75	116	178
d2	85/85	132	196
d3	3,5/3,5	4,8	5,8
d4	67/67	107	166
h	84/84	87	118
SW	14/14	22	22
Weight (kg)	0.12/0.12	0.5-0.8*	1.1-1.95*

*weight with glycerin filling

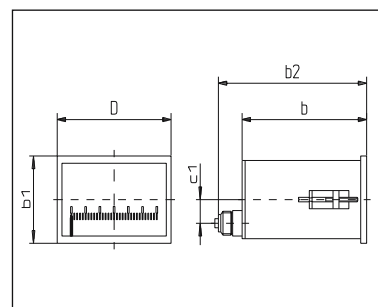
Dimensions of Square and Profile Housing:

Measure- ment:	Dimensions in mm				
	Design G	Design H	Design K	Design L	Design M
b	38	47	47	139.5	139.5
b1	-	-	-	72	96
b2	58	81	81	175	175
D	72	96	144	144	192
c1	-	-	-	7	7

Designs:



Design G-K:
Rectangular housing



Design L-M:
Profile housing

Options and Accessories:

Description	Code	for Type PMK04...
Protected against over/under pressure < / = 25 mbar, 3 times >25 mbar, 10 times	U	All models
Black painted bezel	FS	All MS models except NG 63
Bright metal bezel	FP	All stainless steel (VA) models
Red mark on dial face	MR	All models
Measuring system cleaned for oxygen	MO	All models
Pressure throttling screw in connection shank	D08	All models