

Differential pressure measuring instruments with compression spring and diaphragm seal

with or without microswitch

Nominal sizes ND 100

Connection position bottom, radial



Description

Differential pressure measuring instruments with compression springs are primarily designed and built for the industrial and sanitary measuring technology sectors. These instruments fully consider the needs of the gas, water and air supply sectors and are also used for the treatment of such media.

These measuring instruments are suitable for liquid and gaseous media in so far as these are not aggressive or highly viscous and do not crystallise. Moreover, they must not contain any magnetic material.

Differential pressure measuring instruments with electric microswitches are suitable for controlling and regulating process sequences by means of the given process pressure.

Function:

The robust, compact measuring system for measuring the differential pressure comprises a diaphragm, which is loaded on both sides by the springs which determine the measuring ranges.

If the diaphragm is loaded with a varying pressure – the differential pressure - a deflection occurs which is transferred by a piston to the pointer mechanism or microswitch, respectively, to cause a pointer deflection proportional to the differential pressure and actuate the microswitch.

Features

- o Measuring cell in pressure cast aluminium, compression springs made of high grade stainless steel
- o Static pressure and overloading up to 25 bar
- o Contact device for up to two microswitches
- o Integrated max. working pressure display
- o Fastening bracket to the back for wall mounting
- o Compact version, easy fitting

Ranges


0 ... 250 mbar to 0 ... 25 bar

Applications

Filter plants, pipeline systems, valve and pump monitoring and for gas, water and air supply lines.

Model: P2590

Technical data

Series	P2590		Options
Nominal size	100		
Type			
Type of contact	without or with Microswitch		
LCD display - tension load	Without LCD-display		31/2-digit, 12.7 mm high with analogue output 4...20 mA 3.5 DCV
Number of contacts	without 1 - 2		
Electrical connection	without cabel connector right hand side 6 screw terminals + PE, wire 2.5 mm ² screw type M20 x 1.5		M16x1.5 with 1m cable
Accuracy class	2.5% of end scale value (working pressure display 4% of scale value)		1.6% on request
Ranges	0 ... 250 mbar to 0 ... 25 bar Separate display of max. working pressure display 0 ... 25 bar		without working pressure display
Overloading	⊕ or ⊖ side, max. 25 bar (one-, bilaterally and reciprocally sided)		
Application range	Steady load: up to full scale value Alternating load: up to 0.9 - fold to full scale value		
Case	Aluminium pressure diecasting, black		
Ring	Without		Fastening bezel, front
Window	Plastic, Plexi		
Dial	Aluminium, white - scale outside, black		
Movement	CuZn alloy		
Pointer	Micropointer, adjustable pointer - Aluminium, black		
Pressure chamber (in contact with measured media)	GD-AlSi 12 (Cu) Material No. 3.2982 black finish		HART-COAT or stainless steel
Measuring element (in contact with measured media)	Compression spring, high grade stainless steel 1.4301 Diaphragm, Viton [®] 1) (FPM)		Perbunan (NBR), fabric reinforced
Pressure connection - Position	brass radial bottom	steel with galvanized surface to the bottom behind each other, axial distance 26 mm	
- Thread 2)	G1/2"	2 x cutting ring unions for 6 mm dia. tube	Other threads on request
Special features			Pressure relief valve integrated in the gauge
Temperatures - Measuring media - Ambient	Tmax. 90°C Tmin. -10°C, Tmax. 70°C		
Degree of protection	IP 54 to EN 60 529 / EC 529		IP 65

1) Viton[®] fluoroelastomer, a product of DuPont Dow Elastomers

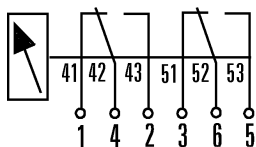
2) Connection female thread G 1/4 or cutting ring union for 8 mm or 10mm dia. tube without surcharge.
Gauge mounting pressure entries identified ⊕ high pressure and ⊖ low pressure.
Mounting by means of rigid tailpipes, or surface mounting.

Dimension

Model P2590

Version with microswitch (single and / or doble changeover contact)

Electrical connection	Electrical data:	AC	DC
		Max. switching voltage	250 V
Max. switching capacity		5 A	0.4 A
Max. current		250 VA	10 W
Repeatability 1.6%			
Switching reverse voltage 5% of full scale value.		Contactaction:	
Adjustment:		1x – changeover contact	5.3
15% to 100% of full scale value.		2x – changeover contact	5.3.3

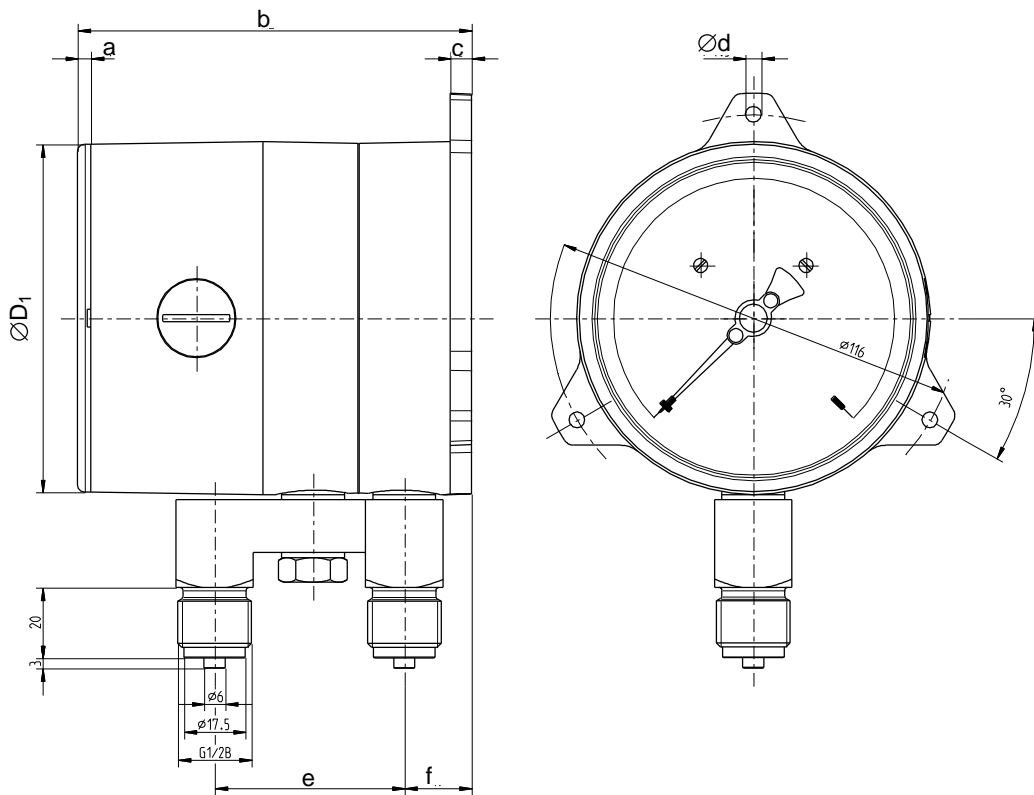


Contact action 5.3.3

Dimensions

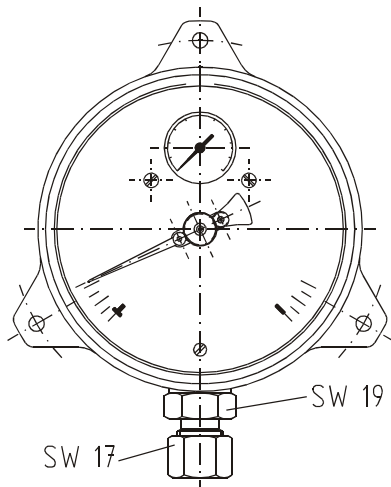
Model P2590

standard - version



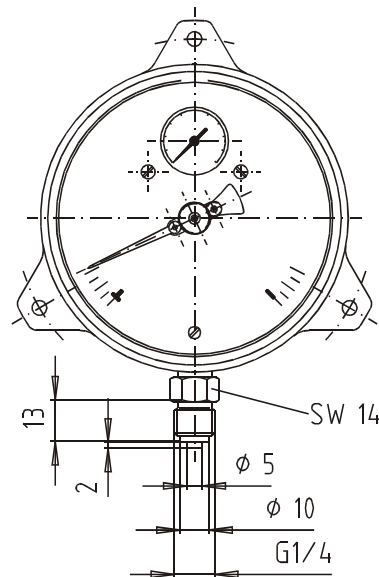
Model	Dimension in mm							
	a	b	c	e	f	Ø D ₁	Ø d	G
P2590	4	112	6	54	19	100	4,5	G1/2 B

Model P2590
working pressure display



Cutting ring unions for 6,8 or 10mm dia. tube

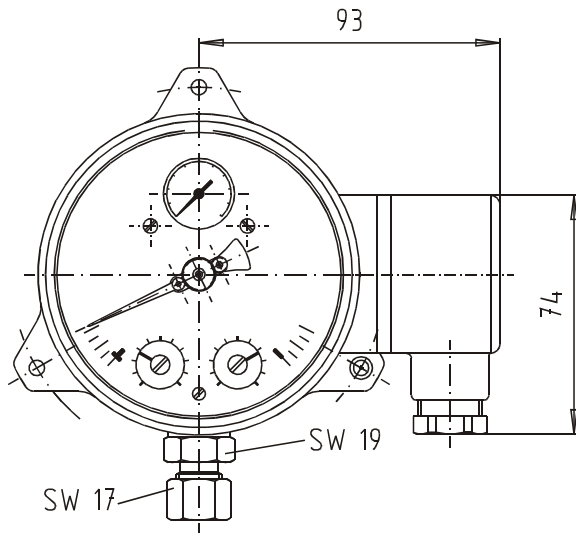
Options:
male thread G 1/4 B



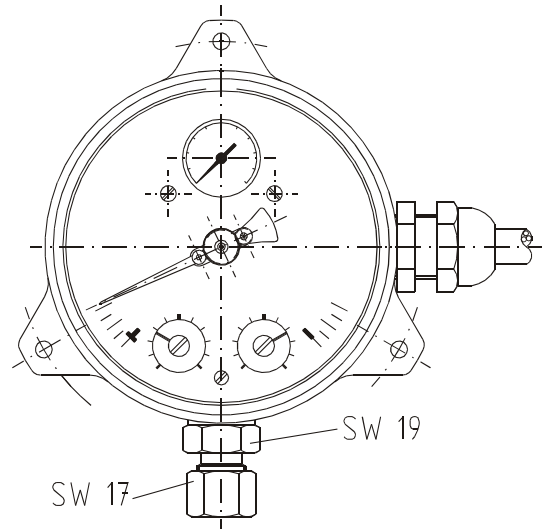
Dimensions

Model P2590

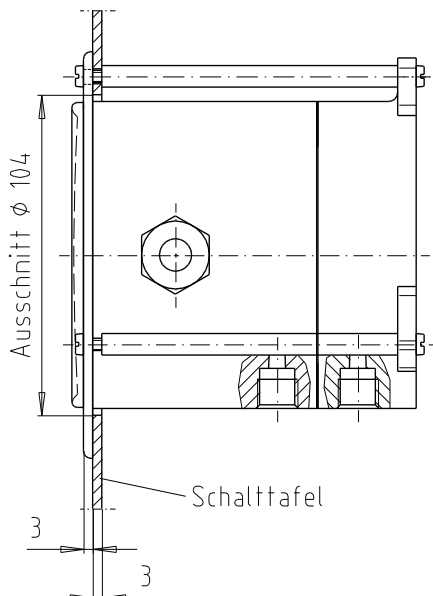
Version with cable box M20x1.5



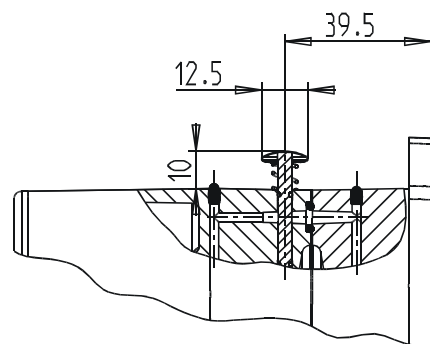
Version with M16x1.5 and 1 m cable



Option: surface mounting flange, front for panel mounting



Option: Integrated pressure equalizing valve



Modifications reserved