

P8AP

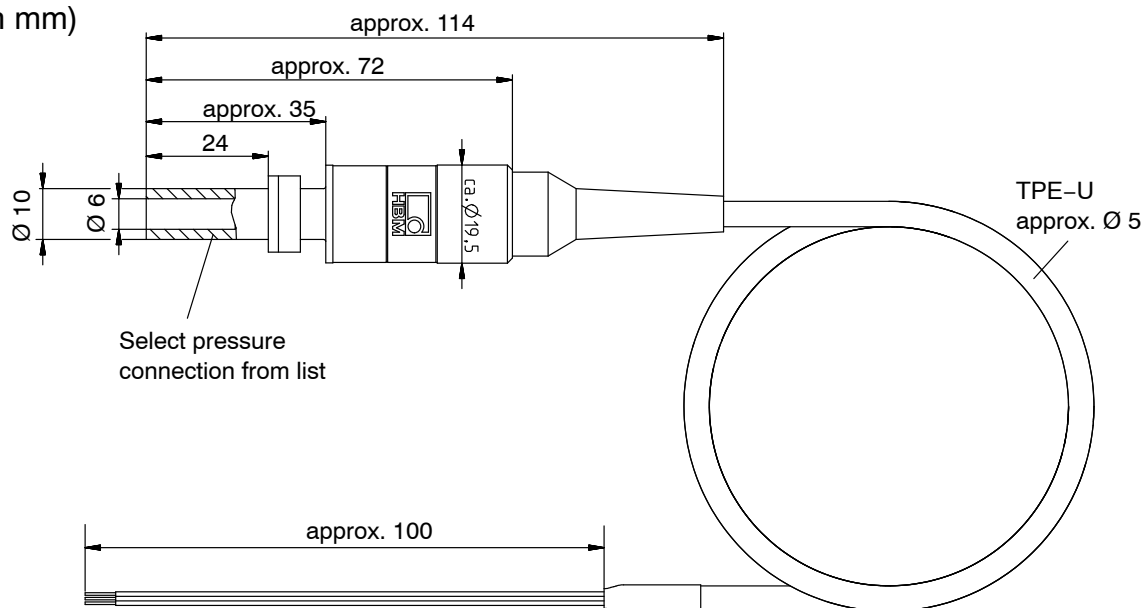
Absolute pressure transducer



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						
Mechanical input quantities							
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 ³	1110 (410)	1100 (400)	1090 (390)	1060 (360)	1100 (400)	1020 (320)
Control volume	mm ³	2			1.5	0.5	0.3
Output characteristics							
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		Option A5		Option T2	Option T9	Option TH	
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 ²	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					

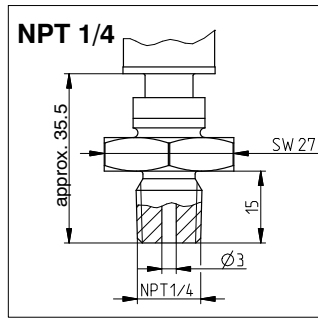
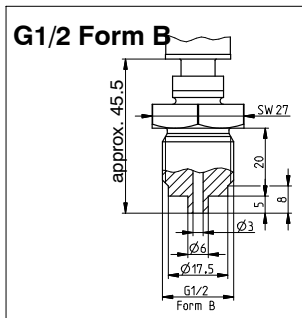
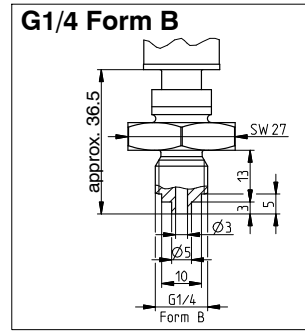
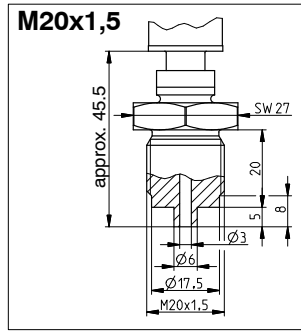
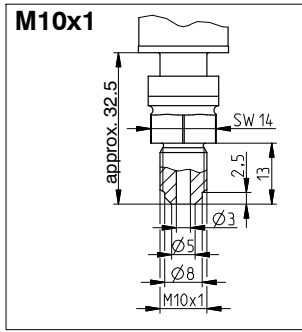
*) For the other pressure connections, see options; take the dead volume and the material from the "Connector elements" section on page 3.

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

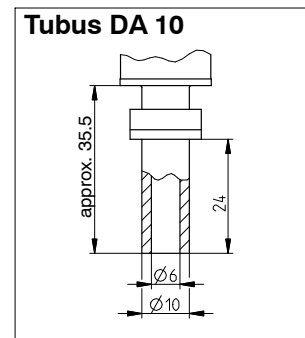
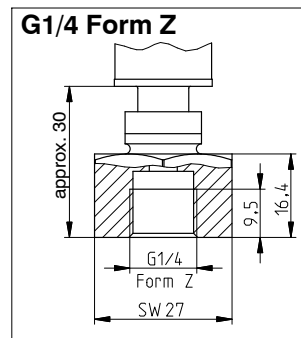
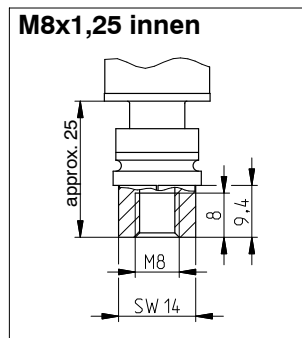
Economical standard versions with a tube (DA10) for pipe unions (see Options) can be supplied from stock at short notice.

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

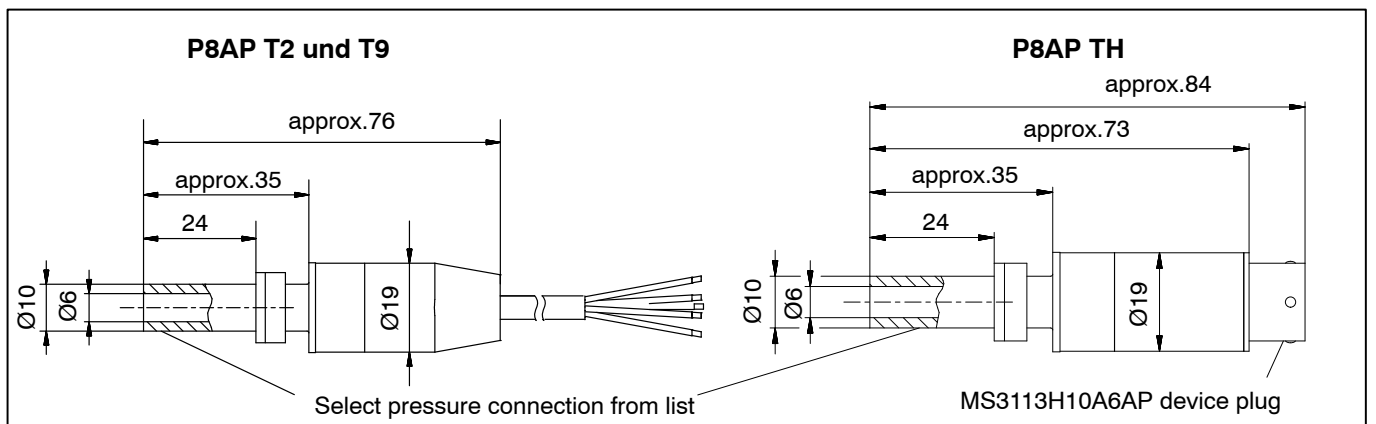


		External thread					Internal thread		Tube DA 10
		M10x1	M20x1.5	G1/4 Form B	G1/2 Form B	NPT 1/4	M8x1.25	G 1/4 Form Z	
Dead volume *)	mm ³	170	260	190	260	190	180	100	700
Full scale value	bar	500	1600**)	1000	1600**)	1000	500	1000**)	500
Material		1.4542					1.4542		1.4571

*) 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

Modifications reserved.

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