


PDR04

Differential Pressure Gauge with Double Bourdon Tube Measuring System with Coupled Bourdon Tubes

- nominal sizes 100 and 160 mm
- accuracy class 1,6
- completely made of stainless steel, fully welded version
- measuring ranges from 0...0,6 bar to 0...16 bar
- static pressure 3-40 bar
- optional limit switches available
-  Ex version according to ATEX optional



Description:

The differential pressure gauges PDR04 have two bourdon tube measuring systems which are coupled together in such a way that only the pressure difference between the two inputs is displayed on the scale via the pointer mechanism. An additional, rotatable scale as with other double bourdon tube systems is therefore not necessary.

The devices are always supplied completely in stainless steel in the housing size 100 or 160 mm.

Housing versions are available for practically all installation situations. Optionally, limit switches can be installed in the devices.

Typical applications:

The differential pressure gauges PDR04 are mainly used in the following areas of application:

- filter monitoring
- petrochemistry
- shipbuilding
- offshore applications
- flow measurement by means of orifice plates or acc. to the differential pressure principle

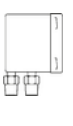
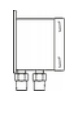

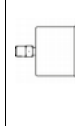
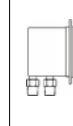
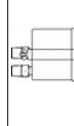
Models:

Nominal sizes: housing diameter 100 or 160 mm
Materials: stainless steel housing 1.4301, bourdon tube and process connection made of stainless steel 1.4571
Process connection: 2 x G 1/2" male or 2 x 1/2" NPT male, special connection optional

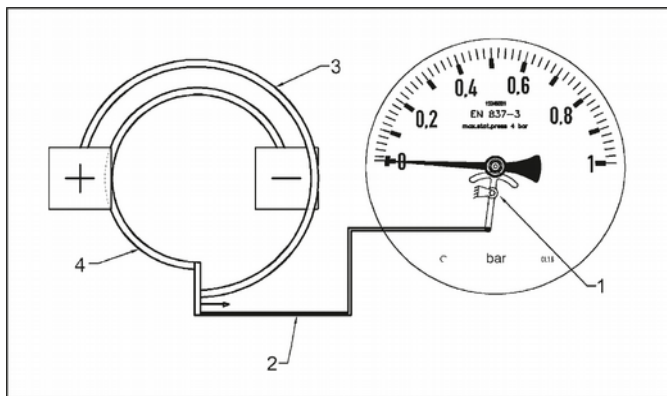
Designs:

Version K: for pipe mounting, connection at bottom
 Version L: for wall mounting, with rear rim, connection at bottom
 Version M: for pipe mounting, connection at back
 Version N: for panel mounting, with three-hole front ring, connection at back
 Version O: for panel mounting, with three-hole front ring, connection at bottom
 Version H: for panel mounting, with front ring and hangers, connection at back

Measuring Ranges:

Measuring range [bar] (max. static pressure)	Design					
						
	Order code					
0...0,6 (3 bar)	K67	L67	M67	N67	O67	H67
0...1 (4 bar)	K69	L69	M69	N69	O69	H69
0...1,6 (6 bar)	K70	L70	M70	N70	O70	H70
0...2,5 (10 bar)	K72	L72	M72	N72	O72	H72
0...4 (16 bar)	K73	L73	M73	N73	O73	H73
0...6 (25 bar)	K74	L74	M74	N74	O74	H74
0...10 (30 bar)	K75	L75	M75	N75	O75	H75
0...16 (40 bar)	K76	L76	M76	N76	O76	H76

Functional Principle:



1 = pointer mechanism
 2 = mechanical connection to measuring element
 3 = bourdon tube (+) for high pressure
 4 = bourdon tube (-) for low pressure

Order Code:

Order number: PDR04. 10. E. 15G. 0. K75. 0. 0

Differential pressure gauge with double linked bourdon tubes

Models:

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

Material:

E = completely stainless steel

Process connection:

15G = 2 x G 1/2" male thread
 15N = 2 x 1/2" NPT male thread
 S = special connection (see: options)

Vibration damping:

0 = without
 1 = with glycerine filling
 2 = with oil filling (only for devices with contact)

Design and measuring range:

K67...H76 = see table „Measuring Ranges“

Additional electrical equipment:

0 = without
 xxx = see table „Contacts“

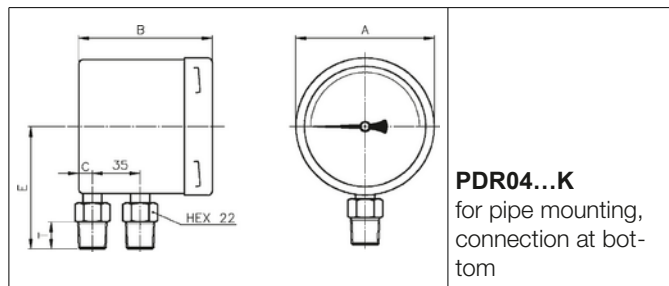
Options and accessories: (multiple selection possible)

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

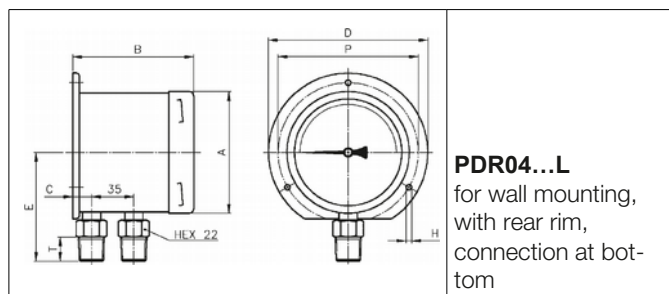
Technical Data:

Housing: round stainless steel housing 1.4301, d = 100 or 160 mm
Measuring element: 2 x stainless steel bourdon tube 1.4571
Pointer mechanism: stainless steel 1.4301
Viewing class: mineral glass (4 mm)
Scale and pointer: aluminium, pointer deflection 90-180°
Process connection: 1/2" G or NPT (standard), 1/4", 3/8" G or NPT (optional) made of stainless steel 1.4571, other connections on request
Liquid-filled version: glycerine (for contact devices with oil filling)
Measuring ranges: see table „Measuring Ranges“
Max. static pressure: see table „Measuring Ranges“
Media temperature: -20 ... +100 °C
Accuracy: class 1,6
Protection class: IP45 (IP65 for filled devices)

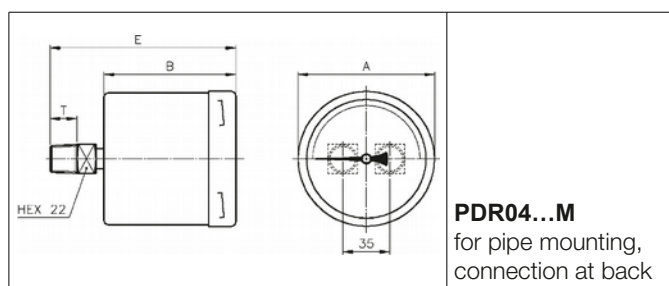
Dimensions:



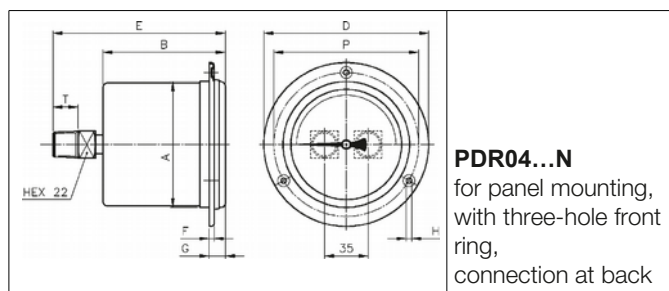
	Dimensions [mm]			
	Ø 100	Ø 160	Ø 100 + contact	Ø 160 + contact
A	101,5	162	101,5	162
B	97	100	159	163
C	14	18	14	18
E	90	120	90	120
T	20	20	20	20



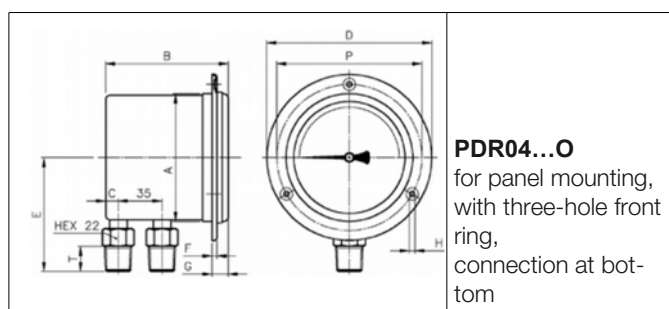
	Dimensions [mm]			
	Ø 100	Ø 160	Ø 100 + contact	Ø 160 + contact
A	101,5	162	101,5	162
B	100	102	162	165
C	14	18	14	18
D	132	196	132	196
E	90	120	90	120
P	116	178	116	178
H	4,5	6	4,5	6
T	20	20	20	20



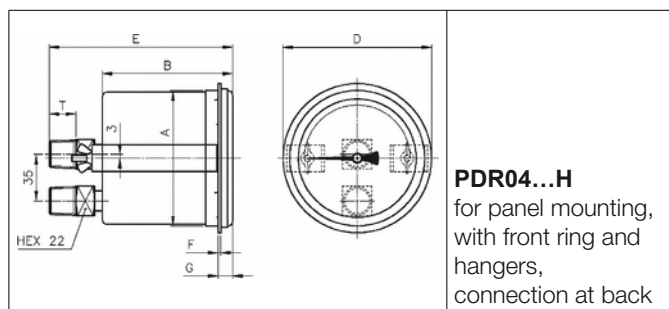
	Dimensions [mm]			
	Ø 100	Ø 160	Ø 100 + contact	Ø 160 + contact
A	101,5	162	101,5	162
B	97	100	159	163
E	137	140	199	203
T	20	20	20	20



	Dimensions [mm]			
	Ø 100	Ø 160	Ø 100 + contact	Ø 160 + contact
A	101,5	162	101,5	162
B	97	100	159	163
D	132	196	132	196
E	137	140	199	203
F	3,5	3	3,5	3
G	13	15,5	13	15,5
H	4,5	6	4,5	6
P	116	178	116	178
T	20	20	20	20



	Dimensions [mm]			
	Ø 100	Ø 160	Ø 100 + contact	Ø 160 + contact
A	101,5	162	101,5	162
B	97	100	97	100
C	14	18	14	18
D	132	196	132	196
E	90	120	90	120
F	3,5	3	3,5	3
G	13	15,5	13	15,5
H	4,5	6	4,5	6
P	116	178	116	178
T	20	20	20	20



	Dimensions [mm]			
	Ø 100	Ø 160	Ø 100 + contact	Ø 160 + contact
A	101,5	162	101,5	162
B	97	100	159	163
D	110	180	110	180
E	137	140	199	203
F	2	2	2	2
G	10,5	9	10,5	9
T	20	20	20	20

Limit Contacts:

Versions:

Magnetic snap-action contact:

as N/O or N/C
(max. 2 pieces)
as SPDT (max. 1 piece)
switching capacity 30 W, 50 VA,
switching voltage 24...250 V

Inductive contact:

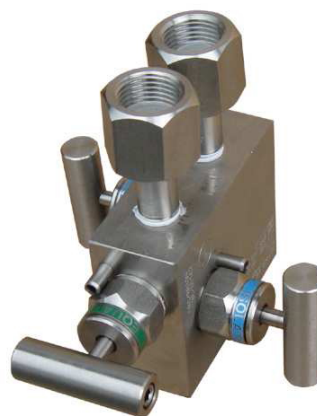
as N/O – output transistor
through-connected, or N/C -
output transistor disabled
(max. 2 pieces)
control voltage 8 VDC, Ri = 1kOhm
intrinsically safe acc. to EEx ib IIC T6

Description	Code
(contact function with increasing pressure, clockwise pointer movement)	1 = N/O 2 = N/C 3 = SPDT
1 magnetic snap action contact, N/O	M1
1 magnetic snap action contact, N/C	M2
1 magnetic snap action contact, SPDT	M3
2 magnetic snap action contacts, switching function: x = N/O or N/C	Mxx
1 inductive contact, N/O	I1
1 inductive contact, N/C	I2
2 inductive contacts, switching function: x = N/O or N/C	Ixx

Options and Accessories:

Description	Code
scale in psi	P
double scale bar / psi	BP
special scale	SK...
process connection G 1/4	08G
process connection G 3/8	10G
process connection 1/4" NPT	08N
process connection 3/8" NPT	10N
three-spindle stainless steel valve block, process connection: 2 x G 1/4 female instrument connection: 2 x G 1/2 with rotating sleeve	3VD-35

Three-Spindle Valve Block for PDR04:



The 3VD-35 valve block is used to shut off the connection to the process and to equalize the pressure between the two inputs of the differential pressure gauge before the actual measurement.

The device is completely made of stainless steel 1.4401, the packing is made of PTFE.

The valve block can be used for all differential pressure gauges with a centre distance of the process connections of 35 mm.

Function:

