

Differential Pressure Gauges With Integrated Working Pressure Gauge Model 702.01.100

WIKA Data Sheet PM 07.15



DELTA-plus

Applications

- For gaseous and liquid media that are not highly viscous or crystallising
- Heating, ventilation, air-conditioning, dust removing technology
- Technical building equipment, filter plants, drinking and service water treatment
- Pump monitoring

Special Features

- Differential pressure measuring ranges from 0 ... 250 mbar to 0 ... 25 bar
- High working pressure (static pressure) up to 25 bar
- Overpressure safety either side up to 25 bar
- Solid case construction for protection against external mechanical effects
- Optional integrated pressure equalising valve



DELTA-plus with Option Compression Fitting with Ferrule, Model 702.01.100

Description

These differential pressure gauges are particularly intended for the monitoring of differential pressures in filter systems, pumps and pipeline systems in the heating, ventilation and air-conditioning sector, technical building equipment and in the water management industry.

Apart from the display of the differential pressure, these applications require, as a rule, the display of the current working pressure.

For this reason, a working pressure gauge is integrated in the DELTA-plus differential pressure gauge as a standard feature.

An additional measuring point involving additional expenses for piping and mounting is thus no longer required.

The white dial of the working pressure gauge distinctly stands out against the blue background of the display of the differential pressure gauge, thus enabling a quick and safe reading of both measurement parameters.

The ranges of 0 ... 250 mbar up to 0 ... 25 bar provide the measuring ranges, which are required in many different applications. The sturdy and compact design of the differential pressure gauge makes it possible to use it even under tough industrial ambient conditions.

Design and operating principle

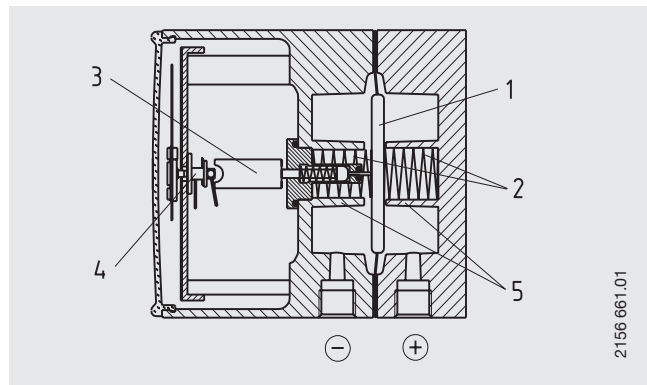
Pressure p_1 and p_2 are given in the \oplus and \ominus chambers separated by an elastic diaphragm (1).

The differential pressure ($\Delta p = p_1 - p_2$) deflects the diaphragm in an axial direction (measuring travel) against the measuring range spring (2).

The transmission of the differential pressure proportional to the measuring travel to the movement (4) within the indicating case is carried out pressure sealed and with little friction by means of a connecting rod (3).

The overpressure protection is provided by contoured metal bolsters for the elastic diaphragm (5).

Illustration of operating principle



Mounting pressure entries identified \oplus and \ominus
 \oplus high pressure, \ominus low pressure

Mounting by means of

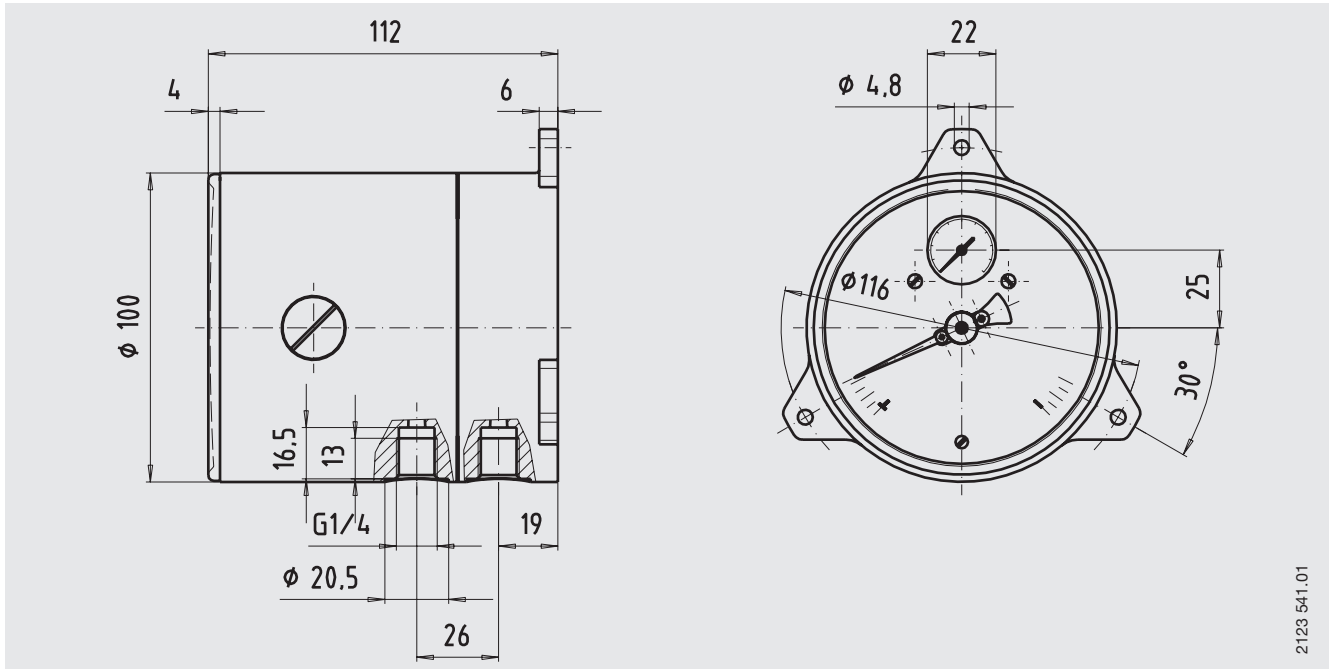
- rigid tailpipes
- or wall mounting with mounting brackets

Specifications		DELTA-plus Model 702.01.100
Nominal size	mm	Differential pressure gauge: \varnothing 100
	mm	Working pressure gauge: \varnothing 23
Accuracy class		Differential pressure gauge: 2.5
		Working pressure gauge: 4
Scale ranges per EN 837	bar	Differential pressure: 0 ... 0.25 to 0 ... 25
	bar	Working pressure: 0 ... 25
Max. working pressure (stat.)	bar	25
Overpressure safety	bar	Either side max. 25
Operating temperature	$^{\circ}\text{C}$	Ambient: -10 ... +70
	$^{\circ}\text{C}$	Medium: +90 maximum
Ingress protection		IP 54 per EN 60 529 / IEC 529
Media chamber	(wetted)	GD-AISI 12 (Cu) 3.2982, black lacquered
Process connections	(wetted)	2 x G $\frac{1}{4}$ female, lower mount (LM), in-line, axle base 26 mm
Pressure elements	(wetted)	Differential pressure: Compression spring of stainless steel 1.4310 or FD SiCr EN 10270-2 and separating diaphragm of FPM/FKM fabric back stay (option: NBR)
		Working pressure: Bourdon tube of Cu-alloy
Links	(wetted)	Stainless steel 1.4305, FPM/FKM (option: NBR)
Sealings	(wetted)	FPM/FKM (option: NBR)
Movement		Cu-alloy, wear parts argentan
Dial		Differential pressure gauge: aluminium, blue, white lettering
		Working pressure gauge: plastic, white, black lettering
Pointer		Differential pressure gauge: adjustable pointer, aluminium, white
		Working pressure gauge: plastic, black
Zero adjustment for differential pressure gauge		By means of adjustable pointer
Case		GD-AISI 12 (Cu) 3.2982, black lacquered
Window		acrylic
Weight	kg	approx. 1.3

Options

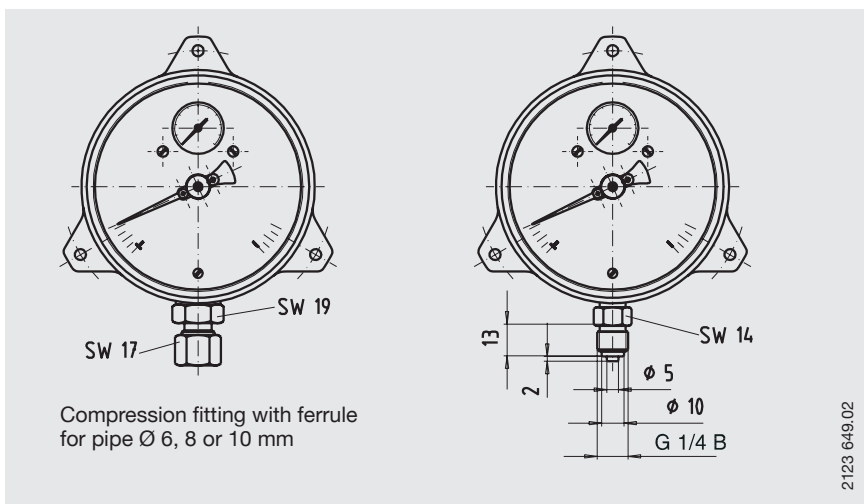
- Media chamber GD-AISI 12 (Cu) HART-COAT surface protection
- Media chamber of stainless steel (without working pressure gauge)
- Accuracy class 1.6 for differential pressure gauge with scale ranges 0 ... 1 bar to 0 ... 25 bar
- Ingress protection IP 65
- Integrated pressure equalising valve (stainless steel and FPM/FKM)
- 4-way valve manifold of Cu-alloy or stainless steel (1x pressure equalising valve, 2x pressure gauge valve, 1x valve for purging or air bleeding)
- Other threaded process connections female or male
- Compression fitting with ferrule for pipe \varnothing 6, 8 or 10 mm
- Panel mounting flange

Dimensions in mm



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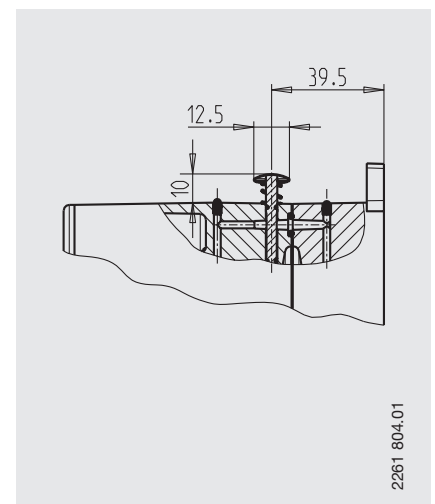
Option Process connection variants



Compression fitting with ferrule
for pipe \varnothing 6, 8 or 10 mm

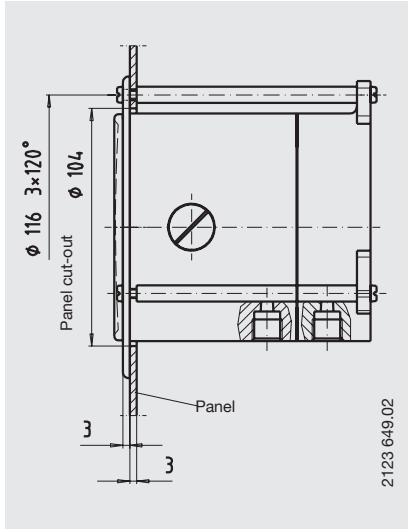
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Option Integrated pressure equalising valve

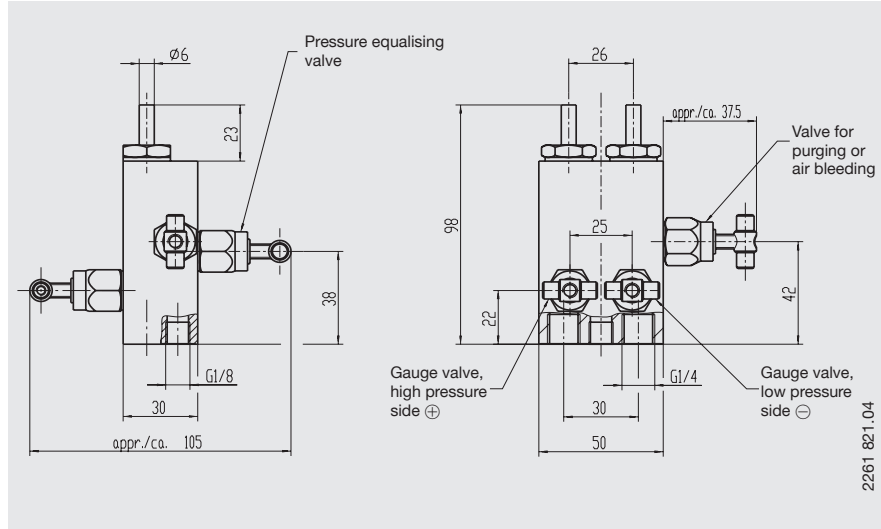


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Option Panel mounting



Option 4-way valve manifold



Ordering information

Model / Scale range / Process connection / Material of media chamber / Material of separating diaphragm and sealings / Accuracy class for differential pressure gauge / Options

Modifications may take place and materials specified may be replaced by others without prior notice. Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing.

