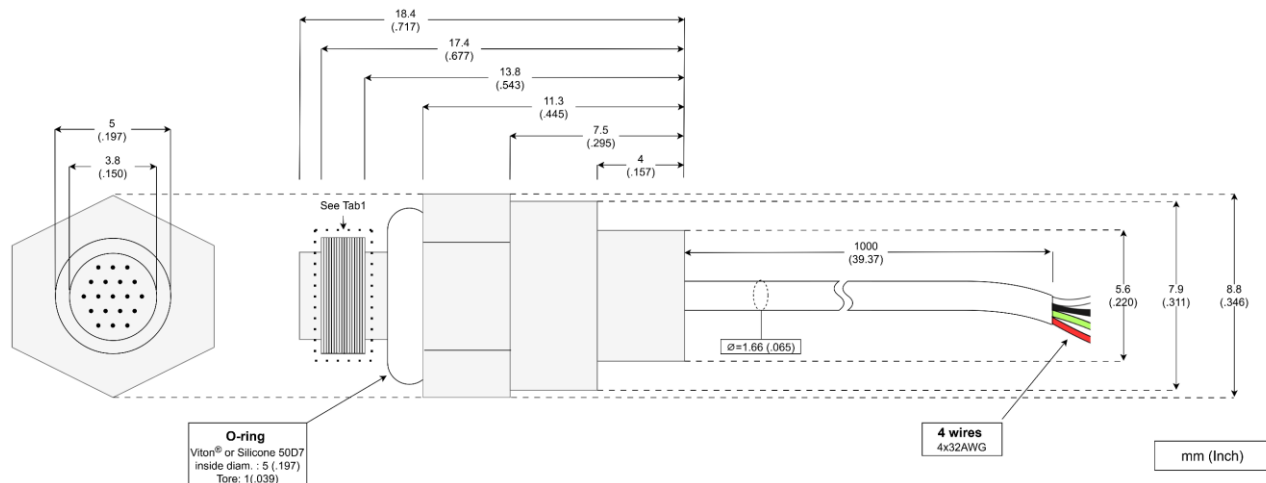




Miniaturized high pressure sensor

3.80 mm up to 185°C

MHP-004-3.80-XXX-S-YYYY-A-ZZ-YY



MODEL DEFINITION

XXX: SST: mechanical casing in stainless steel

S: M for metric, I for Imperial

YYYY: pressure range in PSI (1000, 3000)

A: absolute pressure measurement

ZZ: ST: standard temperature up to 100°C

HT: high temperature up to 185°C

YY: ST: Standard temperature up to -20°C

LT: Low temperature up to -55°C

Options: special tube length, material and grid shape also available on request

Tab 1

Type	Value
Metric	M5x0.5
Metric	M5x0.8
Imperial	10-32 UNF-2A

OVERVIEW

- Outer diameter **3.80 mm**
- From 18 to 3000 psi Absolute pressure sensor
- Wide temperature range from **-55 °C** up to **+185 °C**
- Harsh environment
- Customized solution possible
- mV output
- Highest resonance frequency on the market
- Amplification can be done for a special request
- Shielded wire: TAU-3219.04
- 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
- ...

PART NUMBER		MHP-004-3.80-XXX-S-YYYY-A-ZZ-YY		
Outer diameter	3.80 mm			
Pressure range ¹	0-70 bar		0-210 bar	
	0-1000 PSI		0-3000 PSI	
Sensitivity	1.78 mV/bar		0.86 mV/bar	
Burst pressure ¹	3000 PSI		9000 PSI	
Bridge resistance	5 kΩ typical / (4-6 kΩ)			
Vout span ²	125 mV typical (105 -145mV)		180 mV typical (150 - 180 mV)	
Excitation voltage	5V typical (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.
- Small leakage can be observed on few sensors

CONTACT

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