

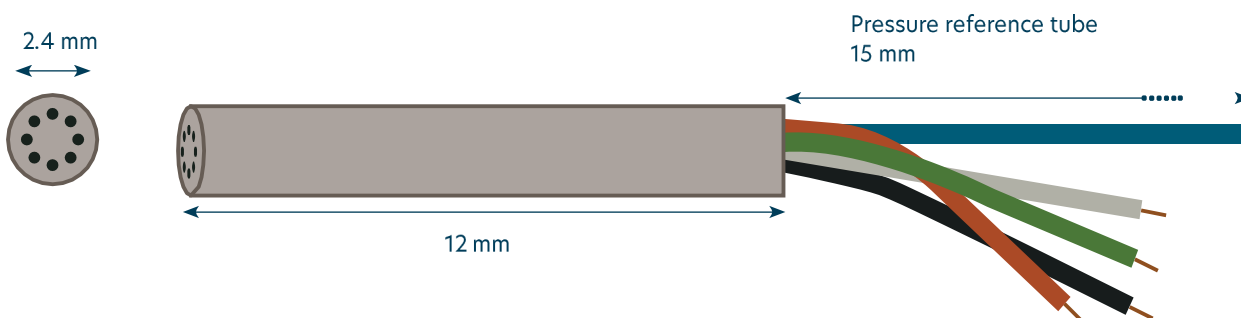


bar

MP-2.40 MINIATURISED DIFFERENTIAL PRESSURE SENSOR

2,40 mm up to 100C°

SENSORADE
Miniaturized aerodynamic flow measurement



MODEL DEFINITION

TIG: Inconel tube with grid is the standard product

YYY: pressure range in psig (005, 015, 030, 080, 150)

D: differential pressure measurement

ST: standard temperature up to 100C°

Options: special tubes (sensor and reference) length, material and grid shape also available on request.

Wire color code

Black	Input -
Red	Input +
White	Output -
Green	Output +

FEATURES

- Reduced size: Ø 2.4 mm
- Integrated field shield
- Temperature range : up to 100°C
- Full scale range of 5 to 150 PSI
- Customized solution possible mVolt output
- Highest resonance frequency on the market
- Amplification can be done for a special request

Ideal for dynamic pressure measurement



APPLICATIONS

MEDICAL

- Patient monitor
- Oxygen Concentrators
- Fluid Evacuation

INDUSTRIAL

- Industrial Controls
- Compressors & Pumps
- Oil-Filled Package

AEROSPACE

- Ideal for Wind Tunnel aerodynamic measurement

AUTOMOTIVE

- Diesel Particulate Filter Exhaust Gas Recirculation Automotive Systems



■ 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

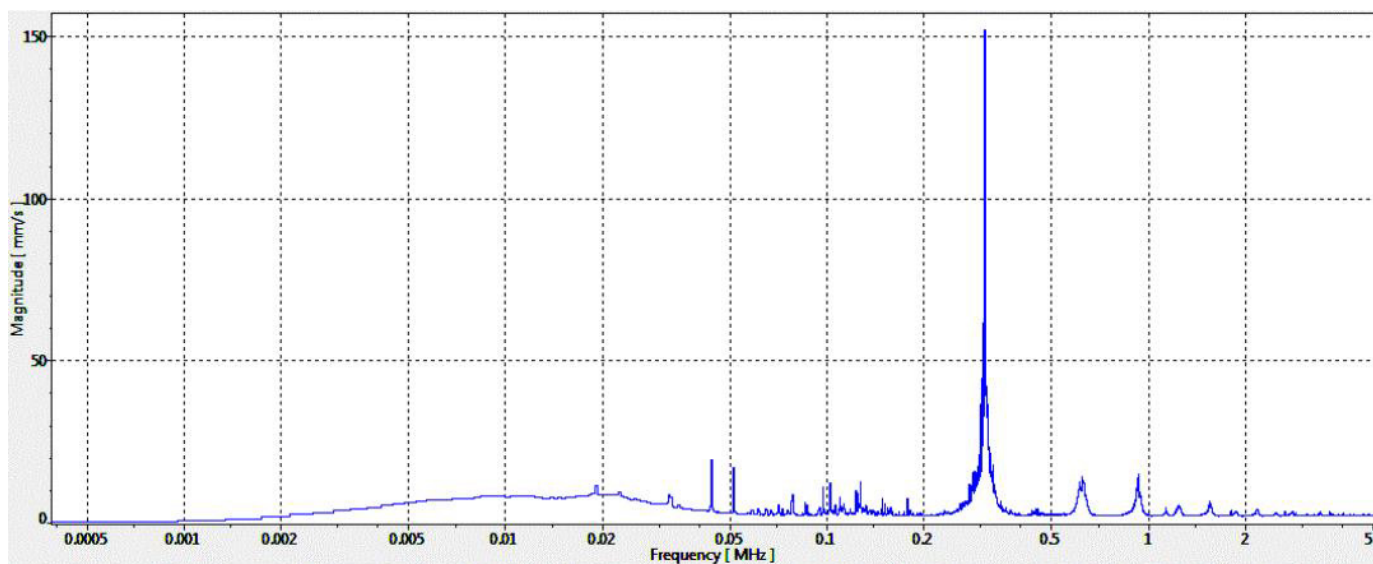


Figure 1: Result for the 30 PSI MEMS differential pressure sensors



SPECIFICATIONS

PART NUMBER		MP-2.40-TIG-YYY-D-ST	
Pressure Range	Proof Pressure	Burst Pressure	
0 → 5 PSIG	25 PSI	40 PSI	
0 → 15 PSIG	45 PSI	75 PSI	
0 → 30 PSIG	90 PSI	150 PSI	
0 → 80 PSIG	240 PSI	320 PSI	
0 → 150 PSIG	300 PSI	450 PSI	

Characteristic		Minimum	Typical	Maximum	Unit
Span ⁴	0 → 5 PSIG	60	90	120	mV
	0 → 15 PSIG	55	80	105	
Zero Offset		-45	-10	25	mV
Bridge Resistance (RB)		4	5	6	kΩ
Pressure Hysteresis (d) ¹		-	<±0.1	-	% / FS
Thermal Hysteresis (d, f)		-	<±0.2	-	% / FS
Operating Temperature ²		-		+100	°C
Max Excitation Voltage		-	-	10	V
TC Span ³		-0.24	-0.19	-0.155	% / °C
TC Zero Offset ³		-75	-	75	µV / °C
TC Zero Resistance ³		0.24	0.275	0.33	% / °C
Linearity - Topside ¹		-0.15	<±0.10	0.15	% / FS
Linearity - Backside	5 PSI	-0.3	<±0.2	0.3	% / FS
	15, 30, 80, 150 PSI	-0.15	<±0.10	0.15	

REMARK

- All sensors are provided with a control sheet given pressure level versus mVolt @25C° under a supply voltage of 5 Volt.
- Temperature measurement/compensation available.
- Conditioning system on request.
- Frequency > 300 KHz under vacuum condition.
- High robustness: specific protection on wire bonding @MEMS level (protection against particles, dust, condensation...) without impact on frequency measuring range.

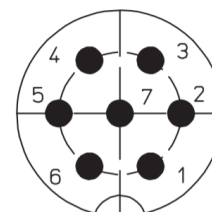
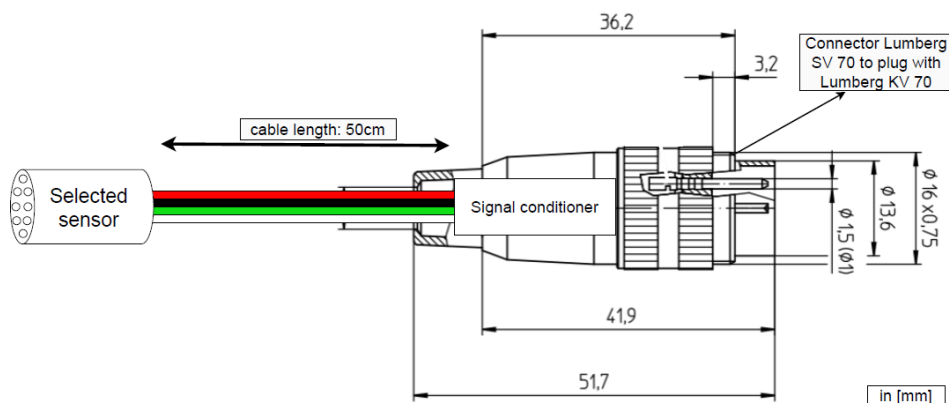
1. Accuracy @25 Celsius
2. TMCL qualification tests - JEDEC JESD22-A104 « temperature cycling » @ Tmax
3. @MEMS level
4. Amplification can be done for a special request



bar SC-MP-4-XX
Signal conditioner



Miniaturized aerodynamic flow measurement



Pin configuration	
Pin	Function
Casing S	shield
1	Vout+
2	GND
3	GND
4	Vin+
5	NC
6	NC
7	NC

SC-MP-4-XX

SC: Signal conditioners
MP: Miniaturized pressure
24: Maximum input voltage in volt
XX: Maximum output voltage in volt (05, 10)

OVERVIEW

- Can be used with our sensor
- Power supply up to 24V
- Output signal up to

SPECIFICATIONS

Characteristics	Electrical characteristics	
PART Number	SC_MP_24_05	SC_MP_24_10
Supply Voltage	8-24 VDC	12-24 VDC
Output Voltage	0-5 VDC	0-10 VDC
Bandwidth	0-200 kHz	0-200 kHz
Operating temperature	85 °C	85 °C
Maximum current	5mA	5mA
Output impedance (1KHz)	200Ω	200Ω

The information provided herein is to the best of our knowledge true and accurate, it is provided for guidance only. All specifications are subject to change without prior notification.

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