

P8AP

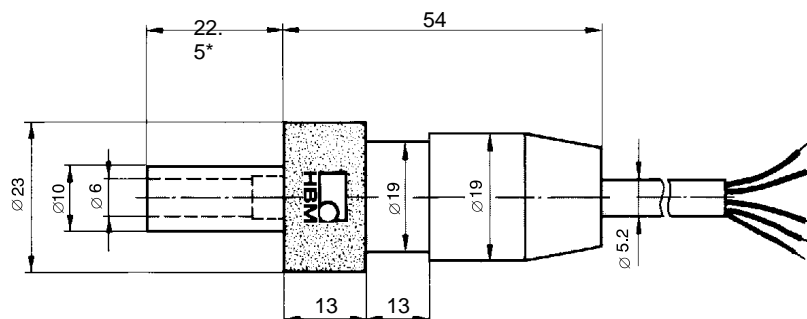
Absolute Pressure Transducers

Special features



- Strain-gauge sensor 2 mV/V, welded
- No sealing between pressure connection and strain-gauge sensor; no filling liquid
- Rapid and easy installation
- Various optional pressure
- Corrosion-resistant material
- Mounting position as desired
- For static and dynamic pressure
- Excellent price/performance ratio

Dimensions (in mm; 1 mm= 0.03937 inches)



Allocation of contacts:

Bridge excitation voltage U_B	(+)	black
Bridge excitation voltage U_B	(-)	blue
Output voltage U_A	(+)	white
Output voltage U_A	(-)	red
Screen	(ground)	yellow

* With other pressure connections see section "Connection elements" on page 3.

Specifications

Type	P8AP						
Accuracy class	0.3						
Mechanical input characteristics							
Measurement span	bar	10	20	50	100	200	500
Starting to measure	bar	0					
Fundamental resonance frequency of membrane	kHz	12	16	29	60	86	134
Attenuation ratio of membrane	1	0.01					
Operating range at 23 °C [+73.4 °F]	%	0...150					
Overload cutoff at 23 °C [+73.4 °F]	%	175					
Test pressure	%	175					
Destructive range	%	> 200					
With dynamic loading permitted pressure	%	100					
permitted oscillation bandwidth (in accordance with DIN 50 100)	%	70	70	85	95	95	60
Material for parts in contact with the measurement medium: internal surfaces pressure connector (tube)		Stainless steel 1.4542 Stainless steel 1.4301					
Material for external surfaces		Stainless steel 1.4301, Polyethylene					
Dead volume with tube ^{*)} without pressure connector	mm ³	1110	1100	1090	1060	1100	1020
	mm ³	(410)	(400)	(390)	(360)	(400)	(320)
Control volume	mm ³	2			1.5	0.5	0.3
Output characteristics							
Rated sensitivity	mV/V	2 ± 2%					
Input resistance at 23 °C [+73.4 °F]	Ω	420 (+180/-120)				370 (+130/-70)	
Output resistance at 23 °C [+73.4 °F]	Ω	330 (+90/-30)					
Rated range of the excitation voltage (effective value)	V	0.5...5		0.5...12			
Characteristic curve deviation (Starting point setting)	%	0.3					
Repeatability in accordance with DIN 1319	%	± 0.1					
Temperature coefficient of zero point, by reference to measurement span, per 10 K, in rated temperature range	%	± 0.3			< ± 0.2		
Temperature coefficient of sensitivity (measurement span), by reference to the actual value, per 10 K, in rated temperature range	%	± 0.3					
Ambient conditions Rated temperature range	°C [°F]	-10...+70 [+14...+158]					
Service temperature range	°C [°F]	-40...+80 [-40...+176]					
Storage temperature range	°C [°F]	-50...+85 [-58...+185]					
Impact resistance (in accordance with DIN IEC 68)	m/s ²	800					
Protection System (in accordance with DIN 40050, IEC 68)		IP67					
Cable length, free ends ^{**)}	m	5					
Weight (with cable) approx.	g	250					

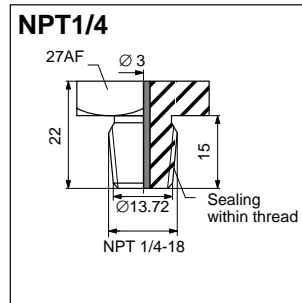
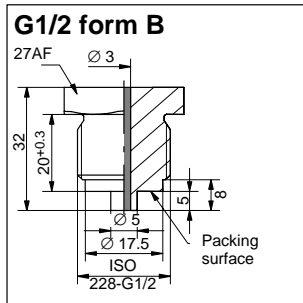
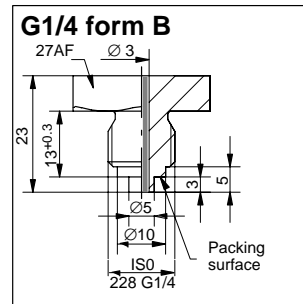
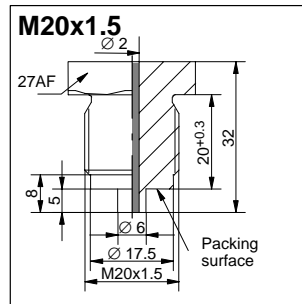
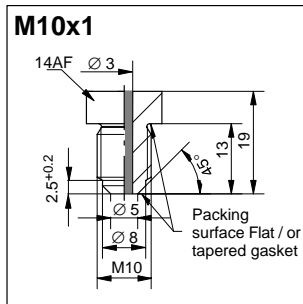
*) With other pressure connections, see Options, the dead volume and material can be taken from the section "Connection elements" on page 3.

***) With Option 3, Code T2: 1.5m

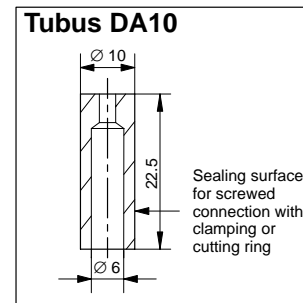
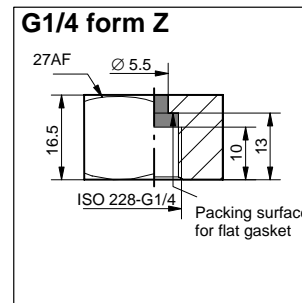
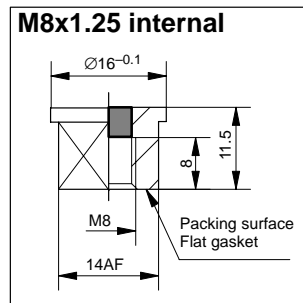
Economic standard versions with tube body (DA10) for pipe unions (see Options) can be supplied at short notice from stock.

Standard version	10 bar	20 bar	50 bar	100 bar	200 bar	500 bar
Order number	1-P8AP/10B-001	1-P8AP/20B-001	1-P8AP/50B-001	1-P8AP/100B-001	1-P8AP/200B-001	1-P8AP/500B-001

Connecting elements with outer thread



Connecting elements with inner thread and others



		External thread					Internal thread		Tubus DA 10
		M10x1	M20x1.5	G1/4 form B	G1/2 form B	NPT 1/4	M8x1.25	G 1/4 form Z	
Dead volume ^{*)}	mm ³	170	260	190	260	190	180	100	700
Final scale value	bar	500	1600 ^{**)}	1000	1600 ^{**)}	1000	500	1000 ^{**)}	500
Material		1.4542					1.4542		1.4571

^{*)} Dead volume of connector element, to be added to dead volume of transducer

^{**)} Specifications in accordance with DIN 16 288

Options for P8AP

P8AP basic option

Code	Option 1: Measuring range 0bar...
218	10 bar
221	20 bar
225	50 bar
228	100 bar
231	200 bar
235	500 bar

Code	Option 2: Pressure connection	
10	M10x1	Outer thread
13	M20x1.5	
14	G1/4 form B	
15	G1/2 form B	
17	NPT 1/4	
51	G1/4 form Z	Inner thread
50	M8x1.25	
71	Screwed conn. with cut. or clamp. ring DA10	

Code	Option 3: Version
A5	Standard version
T2	High temperature version (max. +140°C [+284°F])

Ordering example

K-P8AP-

2	1	8
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1	0
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T	2
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Units marked are standard versions and can be supplied ex works at short terms of delivery. These devices include all marked options.

Further possible pressure connections on request:

- Outer thread** : M12x1.5; M14x1.5; NPT1/8; NPT1/2; UNF 7/16-20; UNF 9/16-18; G1/2 form D; G3/4 form D
- Inner thread** : NPT1/4; NPT1/2; G1/2 form B
- Further** : Hose nozzle D8

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