

# DP800



## DIFFERENTIAL PRESSURE GAUGES

### DOUBLE DIAPHRAGM TYPE

### HIGH WORKING PRESSURE PN 40, 100, 250 or 400

#### APPLICATIONS

Differential pressure measurement with a high differential pressure overload and/or high working pressures (static pressures), also in aggressive ambient  
For gaseous, liquid, viscous and aggressive media  
Monitoring and control of pumps  
Filter monitoring  
Level measurement in closed tanks

#### DESIGN

High overpressure safe on either sides  
Pressure rating PN 40, 100, 250 or 400  
Hydraulic cushioning protection against rapid pressure changes  
The torque pipe seals with bearing, assures a frictionless path  
Overpressure protection in both directions up to the max static pressure rating.

#### CASE DIAMETER

100 and 160 mm

#### ACCURACY CLASS <sup>(1)</sup>

Stainless steel AISI 316L: 1,6  
Monel 400 (2.4360): 2,5  
Hastelloy C276: 1,6

<sup>(1)</sup> at 20 °C and zero static pressure

#### SCALE RANGES

0...60 mbar to 0...160 mbar  
(gauge body DN140)  
0...250 mbar  
(gauge body DN100)  
0...0,4 bar to 0...40 bar  
(gauge body DN 88)  
or equivalent other units of pressure, vacuum or combined pressure and vacuum

#### OVERPRESSURE SAFETY AND MAX. STATIC PRESSURE

Max static pressure on either side: 40, 100, 250, or 400 bar  
Overpressure safety 400 bar only for ranges:  
0...0.4 bar to 0...40 bar

#### OPERATING TEMPERATURE

Ambient : -20 / + 60 °C  
Process fluid: +100 °C max.

#### TEMPERATURE ERROR

± 0,6% / 10 K of full scale value, when temperature of the pressure element deviates from +20 °C

#### ZERO SHIFT

Max. ± 2% at 20 °C and max static pressure

#### PROTECTION CLASS

IP 65 – EN 60 529 / IEC 529

#### STANDARD FEATURES

#### MEASURING FLANGES

Stainless steel AISI 316 L

#### PROCESS CONNECTION

2 x 1/4" NPT-Female (EN 837)  
Lower

#### PRESSURE ELEMENTS

Double diaphragm  
Ranges:  
≤ 16 bar Stainless steel 316 L  
> 16 bar Inconel 718  
Internal stop without o-ring

#### DIAPHRAGM SEALING RINGS

FPM (Viton ®)

#### PURGING PLUGS

2 x 1/4" NPT-M  
stainless steel AISI 316L

#### BOLTS

Stainless steel AISI 304 (PN 100 bar max.)  
Alloy steel zinc flake coated, RoHS compliant  
(PN 250 and 400 bar)

#### MOVEMENT

Stainless steel with bearing

#### DIAL

Aluminium with black markings on white background

#### POINTER

Adjustable, black aluminium  
External zero adjustment with filled case and/or electrical contact or diaphragm seals



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#### CASE AND RING

Material: stainless steel AISI 304  
Style: bayonet ring

#### WINDOW

Laminated safety glass,  
4 mm thickness

#### CHAMBER FILLING FLUID

Silicone oil

#### MOUNTING

Stem mounting  
Symbols (+) higher pressure and (-)  
lower pressure engraved on body  
identify pressure entries

#### OPTIONS

Case and ring AISI 304 DN 125 mm (USA type)  
Case and ring AISI 316 DN 100 - 160  
Scale range 0...40 mbar (dial arc 180°)  
Other threaded process connections  
Connection at 12 o'clock  
Capillary cooling when pressure medium  
temperature > 100 °C  
Panel mounting flange with 2" pipe bracket  
Surface mounting flange  
2" pipe mounting bracket st. steel AISI 304 or 316  
Plastic window (not in ATEX execution)  
Special dial layout  
Glycerine filled case (+15 /+60°C)  
Silicone oil filled case (-40 / +60 °C)  
Other chamber filling fluid such as  
compatible with food processes or for  
oxygen service (static pressure max. 100 bar)  
Pressure equalising valve 3 or 5 way  
(see A33 or A35)  
Maximum reading pointer  
Stainless steel tag plate  
Wetted part components in Alloy 400 or  
Hastelloy C276  
Diaphragm Alloy 400, Hastelloy C276  
Electric contacts (3)  
Diaphragm seals for range ≥ DP 250 mbar (4)  
ATEX execution



II 2 GD c

Notes:

- (3) ATEX execution : contact under dial see drawings,  
inductive contact :  
PTB 99 ATEX 2219X / PTB 00 ATEX 2049X,  
ZELM 03 ATEX 0128X,  
for further information please see data sheet CE  
electrical contacts
- (4) Large volume diaphragm seal for DP  
(see catalogue)

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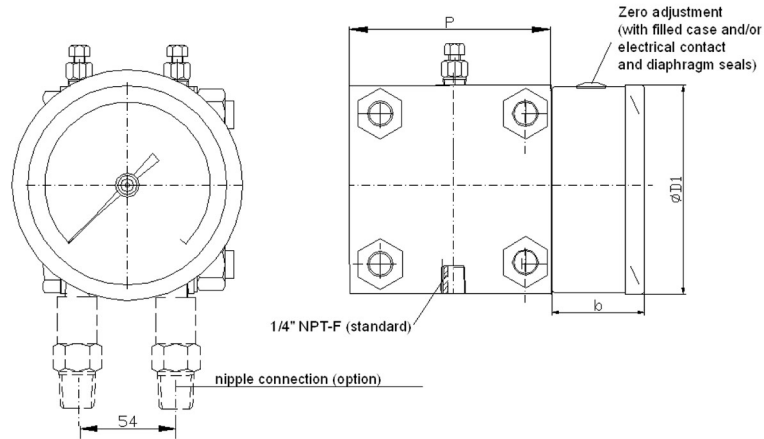
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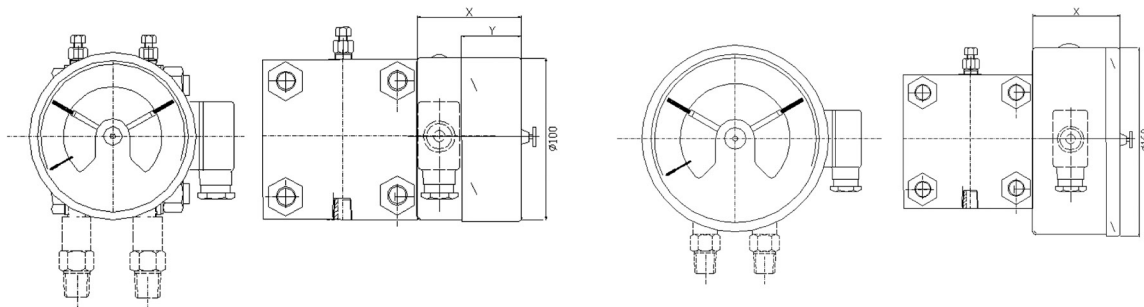
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### Dimensions (mm)

DN	range	P $\nabla$ (PN 40/100)	P $\nabla$ (PN 250)	(PN400)	b	D1
100	≤ 160 mbar	140	-	-	51	100
100	250 mbar	100	100	-	51	100
100	≥ 400 mbar	88	88	88	51	100
160	≤ 160 mbar	140	-	-	51	160
160	250 mbar	100	100	-	51	160
160	≥ 400 mbar	88	88	88	51	160



DN	Type of contact	X	Y
100	Single or double contact	100	60
100	DPDT	110	60
100	Quadruple contact	110	60
160	Single or double contact	102	



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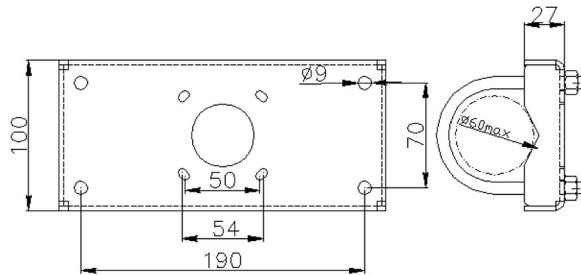


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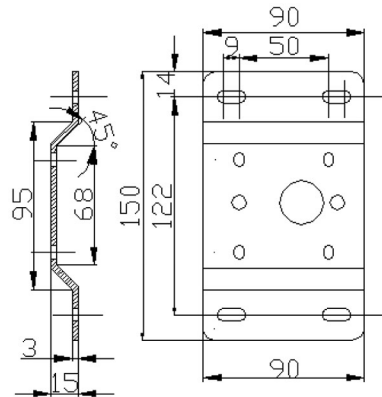
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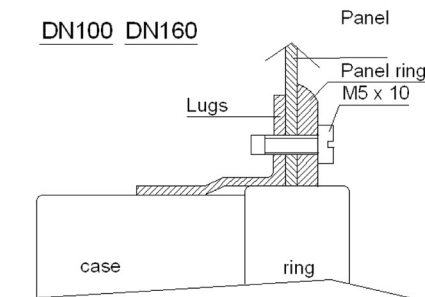
2" pipe bracket



Back flange surface mounting

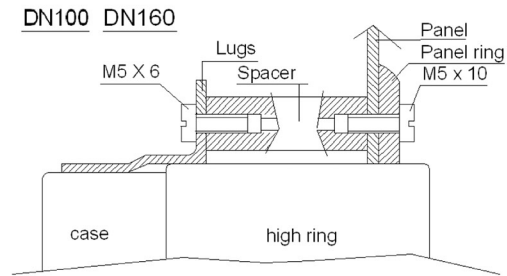


Panel Mounting (\*)



The assembly consist of:  
Panel ring  
4 screws M5

Panel Mounting with electrical contacts (\*)

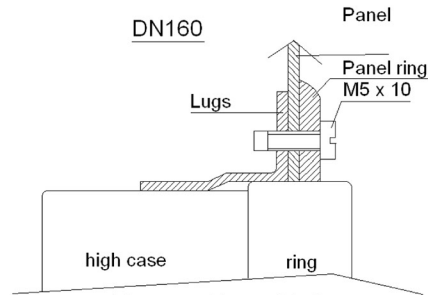


The assembly consist of:  
Panel ring  
4 spacers  
8 screws M5

(\*) Panel cut-out

105 for DN100

165 for DN160



The assembly consist of:  
Panel ring  
4 screws M5



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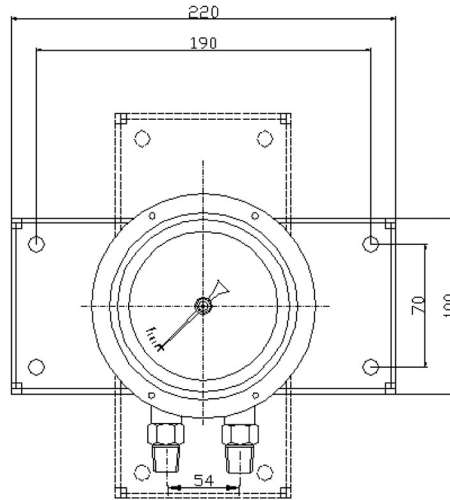
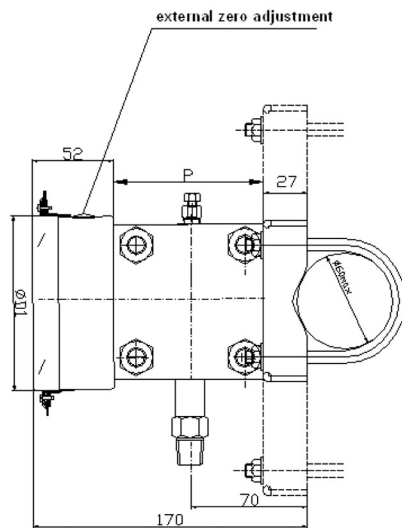
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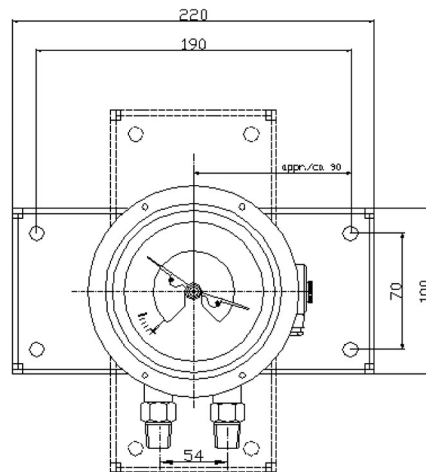
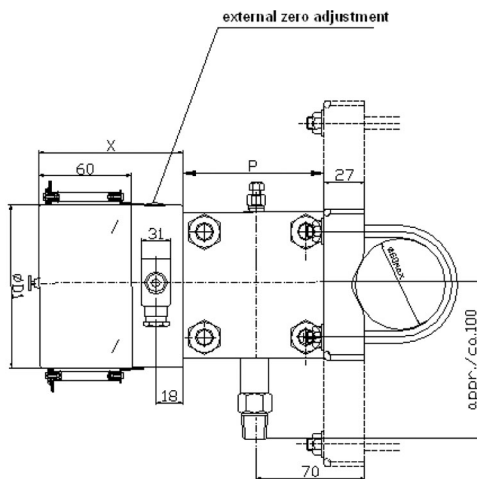
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PANEL MOUNTING FLANGE



PANEL MOUNTING FLANGE  
WITH ELECTRICAL CONTACT



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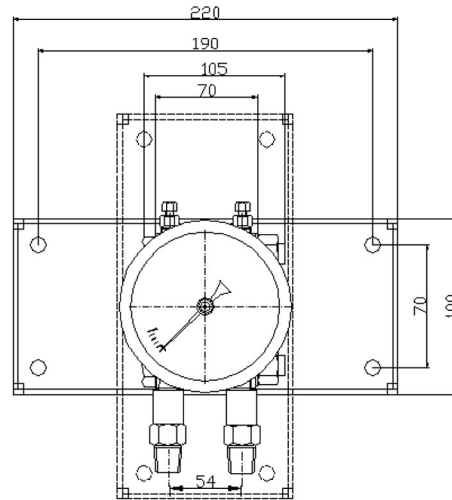
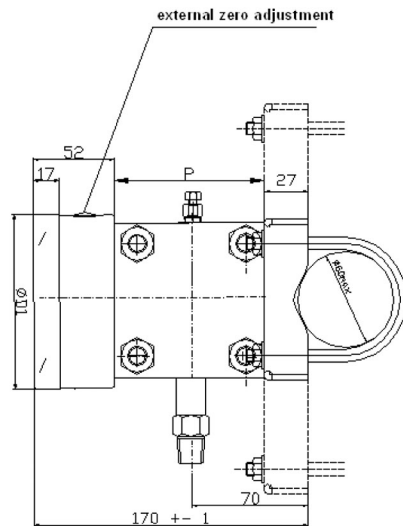
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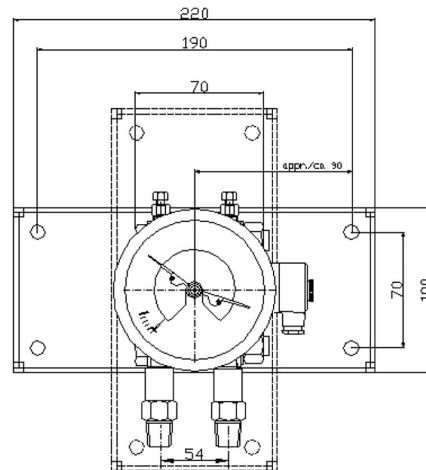
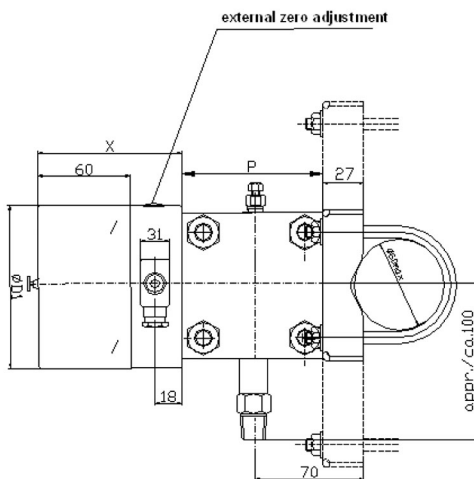
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2" PIPE MOUNTING BRACKET



2" PIPE MOUNTING BRACKET  
WITH ELECTRICAL CONTACT



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