

# P3MB

## Absolute Pressure Transducers

### Special features

- For static and dynamic pressure variations, pressure peaks, pressure fluctuations
- Measuring ranges 10 bar to 3000 bar
- S/G (strain gage) principle of measurement
- OPTION: ATEX-compliant explosion protection, device category 2 for Zone 1
- Corrosion resistant
- Degree of protection IP67 per DIN 40 050 (IEC 529)
- Connecting transducers in parallel facilitates differential pressure measurement

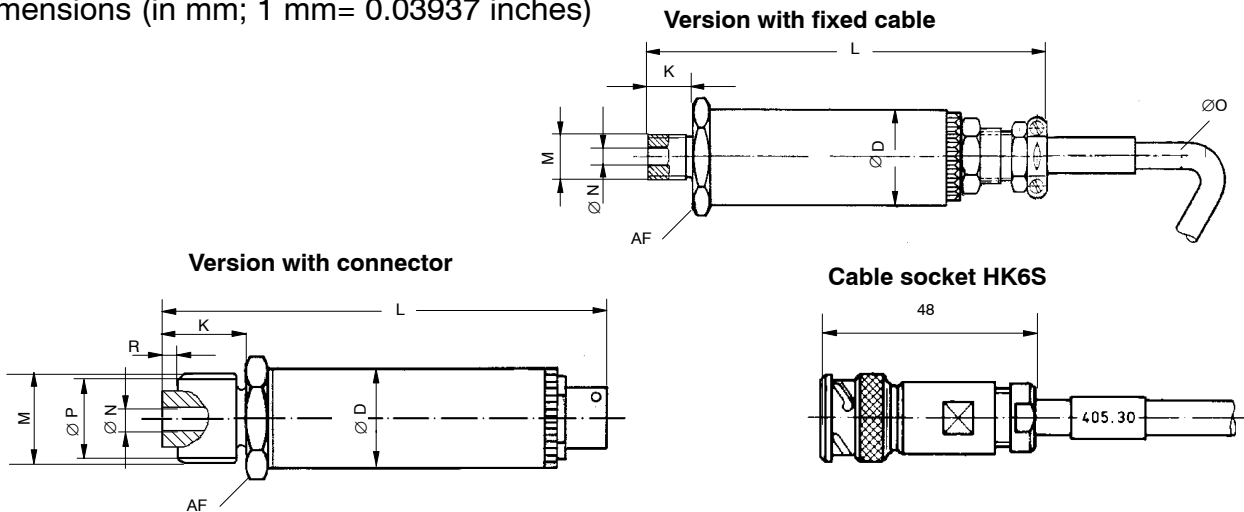


Version with fixed cable



Version with connector

Dimensions (in mm; 1 mm= 0.03937 inches)

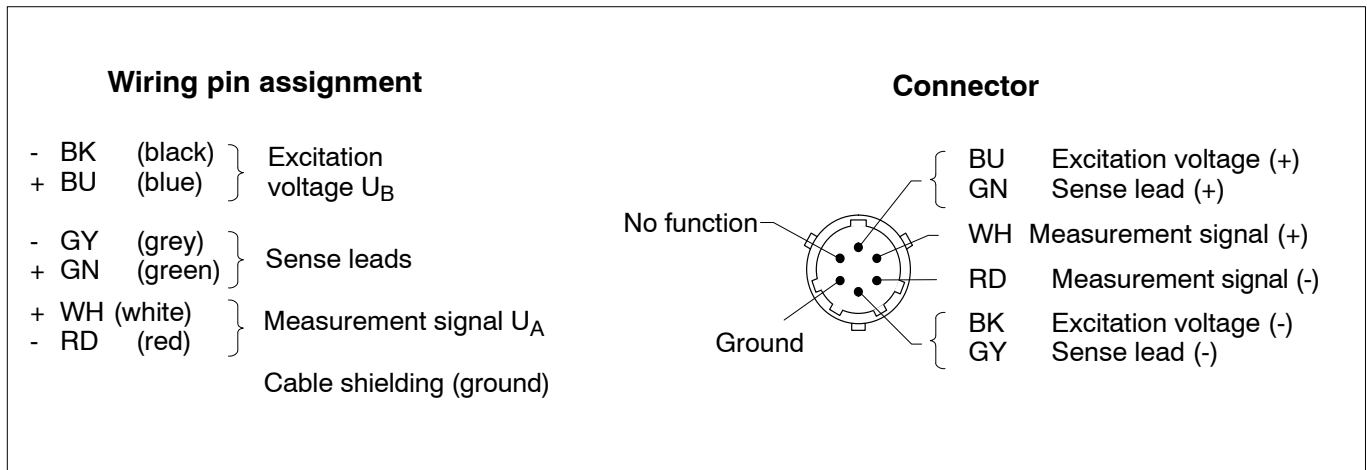


P3MB		D	K	L	M	N	O	P	AF	R
with cable connection	1 bar...5 bar	25	12	101	M12x1.5	5	6.5	-	22	-
	10 bar...2 000 bar	25	12	112	M12x1.5	5	6.5	-	27	-
	3 000 bar	25	20	129	M20x1.5	5	6.5	17.5	27	3
with plug connection	1bar...5 bar	25	12	85	M12x1.5	5	-	-	22	-
	10 bar...2 000 bar	25	12	97	M12x1.5	5	-	-	27	-
	3 000 bar	25	20	105	M20x1.5	5	-	17.5	27	3

**Inexpensive standard versions available from stock:**

Measuring range, 0 bar...	Ordering details	
	Cable connection 3 m cable, unterminated	HS6P (plug connection)
10 bar	1-P3MB/10BAR	1-P3MBP/10BAR
20 bar	1-P3MB/20BAR	1-P3MBP/20BAR
50 bar	1-P3MB/50BAR	1-P3MBP/50BAR
100 bar	1-P3MB/100BAR	1-P3MBP/100BAR
200 bar	1-P3MB/200BAR	1-P3MBP/200BAR
500 bar	1-P3MB/500BAR	1-P3MBP/500BAR
1000 bar	1-P3MB/1000BAR	1-P3MBP/1000BAR
2000 bar	1-P3MB/2000BAR	1-P3MBP/2000BAR
3000 bar	1-P3MB/3000BAR	1-P3MBP/3000BAR

**Pin assignment**



# Specifications to DIN 16086

Type	1-P3MB										
Accuracy class	0.2	0.15	0.2	0.15	0.1	0.2					
<b>Mechanical input quantities</b>											
<b>Pressure type</b>	Absolute pressure										
<b>Measuring range, 0 bar...</b>	bar	10	20	50	100	200	500	1000	2000	3000	
<b>Initial value</b>	bar	0									
<b>Mechanical values to VDI/VDE 2600</b> , by reference to full scale value											
Operating range at reference temperature	%	0...200					0...150				
<b>Overload limit</b> at reference temperature	%	250					200				
<b>Test pressure</b>	%	250					200			150	
<b>Destructive range</b>	%	> 250					> 200				
<b>Max. dynamic pressure</b>	%	100									
<b>Max. dynamic vibration amplitude</b> to DIN 50 100	%	70									
<b>Natural frequency of the membrane</b>	kHz	13	15	26	38	67	> 100				
<b>Dead volume</b>	mm <sup>3</sup>	2500			2000			800		900	
<b>Control volume</b>	mm <sup>3</sup>	9	7				1.5				
<b>Material</b>											
of the parts in contact with the measurement medium	1.4301, 1.4542					1.4542					
of the parts in contact with environment of the membrane	1.4542, 1.4301, nickel-plated brass, chloropren rubber, silicone										
of the fluid	-										
<b>Output characteristics</b>											
<b>Output signal span</b>	mV/V	2 ± 0.15 %								1.5 ± 0.15 %	
<b>Linearity deviation incl. hysteresis</b>	%	± 0.2	± 0.15	± 0.2	± 0.15	± 0.1	± 0.2				
<b>Repeatability</b> to DIN 1319	%	± 0.05									
<b>Effect of temperature on sensitivity</b> in the nominal range of the excitation voltage per 10 K, by reference to the actual value											
in the nominal temperature range	%						± 0.1				
in the operating temperature range	%						± 0.2				
<b>Effect of temperature on the zero signal</b> in the nominal range of the excitation voltage per 10 K, by reference to nominal sensitivity											
in the nominal temperature range	%						± 0.1				
in the operating temperature range	%						± 0.15				
<b>Nominal range of the excitation voltage</b> (rms value)	V						0.5...12				
<b>Input resistance</b> at reference temperature	Ω						350 ± 5				
<b>Output resistance</b> at reference temperature	Ω						350 ± 1.5				
<b>Isolation resistance at 500 V AC</b>	GΩ						5				
<b>Ambient conditions</b>											
<b>Reference temperature</b>	°C[°F]						+23[+73.4]				
<b>Nominal temperature range</b>	°C[°F]						-10...+80[+14...+176]				
<b>Limiting temperature range</b>	°C[°F]						-40...+100[-40...+212] (...120°C[+248°F] up to 24 hours)				
<b>Storage temperature range</b>	°C[°F]						-50...+100[-58...+212]				
<b>Degree of protection</b> (to DIN 40050, IEC 529)	IP67										
<b>Mechanical specifications</b>											
<b>Pressure connection</b> 1-P3MB					M12x1.5				M20x1.5		
<b>Weight without cable approx.</b>	g	200									

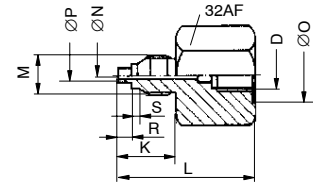
**Accessories:**

**List of components supplied:**

- 1 USIT ring U12.7x20x1.5 for P3MB.../1 Bar ... 200 Bar
- 1 double-cone seal, 1.4305, for P3MB.../500 Bar ... 3000 Bar

**Also available:**

**Connecting thread**  
for measuring ranges up to 500 bar  
Material: Stainless steel 1.4305



Type	D	K	L	M	N	O	P	R	S
P3M/500/M20	M12x1,5	25	50	M20x1,5	4	20,2	5	5	3
P3M/500/R1/2	M12x1,5	20	50	G1/2	4	20,2	5	5	3

**Connection cable** Kab 405.30A-3 (for version with connector HS6P)

**Cable socket** HK6S, order no. 3-3312.0095

**Cable connector for Greenline** Order no. 1-MS3106PEMV

**15-pin sub-D connector**, order no. 2-9278.0321

**Options:**

Code	Option 1: Measuring range	
010B	10 bar	Absolute pressure M12x1.5
020B	20 bar	Absolute pressure M12x1.5
050B	50 bar	Absolute pressure M12x1.5
100B	100 bar	Absolute pressure M12x1.5
200B	200 bar	Absolute pressure M12x1.5
500B	500 bar	Absolute pressure M12x1.5
01KB	1000 bar	Absolute pressure M12x1.5
02KB	2000 bar	Absolute pressure M12x1.5
03KB	3000 bar	Absolute pressure M20x1.5

Code	Option 2: Electrical connection
D	with cable, 3 m, D15 connector
A	with cable, 3 m, free ends, ATEX II 2 G EEx ib IIC T4
F	with cable, up to 20 m, D15 connector *)
M	with cable, 3 m, MS3106PEMV plug
N	with cable, up to 20 m, MS3106PEMV plug *)
C	with HS6P connector, ATEX II 2 G EEx ib IIC T4 **)
B	with cable, up to 20 m, free ends, ATEX II 2 G EEx ib IIC T4 *)
Y	with cable, up to 20 m, free ends *)
*)	Please specify the cable length
**)	Corresponds to PT06E-10-6S, Fa. Bendix / UPT06J, FA. Cannon

Ordering details K-P3MB -  -   
Example order K-P3MB -  -

Modifications reserved.  
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