

PMP3700

Test Sensors for Aerospace

The amplified PMP3700 pressure sensors have been specifically designed to meet the harsh test requirements encountered in aerospace applications. These sensors are based on the pedigree of the 3000 Series flight qualified product family, which has been hugely successful since its launch in 2000. The PMP3700 sensors offer a high performance (digitally characterised) sensor that can be configured to suit the customer's specific requirement. The products incorporate the unique Druck fabricated silicon, which is produced in our new 21st century Class 100 clean room, providing unrivalled long term stability and performance. The product is designed with aerospace in mind, offering a fully hermetically sealed device, with EMC and RFI protection.



Features

- Absolute, gauge and sealed gauge options available
- Standard accuracy of $\pm 0.2\%$ FS over the specified temperature and pressure ranges
- Stated accuracy includes the combined effects of non-linearity, hysteresis, repeatability (NLHR) and zero/span settings over the calibrated temperature range.
- Fully welded Stainless Steel construction
- Hermetically sealed

Applications

- Accurate pressure measurements for use in aerospace ground and flight tests
- Suitable for Automotive test and many Industrial applications

Other Relevant Products

- 3000 Series*
- UNIK 5000*

**see our web site for details.*



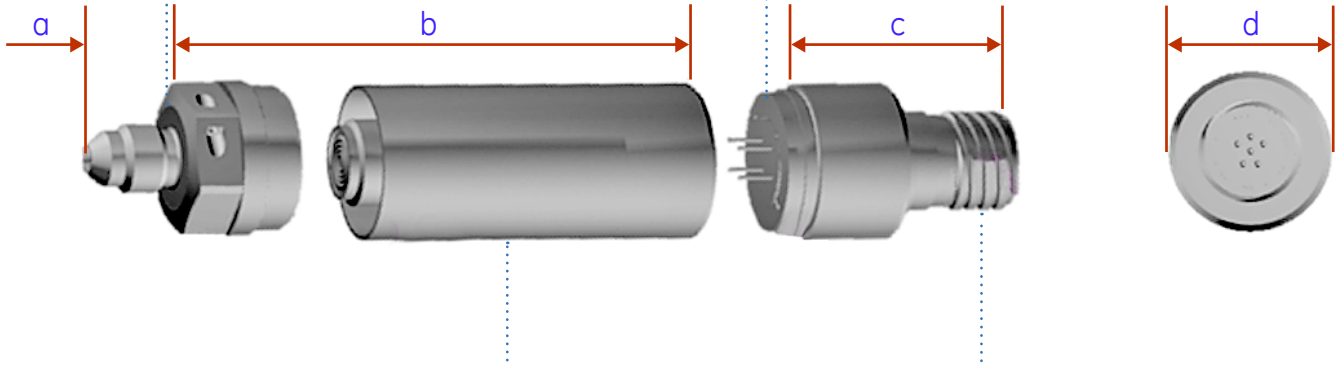
Configuration

Pressure connector

A	7/16-20 UNJF to AS4395E04
B	M10 x 1 Male 60° internal cone
C	7/16-20 UNJF to MS33514E4
D	9/16-18 UNJF to AS4375E06
E	M12 x 1 Male 74° internal cone

Output configuration

0	0.5 to 5 Volts, 3-wire
1	0.5 to 5 Volts, 4-wire



Pressure and range type

Type	Pressure Range	Comments
Gauge/Abs	0 to 70 bar	Low pressure <70 bar
Abs	1.2 to 350 bar	All ranges
SG	0 to 350 bar	High pressure >70 bar

Electrical connector

0	6 Pin D38999/25YB98PN
1	6 Pin MIL-C-26482 Series II Shell size 10
2	5 Pin MS83723/90Y1005PN
3	4 Pin MIL-C-26482 Series I Shell size 8

Notes

- All configurations are commercially available without exception.
- Mating electrical connectors are available upon order placement
- All pressure connectors include wire locking.

Dimensions

Dim.	Size (Dependent on option)	Detail
a	10mm to 14mm	Dependent on type
b	64mm (nominal)	Absolute sensor up to 70 bar
	65mm (nominal)	Abs. & SG up to 350 bar
	69mm (nominal)	Gauge sensor up to 70 bar
c	13mm to 21mm	Dependent on type
d	25mm	All options

Notes

- Total Overall Length = a + b + c
- *Gauge*: referenced to atmosphere
- *Sealed Gauge (SG)*: where 0 is referenced to pressure of the day
- *Absolute (Abs)*: Absolute pressure (less 1 atm)

PMP3700 Specifications

Pressure Range

- 0-350 mbar to 0-70 bar Gauge
- 0-71 bar to 0-350 bar Sealed Gauge
- 1.2 bar to 350 bar Absolute

Note: other pressure units can be specified.

Proof Pressure

2 x FS

Pressure Containment

- Ranges ≤ 70 bar: 6 x FS (200 bar max.)
- Ranges > 70 bar: 4 x FS (700 bar max.)

Media Compatibility

All fluids compatible with 316L stainless steel

Excitation Voltage

18 to 32 Vdc

Analogue Output

3 wire or 4 wire,
0.5 to 5 Vdc (0 to 100% FS pressure)

Analogue Output Resolution

Infinite

Insulation Resistance

$> 100 \text{ M}\Omega$ at 500 Vdc

Output Impedance

$< 150 \Omega$

Accuracy

See table below.

Operating Temperature Range

-55°C (-67°F) to $+125^\circ\text{C}$ ($+257^\circ\text{F}$)

Calibrated Temperature Range

-55°C (-67°F) to $+125^\circ\text{C}$ ($+257^\circ\text{F}$)

Pressure Connection

7/16-20 UNJF to AS4395E04 with wire lock holes

Note: Other options are available.

Electrical Connection

6 pin, D38999/25YB98PN

Note: other options are available.

Weight

150 g (5.3 oz) nominal

Accuracy*

Pressure Range	Temperature Range	Accuracy	Accuracy After 12 Months	Accuracy After 36 Months
350 mbar to 70 bar	-55°C (-67°F) to $+125^\circ\text{C}$ ($+257^\circ\text{F}$)	$\pm 0.2\%$ FS pressure	$\pm 0.3\%$ FS pressure	$\pm 0.5\%$ FS pressure
71 bar to 350 bar	-55°C (-67°F) to -40°C (-40°F)	$\pm 0.5\%$ FS pressure	$\pm 0.6\%$ FS pressure	$\pm 0.8\%$ FS pressure
71 bar to 350 bar	-40°C (-40°F) to $+125^\circ\text{C}$ ($+257^\circ\text{F}$)	$\pm 0.2\%$ FS pressure	$\pm 0.3\%$ FS pressure	$\pm 0.5\%$ FS pressure

* Accuracy figures include the combined effects of non-linearity, hysteresis, repeatability and zero/span settings over the calibrated temperature range.

Ordering Information

1. Specify Part String

Model

PMP	PMP Amplified Transducer						
	Product Diameter and Material						
	37	25mm, Stainless Steel					
		Electrical Connector					
		0	6 pin, D38999/25YB98PN				
		1	6 pin, MIL-C-26482 Series II Shell Size 10				
		2	5 pin, MS83723/90Y1005PN				
		3	4 pin, MIL-C-26482 Series I Shell Size 8				
			Output Option				
			0	0.5 to 5 volts, 3 wire			
			1	0.5 to 5 volts, 4 wire			
				Pressure Connector			
			A	7/16-20 UNJF to AS4395E04			
			B	M10 x 1 Male 60° internal cone			
			C	7/16-20 UNJF to MS33514E4			
			D	9/16-18 UNJF to AS4375E06			
			E	M12 x 1 Male 74° internal cone			
PMP	37	0	0	-B	0-2 bar	G	(typical complete configuration string)

2. Specify Zero Based Pressure Range and Units*

- 350 mbar to 70 bar, Gauge
- 71 bar to 350 bar, Sealed Gauge
- 71 bar to 350 bar, Absolute

* Available pressure units include: bar, mbar, MPa, kPa, hPa, Pa, mH₂O, ftH₂O, inH₂O, cmH₂O, mmH₂O, inHg, mmHg, psi, Torr, kg/cm² and atm.

3. Specify Pressure Reference

- Gauge up to 70 bar
- Sealed Gauge up to 350 bar
- Absolute up to 350 bar

Notes

- Lead-times will vary dependant on type and quantities.
- A Minimum Order Quantity (MOQ) of 5 pieces of the same type is effective.



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920-672B