

# P8AP

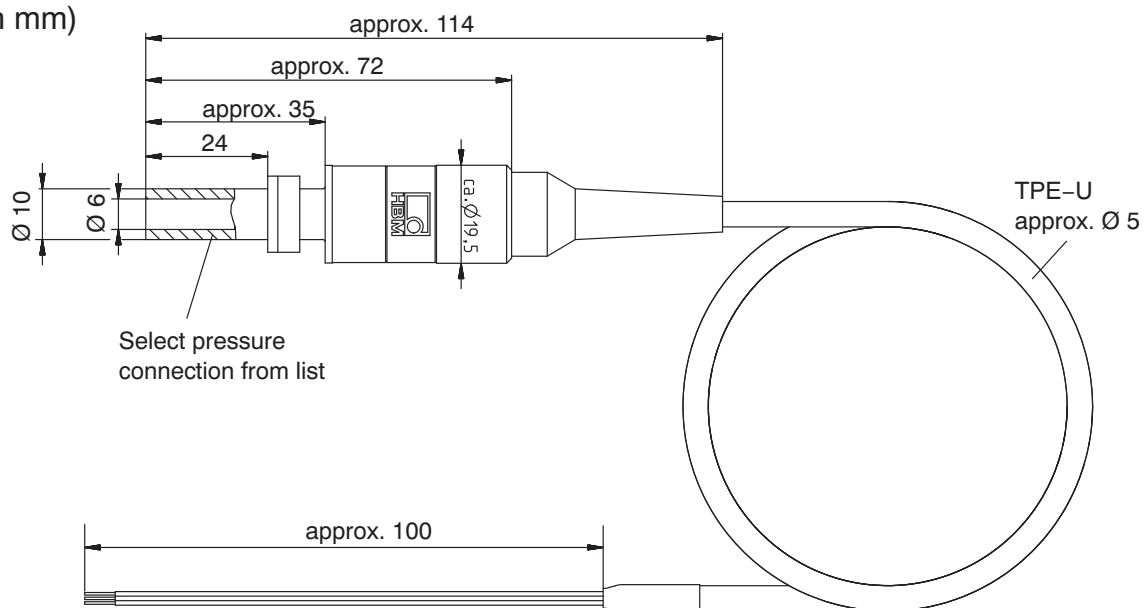
## Absolute pressure transducer



### Special features

- 2 mV/V strain gage sensor
- No sealing between pressure connection and strain gage sensor; no liquid filler
- Fast and economical installation
- Diverse pressure connection options
- Corrosion-resistant
- Mounting position as desired
- For static and dynamic pressures

### Dimensions (in mm)



#### Pin assignment:

Excitation voltage (+) blue  
Excitation voltage (-) black  
Output voltage (+) white

(+) blue  
(-) black  
(+) white

Output voltage (-)  
Sense lead (+)  
Sense lead (-)  
Cable shield

(-) red  
(+) green  
(-) gray  
blank

# Specifications

Type	P8AP						
Accuracy class	0,3						
<b>Mechanical input quantities</b>							
Measuring span	bar	10	20	50	100	200	500
Lower range value (abs.)	bar	0					
Natural frequency of the diaphragms	kHz	12	16	29	60	86	134
Attenuation of the diaphragms	1	0,01					
Operating range at 23 °C	%	0...150					
Overload limit at 23 °C	%	175					
Test pressure	%	175					
Destructive range	%	> 200					
During dynamic loading maximum pressure	%	100					
permissible vibration bandwidth (as per DIN 50 100)	%	70	70	85	95	95	60
Material for parts which come into contact with the measurement medium: inner surface pressure connection		stainless steel 1.4542 stainless steel 1.4301					
Materials for parts which come into contact with the environment		stainless steel 1.4301, polyethylene					
Dead volume with tube *) without pressure connection	mm <sup>3</sup> mm <sup>3</sup>	1110 (410)	1100 (400)	1090 (390)	1060 (360)	1100 (400)	1020 (320)
Control volume	mm <sup>3</sup>	2			1.5	0.5	0.3
<b>Output characteristics</b>							
Nominal (rated) sensitivity	mV/V	2 ± 2%					
Input resistance at 23 °C	Ω	420 (+180/-120)				370 (+130/-70)	
Output resistance at 23 °C	Ω	330 (+90/-30)					
Nominal (rated) range of the excitation voltage (rms value)	V	0.5...5		0.5...12			
Characteristic curve deviation (starting point setting)	%	0,3					
Repeatability as per DIN 1319	%	± 0,1					
Temperature effect on the zero signal relative to the measuring span, per 10 K, in the nominal (rated) temperature rang	%	± 0.3			< ± 0.2		
Temperature effect on the sensitivity relative to the actual value, per 10 K, in the nominal (rated) temp. rang	%	± 0.3					
Ambient conditions		<b>Option A5</b>		<b>Option T2</b>	<b>Option T9</b>	<b>Option TH</b>	
Nominal (rated) temperature range	°C	-10...+70			-10...+70		
Operating temperature range	°C	-40...+80			-40...+140		
Storage temperature range	°C	-50...+85			-50...+140		
Impact resistance (type-tested to DIN IEC 68)	m/s <sup>2</sup>	800					
Degree of protection (as per DIN 40050, IEC 68)		IP 67					
Connection cable length, free end **)	m	5					
Weight, approx. (incl. cable)	g	250					

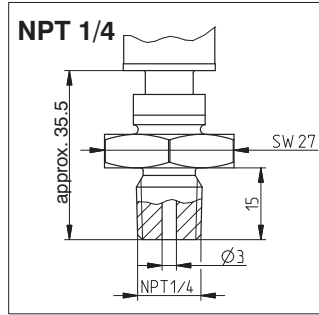
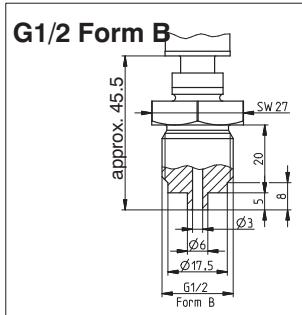
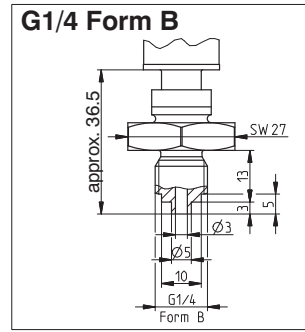
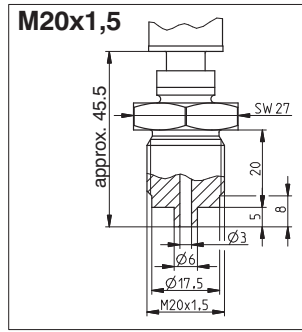
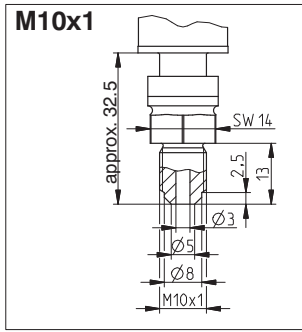
\*) For the other pressure connections, see options; take the dead volume and the material from the "Connector elements" section on page 3.

\*\*) For Option 3, Code T2: 1.5 m

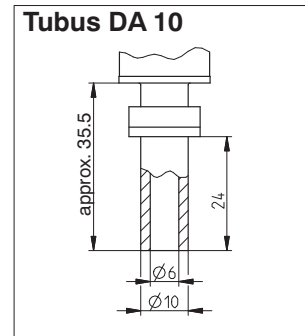
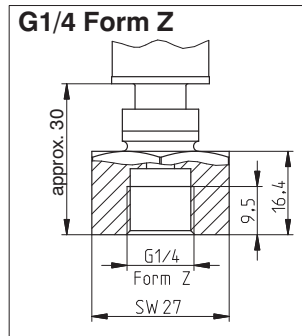
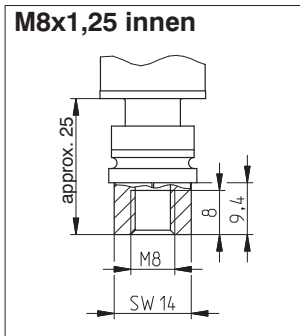
**Economical standard versions with a tube (DA10) for pipe unions (see Options) can be supplied from stock at short notice.**

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

## Connector elements with external thread



## Connector elements with internal thread and miscellaneous

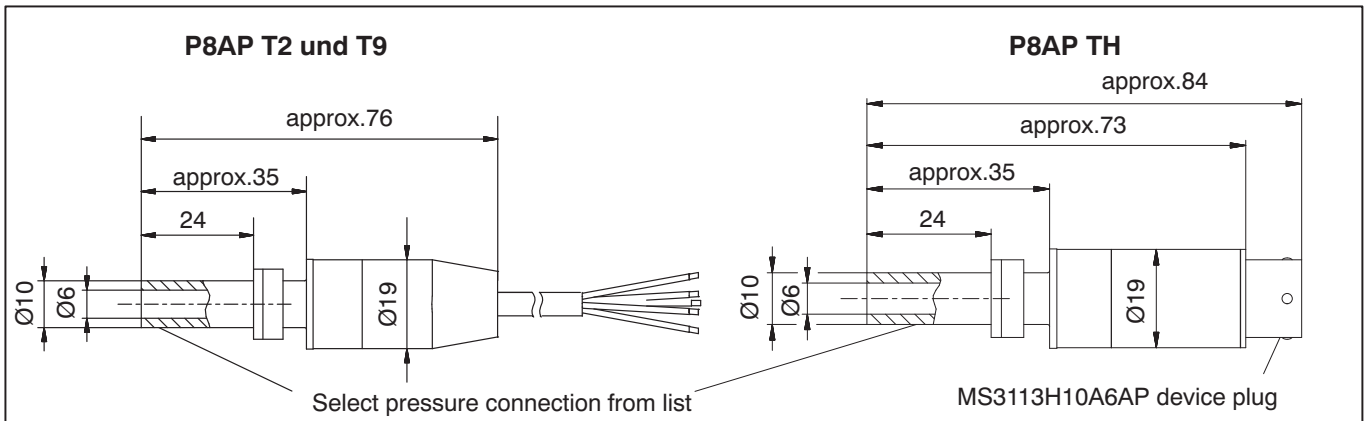


		External thread					Internal thread		
		M10x1	M20x1.5	G1/4 Form B	G1/2 Form B	NPT 1/4	M8x1.25	G 1/4 Form Z	Tube DA 10
Dead volume *)	mm <sup>3</sup>	170	260	190	260	190	180	100	700
Full scale value	bar	500	1600**)	1000	1600**)	1000	500	1000**)	500
Material		1.4542					1.4542		1.4571

\*) Add the dead volume of the connector element to the dead volume of the transducer

\*\*\*) Data as per DIN 16288

## High temperature versions:



## Order code for options

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

Code	Option 2: Pressure connection selection	
10	M10x1	External thread
13	M20x1.5	
14	G1/4 Form B	
15	G1/2 Form B	
17	NPT 1/4	
51	G1/4 Form Z	Internal thread
50	M8x1.25	
71	DA10 screwed connection with cutting or clamping ring	

Code	Option 3: Version
A5	Standard version
T2	High temperature version (max. +140°C), with cable, 1.5 m, free ends
T9	High temperature version (max. +140°C), with cable, 20 m, free ends
TH	High temperature version (max. +140°C), with HS6P connector *)

Code	Option 4: Special features
1	no
2	With pressure peak damping

### Ordering example

K-P8AP- 2 1 8 . 1 0 T 2 -0-K- 2

\*) corresponds to PT06E-10-6S, from Bendix / UPT06J, from Cannon

Devices with  can be supplied in the standard version from stock at short notice. These devices include all the accompanying options.

### In addition, the following pressure connections are possible on request:

**External thread:** M12x1.5; M14x1.5; NPT1/8; NPT1/2; UNF 7/16-20; UNF 9/16-18; G1/2 Form D; G3/4Form D

**Internal thread :** NPT1/4; NPT1/2; G1/2 Form B

#### Regional Distributor



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