Diaphragm Pressure Gauge

FISCHER
MESS- UND REGELTECHNIK

Typ MA 16

Application

Diaphragm pressure gauges are used for measuring pressure in difficult conditions. They are used to measure pressure whilst being uneffected by the media.

The diaphragm pressure gauge can easily be equipped with FISCHER contact modules and transducers.

All these electrical supplements are available intrinsically safe for application in hazardous areas.

Process connection may be a large size flange which enables the measurement of highly viscous media.

Special Features

- high overpressure safe
- contact modules or transducers as accessories
- moderate price
- manufactured acc. to DIN

Construction and Functioning

The diaphragm element consists of a thin convoluted membrane which is held between two flanged halves, where the bottom half incorporates the pressure entry.

The diaphragm deflects when a pressure is applied. By means of push rod and geared movement this deflection is converted into rotation of a concentric pointer to be indicated on a dial scale.

The value indicated is proportional to the pressure applied. Indication of measuring value is shown on a dial of 270°.



Technical Data

Measuring ranges	flange size 160 mm: 0...25 mbar up to 0...400 mbar flange size 100 mm: 0...6 mbar up to 0...25 bar (as per ordering code)
Accuracy class	class 1.6
Dial size	bayonet type case, diam. 100 or 160 mm, standard case acc. to DIN 16026
Operating temperature	ambient: -20° up to +60°C/media: +100°C
Temperature error when temperature of the pressure element deviates from +20°C	rising temperature: +0.6%/10 K falling temperature: –0.6%/10 K
Working pressure	steady: full scale value fluctuating: 0.9 x full scale value
Pressure connection	threaded entry per DIN 16288 G1/2 A open flange 1.4571, diam. 50 mm, with loose male fitting flange

Materials

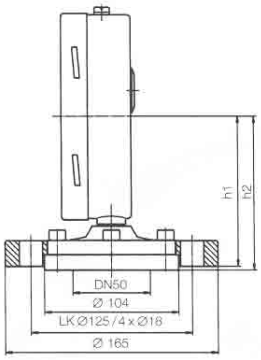
Case	steel, black painted
Dial	aluminium
Pointer	aluminium, black painted
Movement	brass
Flange connection	steel, black painted
Diaphragm	chrome-nickel-steel 1.4571 or Duratherm, corrosion resistance as 1.4571
Flange packing	FPM

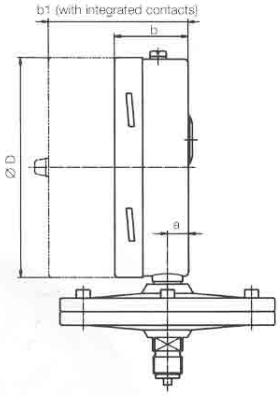
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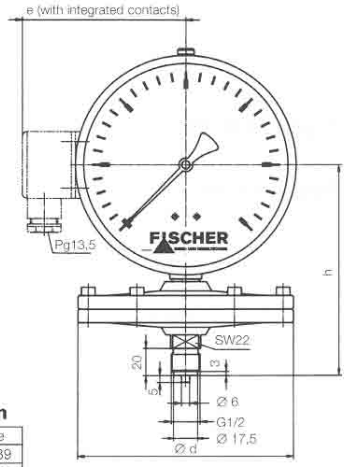
Dimensioned Drawings

Version with male fixing flange

Case Ø	h1	h2
100	117	120
160	147	150







Connection acc. to DIN 16288 Standard design

Range	Case Ø	Ø D	Ø d	a	h	b	b1	e
>= 0.6 bar	100	101	99	16	128	52	100	89
	160	161	99	15.5	158	54	102	119
<= 400 mbar	100	101	157	16	125	52	100	89
	160	161	157	15.5	155	54	102	119

Ordering Code

Diaphragm Pressure Gauge Type MA 16 [ ][ ] [ ] S [ ][ ] [ ] 0 0 [ ] [ ] [ ]

Measuring Ranges

0– 25 mbar	5	6
0– 40 mbar	5	7
0– 60 mbar	5	8
0– 100 mbar	5	9
0– 160 mbar	6	0
0– 400 mbar	8	2
-1– 0 bar	3	1
-1– 0.6 bar	3	2
-1– 1.5 bar	3	3
-1– 3 bar	3	4
-1– 5 bar	3	5
0– 0.6 bar	0	1
0– 1 bar	0	2
0– 1.6 bar	0	3
0– 2.5 bar	0	4
0– 4 bar	0	5
0– 6 bar	0	6
0– 10 bar	0	7
0– 16 bar	0	8
0– 25 bar	0	9
Special range	9	9

Nominal Pressure

10 bar (range ≦ 400 mbar)	E
40 bar (range ≦ 0.6 bar)	H

Measuring System: steel

Connection

Lower connection BSP 1/2"	7 7
Open flange with male fixing flange DN 50 (range ≦ 400 mbar)	F L

Measuring Indication

Case with cam ring (bayonet type) bezel 100 mm	L
Case with cam ring (bayonet type) bezel 160 mm	M

Optional: Pointer

Without special pointer	0
Adjustable set hand	1
Readjusting maximal pointer (range 0–60 mbar)	2

Optional: Contact Modules / Transducers

Without alarm signal	0
Integrated contact module per data sheet KE (range 100 mbar)	1
Integrated remote transmitter per data sheet KE	2
Integrated contact device per data sheet KB	4

Optional: Special Dial / Range etc.

Without extras	O
If any other extras are required please state in the ordering text	S