



MHP- /MMP-3.80-004-XXX-S-YYYY-A-ZZ
Very High Pressure Sensor- /Miniaturized pressure sensor 3.80 mm up to 180C°

SENSORADE
Miniaturized aerodynamic flow measurement

Tab 1	
Type	Value
Metric	M5x0.5
Imperial	10-32 UNF-2A

MMP-3.80-004-XXX-S-YYYY-A-ZZ

XXX: SST: mechanical casing in stainless steel

S: M for metric, I for Imperial

YYYY: pressure range in PSI (0005,0030,0100, 0300)

A: absolute pressure measurement

ZZ: ST: standard temperature up to 100C°

HT: high temperature up to 185C°

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

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

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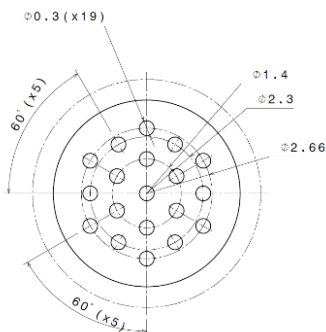
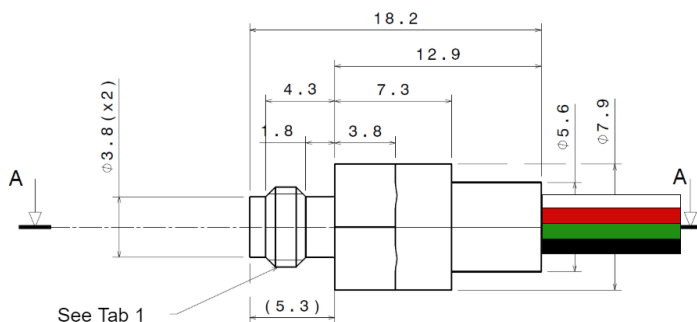
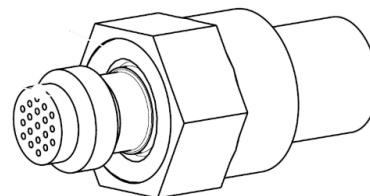
YYYY: pressure range in PSI (1000, 3000)

A: absolute pressure measurement

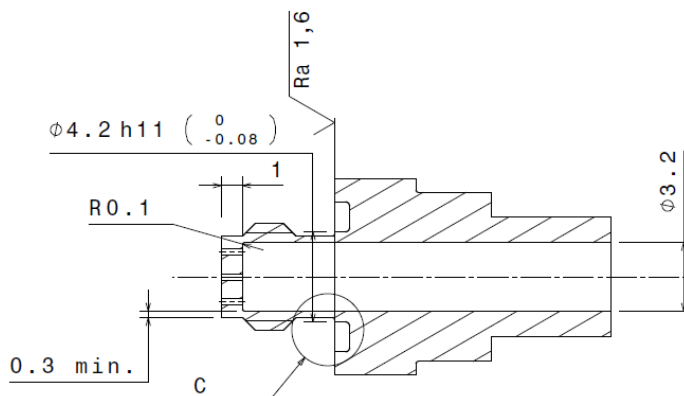
ZZ: ST: standard temperature up to 100C°

HT: high temperature up to 185C°

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



Unit in mm



FEATURES

- Outer diameter 3.80 mm
- From 0,35 to 207 Bar Absolute pressure sensor
- Wide temperature range up to 185C°
- Harsh environment
- Customized solution possible
- mVolt output
- Highest resonance frequency on the market
- Amplification can be done for a special request

APPLICATIONS

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



ADDITIONAL TECHNICAL INFORMATION

O-ring:

- Inside diameter / tore: 5mm / 1mm
- Material: Viton (FKM: fluorinated elastomer)
- Temperature range: -20 to 200°C
- Reference: R 2566

Corrosive fluids:

- Can be used with brake fluid Dot 5.1 for other fluid please contact Althen

Leakage:

- small leakage can appear

Maximum applicable torque:

- 1.6 Nm (14 Lb/In)

Assignment wire:

- Red wire: V+ - Black wire: V-
- White wire: S- - Green wire: S+

SPECIFICATIONS

PART NUMBER

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

Pressure Range	Burst Pressure
0 → 1000 PSI	3000 PSI
0 → 3000 PSI	9000 PSI

Characteristic	Minimum	Typical	Maximum	Unit
Span ⁴ @ 5V	0 → 1000 PSI	125	145	mV
	0 → 3000 PSI	180	210	
Zero Offset ¹	-10	0	10	mV/V
Bridge Resistance (RB)	4	5	6	kΩ
Non-linearity ¹	-0.15	0	0.15	%FS
Pressure hysteresis ¹	-0.05	0	0.05	%FS
Operating Temperature ²	-	-	+185	°C
Max Excitation Voltage	-	5	15	V
TC Sensitivity ³	-1500	-2200	-2500	PPM / °C
TC Zero Offset ³	-25	0	25	μV/V/°C
TC Resistance ³	2300	2800	3300	PPM / °C
Thermal hysteresis ¹	-0.1	0	0.1	% FS

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.
- 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



SPECIFICATIONS

PART NUMBER

MMP-3.80-004-XXX-S-YYYY-A-ZZ

Pressure Range	Burst Pressure
0 → 5 PSI	15 PSI
0 → 30 PSI	90 PSI
0 → 100 PSI	300 PSI
0 → 300 PSI	900 PSI

Characteristic	Minimum	Typical	Maximum	Unit	
Span ^{4@} 5V	0 → 5 PSI	75	100	125	mV
	0 → 30 PSI	75	100	125	
	0 → 100 PSI	75	100	125	
	0 → 300 PSI	75	100	125	
Zero Offset ¹	-10	0	10	mV/V	
Bridge Resistance (RB)	4	5	6	kΩ	
Non-linearity ¹	-0.2	0	0.2	%FS	
Pressure hysteresis ¹	-0.1	0	0.1	%FS	
Operating Temperature ²	-	-	+185	°C	
Max Excitation Voltage	-	5	10	V	
TC Sensitivity ³	-1400	-1900	-2400	PPM/°C	
TC Zero Offset ³	-30	0	30	μV/V/°C	
TC Resistance ³	2000	2500	3000	PPM/°C	
Thermal hysteresis ¹	-0.2	0	0.2	%FS	

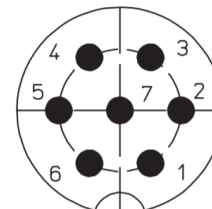
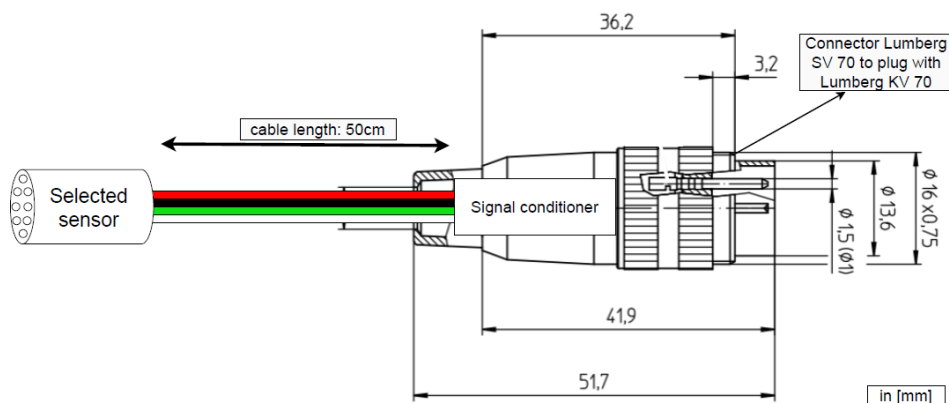
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bar SC_MP_24_XX
Signal conditioner

SENSORADE
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_24_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