Differential pressure measuring instruments with compression spring and diaphragm seal

with or without microswitch

Nominal sizes ND 100

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 diaphram 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

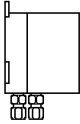0 ... 250 mbar to 0 ... 25 bar

Applications

Filter plants, pipeline systems,

valve and pump monitoring and for gas,

water and air supply lines.

Model: P2590

Technical data

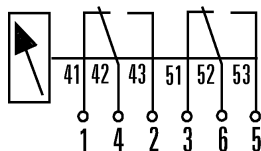| Series	P2590	Options
Nominal size	100	
Type		
Type of contact/ Electrical output	without or with Microswitch	Fixed setting, adjustable from the outside
Number of contacts	without 1 - 2	
Electrical connection	Without Cabel connector right hand side 6 screw terminals + PE, wire 2.5 mm^2 screw type M20 x 1.5	M16x1.5 with 1m cable
Accuracy class	2.5% of end scale value	1.6%
Display ranges	0 ... 250 mbar to 0 ... 25 bar Separate display of max. working pressure 0 ... 25 bar	Without display
Overloading	⊕ or • side, max. 25 bar (one-sided and alternate side overloading)	
Application range	**Steady load: up to full scale value** Alternating load: up to 0.9-fold to full scale value	
Case	Aluminium pressure casting, black	
Ring	without	Fastening bezel, front
Window	Acrylic glass	
Dial	Aluminium, white scale: scale, outside black	
Movement	CuZn alloy	
Pointer	Micropointer Aluminium, black	
Pressure chamber (in contact with measured media)	GD-AlSi 12 (Cu) Material No. 3.2982 Black finish	HART-COAT other Stainless Steel
Measuring element (in contact with measured media)	Compression spring, high grade stainless steel 1.4310 Diaphragm, Buna rubber white tissue plies	Viton$^{® 1)}$ (FPM)
Pressure connection - Position - Thread $^{2)}$	Steel To the bottom behind each other, axial distance 26 mm Two cutting ring unions for 6 mm dia. tube	Other threads on request
Special features		Shut-off valve black
Temperatures - Measuring media - Ambient	Tmax. 90°C Tmin. -10°C, Tmax. 70°C	
Degree of protection	IP 54 to EN 60 529 / EC 529	

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

[2] Connection female thread G ¼ 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.

Model P2590

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

Electrical connection	Electrical data:		
 Contact action 5.3.3		AC	DC
	Max. switching voltage	250 V	30 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: 1x – changeover contact 5.3	
	Adjustment: 15% to 100% of full scale value.	2x – changeover contact 5.3.3	

Dimensions

Model P2590

Standard version

Cutting ring unions for 6,8 or 10mm dia. tube
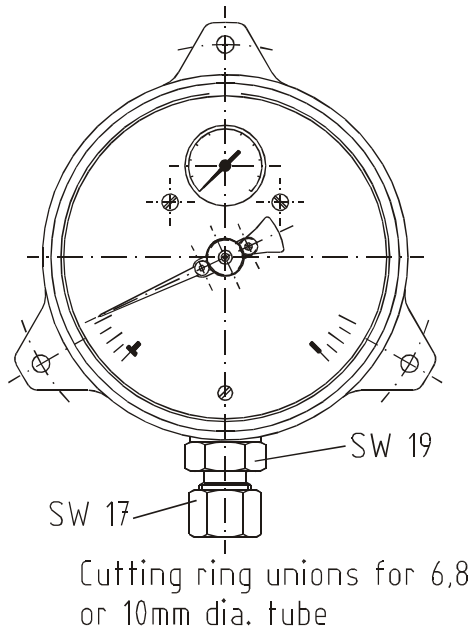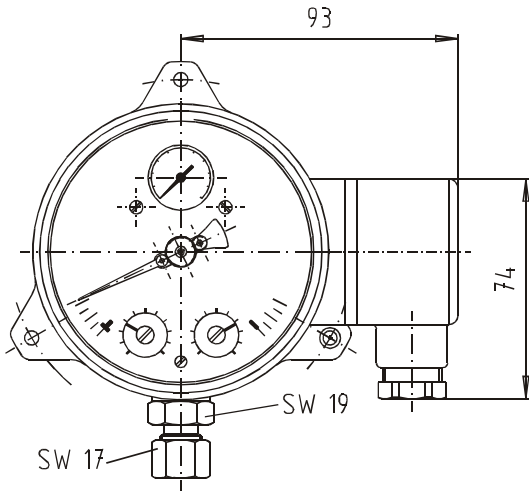
Options: Male thread G ¼ B
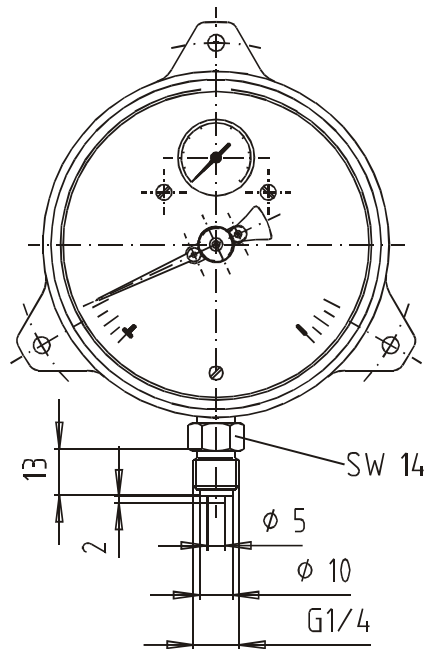
Options: Female thread G¼
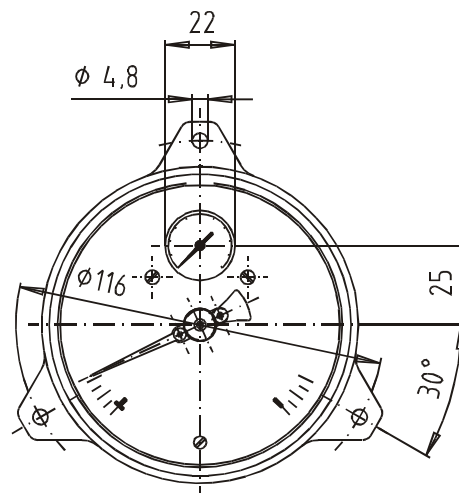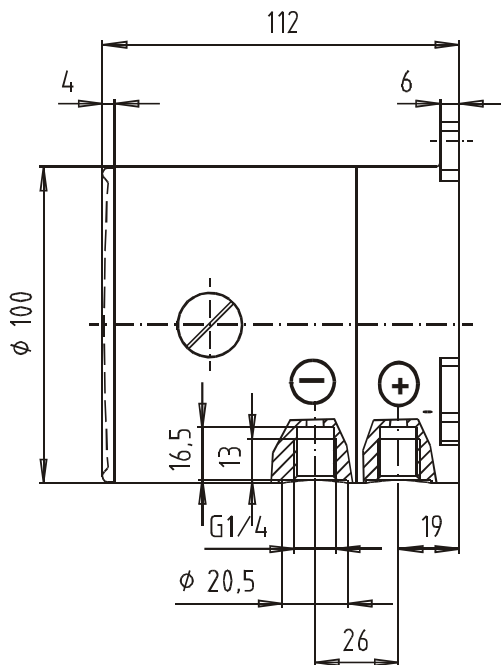
Dimensions

Model P2590

Version with cable box M20x1.5

Version with M16x1.5 and 1 m cable

93

74

SW 19

SW 17

SW 19

SW 17
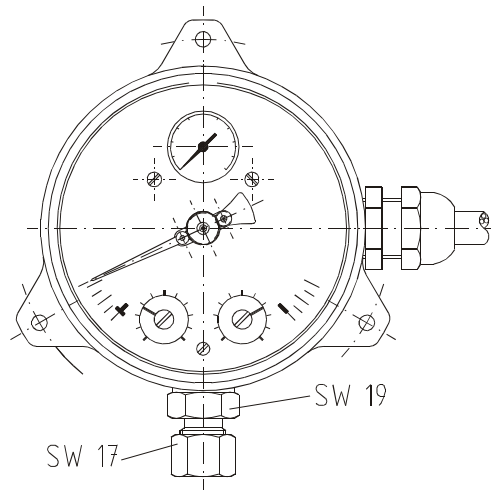
Options: Front flange for panel mounted
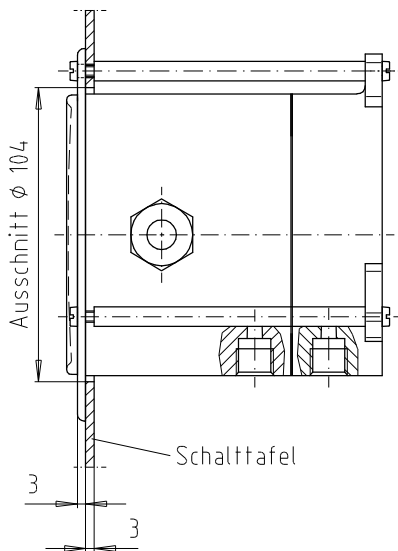
Options: Integrated Pressure equalizing valve

Ausschnitt ⌀ 104

Schalttafel

3

3

39.5

12.5

10
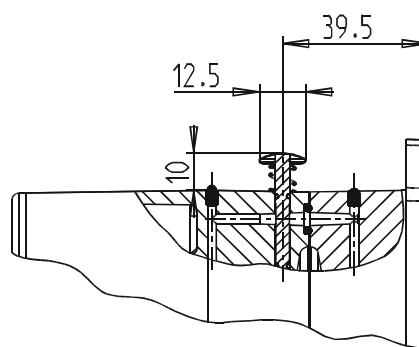
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