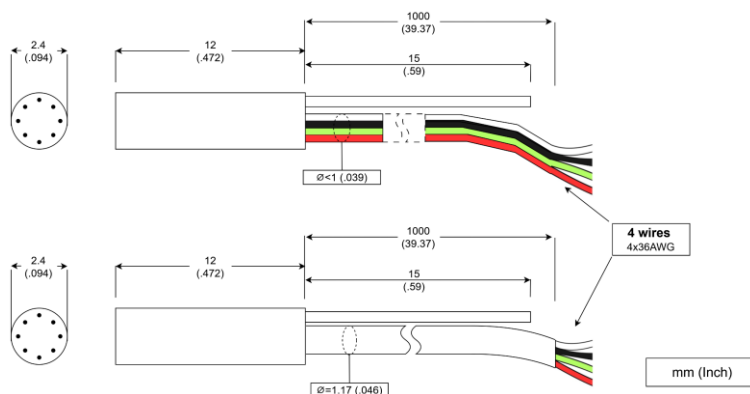


Miniaturized differential pressure sensor

2.4 mm up to 100°C

MP-2.40-TIG-YYY-D-ST-ZZ-XX-YY



MODEL DEFINITION

TIG: Inconel tube with grid is the standard product
 YYY: Pressure range in PSI (005, 015, 030, 080, 150)
 D: Differential pressure measurement
 ST: standard temperature up to 100°C
 ZZ: length of the tube (05,12)
 YY: ST: Normal temperature up to -20°C
 LT: Low temperature up to -55°C
 XX: 00: Unshielded wires
 01: Shielded wire

OVERVIEW

- Outer diameter **2.4 mm**
- Full scale range of 5 to 150 psi
- Wide temperature range up to **+100 °C**
- Integrated field shield
- 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 **310 KHz** of the market
- The tests have been done on a Polytec MSA-500 using Scanning laser-Doppler vibrometry.

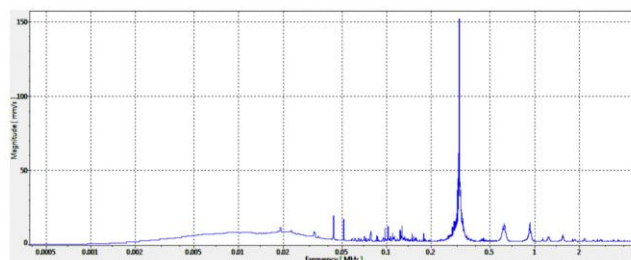


Figure 1: Result for the 30 PSI MEMS absolute pressure sensor

PART NUMBER		MP-2.40-TIG-YYY-D-ST-XX-YY			
Outer diameter	2.40 mm				
Pressure range ¹	0-0.34 bar	0-1 bar	0-2 bar	0-5.5 bar	0-10 bar
	0-5 PSI	0-15 PSI	0-30 PSI	0-80 PSI	0-150 PSI
Sensitivity	265mV/bar	90mV/bar	40mV/bar	15mV/bar	8mV/bar
Proof pressure ¹	1.7 bar	3 bar	6 bar	16.5 bar	20.5 bar
	25 PSI	45 PSI	90 PSI	240 PSI	300 PSI
Burst pressure ¹	2.7 bar	5 bar	10 bar	22 bar	31 bar
	40 PSI	75 PSI	150 PSI	320 PSI	450 PSI
Vout Span ²	90mV typical (60-120mV)	90mV typical (60-120mV)	80mV typical (55-105mV)	80mV typical (55-105mV)	80mV typical (55-105mV)
Bridge resistance	5 kΩ typical (4-6 kΩ)				
Excitation voltage	5V typical (max 10V)				
Tmin ³	-55°C (LT) -20°C (ST)				
Tmax ³	100°C (ST)				
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 | Differential 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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