Electronic Pressure Switch

D S 5

Main features

- **Measuring ranges 0...0.6 bar to 0...2000 bar**
- Output signals **npn or pnp** (max. 1 A DC)
- Media temperature range -40°C to 125°C
- Accuracy 0.5 % at RT
- Precision between adjustable switch points 0.005 % F.S.
- Compact and robust stainless steel design
- Safe against polarity inversion and excess load
- Degree of protection IP67

Applications

- General industrial applications
- Hydraulics
- Air Conditioning
- Plant engineering and automation technology
- Automotive engineering
- Refrigeration and Pneumatics
- Mechanical engineering
- Environmental technology

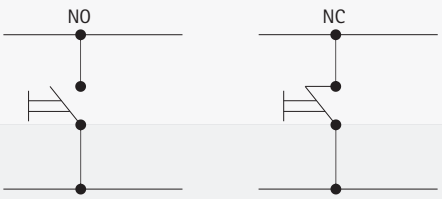
Description

The compact electronic pressure switch DS5 meets highest requirements with view of mechanic demands, high stability and compatibility with media and is very well suited for demanding industrial applications. In functions NO or NC, both the ON and OFF switching delay can be adjusted. Also, a precision of 0.005 % F.S. can be adjusted between the various switch points.

Choice of the switching functions

- Normally open (NO)
- Normally closed (NC)
- Window modus, as NO and NC

These switching functions serve to define the contact behaviour of the switch.



AZ NAGANO Sensortechnik

D S 5

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Specifications

Pressure range									
Measuring range*	p [bar]	**0,6**	**1,0**	**1,6**	**2,0**	**2,5**	**4,0**	**6,0**	**10,0**
Overload pressure	p [bar]	6	6	6	6	6	10	20	20
Burst pressure	p [bar]	9	9	9	9	9	15	30	30
Measuring range*	p [bar]	**16**	**20**	**25**	**40**	**60**	**100**	**160**	**200**
Overload pressure	p [bar]	40	40	100	100	200	200	400	400
Burst pressure	p [bar]	60	60	150	150	300	300	600	600
Measuring range*	p [bar]	**250**	**400**	**600**	**1000**	**1600**	**2000**		
Overload pressure	p [bar]	750	750	840	1200	2400	2400		
Burst pressure	p [bar]	1000	1000	1050	1500	3000	3000		

Electrical parameter				
Switch point				
Number		1 (npn or pnp)		
Function		NC-normally closed/ NO-normally open / Window modus		
Switching-/supply voltage	U [V_{DC}]	10-30		
Switching current	I [A]	1		
Time lag - ON	t [ms]	0-150		
Time lag - OFF	t [s]	0-7		
Withstand voltage	U [V_{DC}]	350	option 710	
Accuracy				
Accuracy @RT	% of the range	≤ 0,50**	** incl. nonlinearity, hysteresis, repeatability, zero-offset- and final-offset	
	BFSL	≤ 0,125	(acc. to IEC 61298-2)	
Non-linearity	% of the range	≤ 0,15		
Repeatability	% of the range	≤ 0,10		
Stability/year	% of the range	≤ 0,10		
Acceptable temperature ranges				
Measuring medium	T [°C]	-40...125		
Ambience	T [°C]	-40...105		
Storage	T [°C]	-40...125		
Compensated range*	T [°C]	-20...85		
Temperature coefficient within the compensated range				
Mean TC offset	% of the range	≤ 0,15 / 10K		
Mean TC range	% of the range	≤ 0,15 / 10K		
Total error	% of the range	-40°C 2,00%		
	% of the range	105°C 2,00%		
Mechanical parameter				
Parts in contact with the measuring medium*		stainless steel		
Housing*		stainless steel		
Shock resistance	g	1000	acc. to IEC 68-2-32	
Vibration resistance	g	20	acc. to IEC 68-2-6 and IEC 68-2-36	
Mass	m [g]	~ 100	(depending on design)	
CE - conformity		EC Directive 89/336/EWG		
IP system of protection	The IP system of protection as specified in the data sheets generally applies, with their mating plug connected.			
	Relative pressure transmitters usually require a ventilated mating plug and/or cable to allow for pressure			
*** others upon request**	compensation. From a pressure range of 60bar, a ventilated mating plug and/or cable is not necessarily required.			

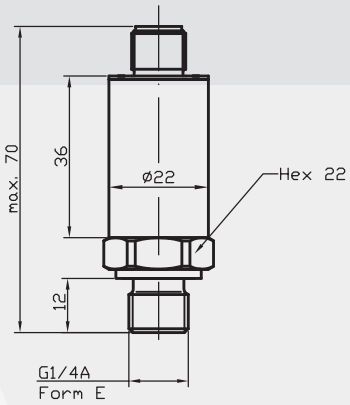
Configurations -examples-

DS5 with M12x1 (S763)

MVS/A

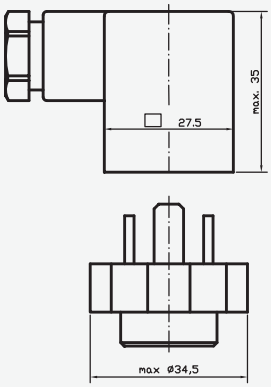
MVS/C

M12x1
(S 763)

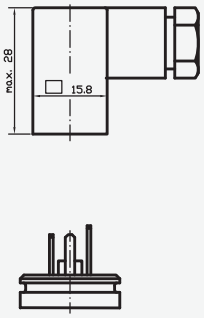


Connectors*

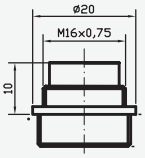
MVS/A
DIN EN 175301-803



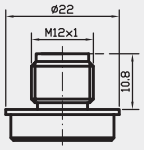
MVS/C
DIN EN 175301-803



male socket
M16x0,5 (S 723)

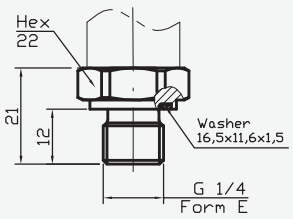


male socket
M12x1 (S 763)

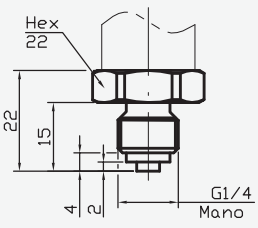


Pressure Connections*

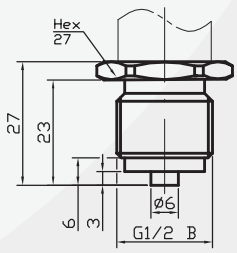
G ¼ A; DIN 3852; Form E



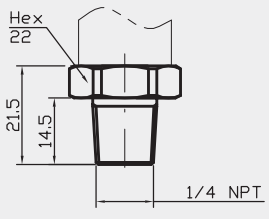
G ¼ B



G ½ B



¼ NPT



*** custom-made adjustments acc. to pressure connections and connecting options are possible**

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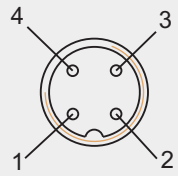
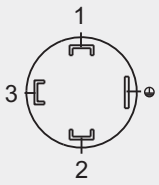
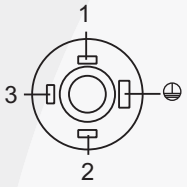
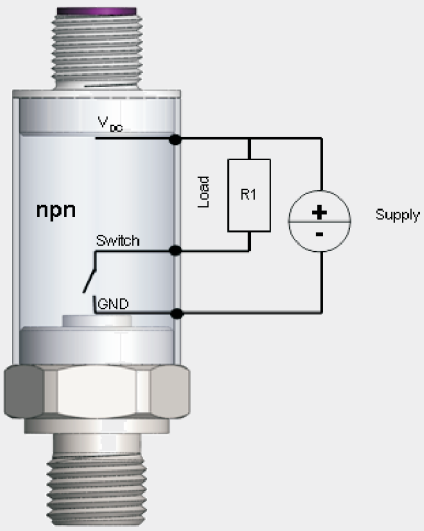
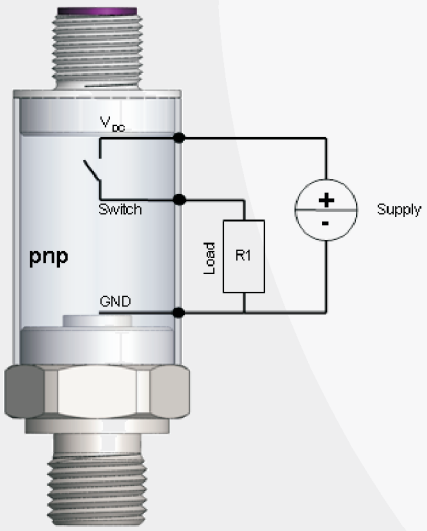
Electrical Connections*

Plug M12x1	Cable port	DIN EN 175301-803-A	DIN EN 175301-803-C
			
1: UB+ 2: nc 3: UB- 4: out	red: UB+ black: UB- white: out	1: UB+ 2: UB- 3: out	1: UB+ 2: UB- 3: out

nc = not connected





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