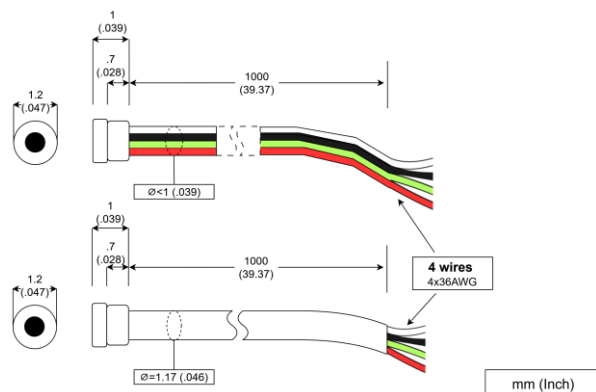


Ultra small pressure sensor for harsh environment

1,20 mm up to 185°C

MP-1.20-WOT-YYY-A-ZZ-XX-YY



MODEL DEFINITION

XXX : TIG: Inconel tube with grid is the standard product
 TIO: Inconel tube (open configuration)
 YYY : Pressure range in PSI (018, 030, 060, 100)
 A : Absolute pressure measurement
 ZZ : ST: standard temperature up to 100C°
 HT: high temperature up to 185C°
 XX : ST: Normal temperature up to -20C°
 LT : Low temperature up to -55C°
 YY : 00: Unshielded wires
 01: Shielded wire

OVERVIEW

- Outer diameter **1.20 mm**
- From 18 to 100 PSI Absolute pressure sensor
- Wide temperature range from **-55 °C** up to **+185 °C**
- Harsh environment
- Customized solution possible
- mVolt output
- Highest resonance frequency on the market
- Amplification can be done for a special request
- Unshielded wires : UAA-3601-WH/...-BK/...-RD/...-GR
 or
 Shielded wire: TAU-3607.04
- Wire length: 1m

WIRE COLOR CODE

BLACK	Input -
RED	Input +
WHITE	Output -
GREEN	Output +

APPLICATIONS

- Instrumentation (ie: Automotive, ...)
- Aerodynamic testing (ie: wind tunnel)
- Turbomachineries
- Industrial process monitoring
- Pumps
- Biomedical
- Oil and gas
- ...

Resonance frequency

- Highest resonance frequency of **2.7 MHz** of the market
- The tests have been done on a Polytec MSA-500 using Scanning laser-Doppler vibrometry.

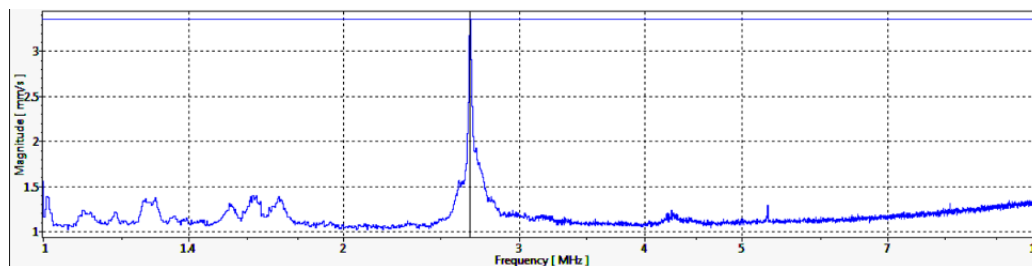


Figure 1: Result for the 30 PSI MEMS absolute pressure sensor

PART NUMBER		MP-1.20-WOT-YYY-A-ZZ-XX-YY			
Outer diameter	1.20 mm				
Pressure range ¹	0-1.2 bar	0-2 bar	0-4 bar	0-7 bar	
	0-18 PSI	0-30 PSI	0-60 PSI	0-100 PSI	
Sensitivity	83mV/bar	50mV/bar	25mV/bar	14mV/bar	
Proof pressure ¹	3 * nominal				
Burst pressure ¹	5 * nominal				
Bridge resistance	6.2 kΩ typical (5-7 kΩ)				
Vout span ²	100 mV typical (65-135mV)				
Excitation voltage	5V (max 6.5V)				
Tmin ³	-55°C (LT) -20°C (ST)				
Tmax ³	100°C (ST) 185°C (HT)				
Accuracy (BFSL ⁴ - RMSE ⁵) ⁶	30°C	60°C	100°C	185°C	
	0.05%FS	0.05%FS	0.05%FS	0.05%FS	
Resolution	Infinitesimal				
Insulating resistance ⁷	> 1 GΩ				
Fluid compatibility	All fluids except high corrosivity, high acidity and gels (please consult factory for specific fluids)				

1 | Absolute pressure; 2 | Amplification can be done for a special request; 3 | TMCL qualification tests – JEDEC JESD22-A104 « temperature cycling » from -20 °C/185 °C ; 4 | Best fitted straight line; 5 | Root Mean Square Error; 6 | The accuracy on the full range of pressure and temperature is 0.50%FS (2 σ), lower accuracy can be observed on few sensors; 7 | Between cable and casing

Remark :

- All sensors are provided with a control sheet given pressure level versus mVolt on the **full temperature and pressure range** under a supply voltage of 5 Volt.
- Temperature measurement/compensation available. [See our tutorial on our website.](#)
- Conditioning system on request.
- High robustness: specific protection on wire bonding @MEMS level (protection against particles, dust, condensation...) without impact on frequency measuring range.

CONTACT

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