

Beck.

The factory-set pressure switches in Ex zones



Pressure switch 901..Ex

with factory-set pressure setting for Ex zones 1, 2 and 21, 22



Application

Factory-set pressure switch monitoring overpressure, vacuum or differential pressure of liquid and gaseous – also aggressive – media .

Pressure setting and switching differential are factory-set by the manufacturer.

Temperature range

Ambient and media temperature from -20°C to $+85^{\circ}\text{C}$

Diaphragm material

Depending on media NBR, Silicone, FKM, EPDM
For 901.30Ex Silicone, others upon request

Electrical rating

max. 100 mA / 24 VAC, 30 mA / 24 VDC

Electrical connection

Tab terminal 6.3 mm x 0.8 mm in accordance with DIN 46244 or push-on screw terminals

Cable conduit

M16x1.5 with integrated cable strain relief

Life

Mechanically more than 10^6 cycles

Weight

30 to 300 g (depending on housing material)

Damping

Restrictors alternatively with 0.3/0.5/0.8 mm diameter

Protection

IP54 / IP65 depending on the used protection cap

Protection class

Protection class II is only met by using a protection cap from our accessories program.

Warning

Read instructions before use. This regulating and control unit must be installed in compliance with the applicable regulations.

Accessories

Various mounting brackets and protection caps with IP54 and IP65

ATEX

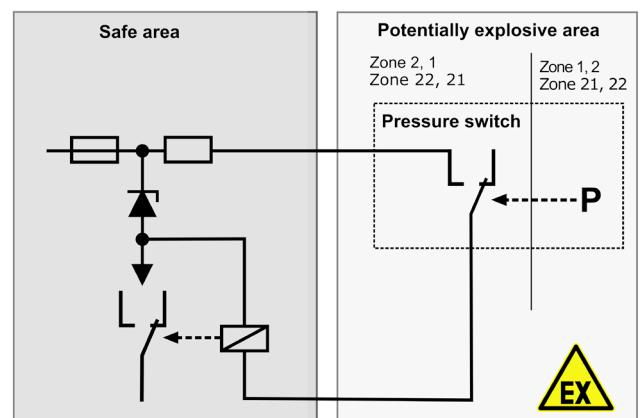
EC type examination	BVS 06 ATEX E 141 X
Device category	II 2G and II 2D
Ignition protection type	Ex ia IIC T4 Gb and Ex ia IIIB T135°C Db
Conformity	EU ATEX Directive EU RoHS Directive
Other approvals	type examination by TUV Südwest and DVGW

Ex i-circuits

This pressure switch can be used in potentially explosive zones for gas in zones 1 & 2 and for dust in zones 21 & 22. In the safe area, an associated isolating means (separating barrier, switching amplifier) must be connected before. The entire isolating circuit must then be proved to keep inherent safety. For this purpose, the power specifications (P, I, U) of the barrier must be lower and the characteristics (L, C) higher than those of the pressure switch and of the connection line (blue colour).

Characteristics:

Gas for IIC: 30 VDC / 60 mA; 24 VDC / 100mA
Dust for IIIB: 30 VDC / 60 mA / 0,6W
Capacitance - Ci 0 μF
Inductance - Li 0 mH



Arrangement of contacts

for 901.1xEx, 901.30Ex, 901.41Ex, 901.51Ex only for 901.2xEx



Pressure connection

Type	Tube connection			Threaded connection			
	5.0 mm	6.5 mm	10.0 mm	M10x1	G1/8	G1/4	G1/2
901.1xEx	PA	PA, PPS	PA, PPS	PA, PVDF CuZn40, V ₂ A	PA, PVDF CuZn40, V ₂ A	PVDF CuZn40, V ₂ A	CuZn40
901.2xEx	PA	PA, PPS	PA, PPS	PA, PVDF CuZn40, V ₂ A	PA, PVDF CuZn40, V ₂ A	CuZn40, V ₂ A	CuZn40
901.30Ex		PA					
901.41Ex		PA, PPS	PA, PPS	PA, PVDF CuZn40, V ₂ A	PA, PVDF CuZn40, V ₂ A	CuZn40, V ₂ A	CuZn40
901.51Ex				CuZn40	CuZn40, V ₂ A	CuZn40, V ₂ A	

PA = polyamide, PVDF = polyvinylidene fluoride, PPS = polyphenylsulfide, CuZn40 = brass, V₂A = stainless steel

For temperature above 85° C metal or PPS pressure connection is required. Upon request pressure connections of other sizes, other plastics or brass nickel-plated are available.

Overpressure range

Type	Factory-set trip pressure		Switching differential (Hysteresis)		Tolerance band of trip pressure	Maximum positive working pressure standard/extended	Maximum negative working pressure standard/extended
	between	and	lower end of range	upper end of range			
901.1xEx	5 mbar	200 mbar	2.5 mbar	50 mbar	± 10 %	0.5 / 4 bar	- / - 1 bar
	200 mbar	1,000 mbar	50 mbar	150 mbar	± 10 %	1 / 4 bar	- / - 1 bar
901.41Ex	500 mbar	3,000 mbar	200 mbar	600 mbar	± 10 %	10 bar*	- 1 bar
901.51Ex	1.0 bar	12 bar	0.2 bar	1.5 bar	± 10 %	25 bar	- 1 bar

* For plastic pressure connections, the maximum permissible operating overpressure is 7 bar!

Vacuum range

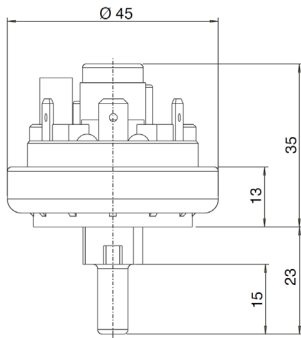
Type	Factory-set trip pressure		Switching differential (Hysteresis)		Tolerance band of trip pressure	Maximum positive working pressure standard/extended	Maximum negative working pressure
	between	and	lower end of range	upper end of range			
901.2xEx	-5 mbar	-200 mbar	2,5 mbar	50 mbar	± 10 %	0,5 / 4 bar	- 1 bar
	-200 mbar	-900 mbar	50 mbar	150 mbar	± 10 %	1 / 4 bar	- 1 bar

Differential pressure range

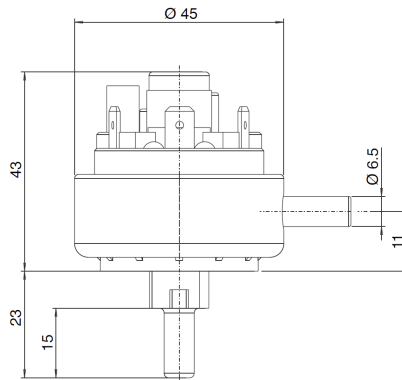
Typ	Factory-set trip pressure		Switching differential (Hysteresis)		Tolerance band of trip pressure	Maximum positive working pressure	Maximum negative working pressure
	between	and	lower end of range	upper end of range			
901.30Ex	5 mbar	50 mbar	2.5 mbar	25 mbar	± 10 %	100 mbar	- 100 mbar

Dimensional Drawings

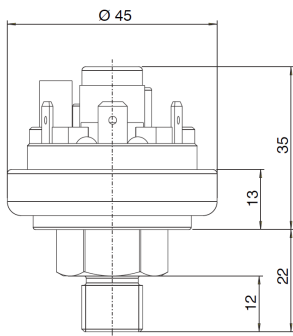
901.10Ex/20Ex



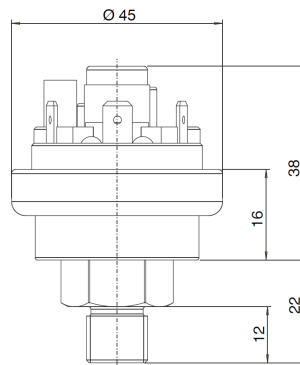
901.30Ex



901.11Ex/21Ex/41Ex

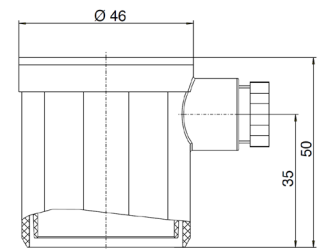


901.51Ex



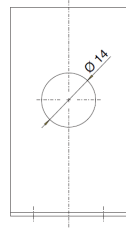
Protection caps

6371 IP54 / 6372 IP65

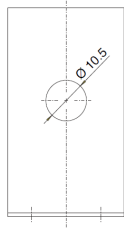


Mounting brackets

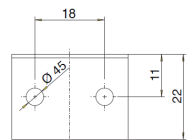
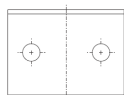
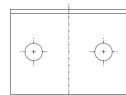
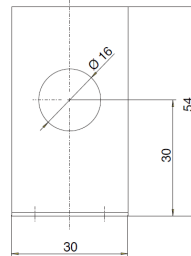
6403



6404



6405



6374 IP54 / 6375 IP65

