

HC-2Mi 微型孔隙水压力传感器

The HC-2Mi Micro Pore Water Pressure Sensor have been specially developed for the measurement of hydrodynamic and aerodynamic pressures over a wide frequency band, The pressure-sensitive element is a high-sensitivity piezoresistive chip in micro-machined silicon.



Pressure Ranges (FS)

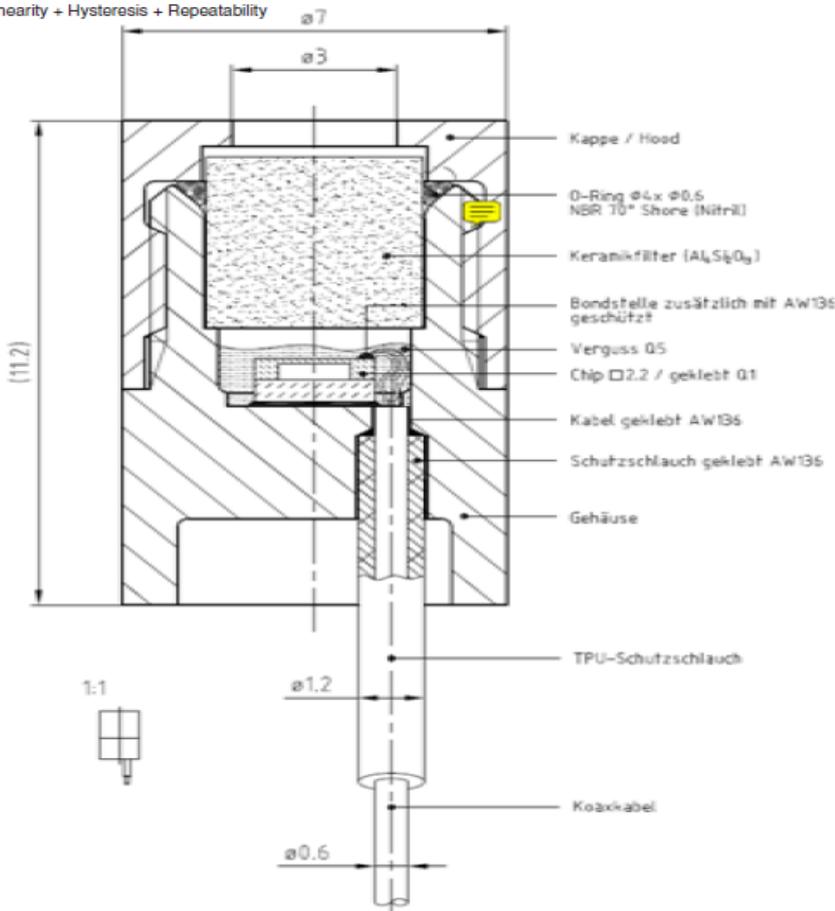
HC-2Mi	bar	1	2	5	10	20	50	100	200	400
Overpressure	bar	3	5	10	20	40	100	200	300	500
Sensitivity typ. (at 1 mA or 3,5 V)	mV/bar	40	35	25	20	10	4	2	1	0,5
Natural Frequency	KHz	> 300	> 300	> 300	> 400	> 500	> 800	> 1000	> 1000	> 1000
Bridge Resistance at 25 °C	Ω	3500	± 20%							
Constant Current Supply	mA	1	3,5 max.							
Insulation / 50 VDC	MΩ	> 100								

Storage- / Operating Temperature	°C	-20...80 / 0...80	
Compensated Temperature Range	°C	0...40	
Vibration	g	50, 20 to 5000 Hz	
Shock	g	20, sinus 11 ms	
Constant Acceleration	g	500	
Dead Volume Change	mm³/FS	< 1	

Accuracy ⁽¹⁾	%FS	< 0,5
Offset at 25 °C	mV	< 5 (compensatable with R3 or R4)
Temperature Error 0...40 °C		
• Zero	mV/°C	0,025 typ.
• Sensitivity	%/°C	0,05 typ.

Acceleration Sensitivity		
• in sensitivity axis	%FS/g	FS ≤ 5 bar: < 3.10 ⁻⁴ FS > 5 bar: < 1.10 ⁻⁴
• vertically to sensitivity axis	%FS/g	FS ≤ 5 bar: < 5.10 ⁻⁵ FS > 5 bar: < 2.10 ⁻⁵

⁽¹⁾ Linearity + Hysteresis + Repeatability



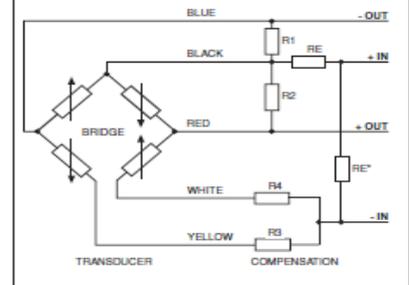
Calibration Sheet

Each pressure sensor is supplied with a calibration sheet with the following information:

- Type, serial number and range of the pressure sensor
- Tested pressure range with corresponding output signals and linearity error, the zero offset, in mV, after compensation with R3 or R4
- Sensitivity at determined excitation (voltage or current), in mV/bar, compensated with the resistors RE (if voltage excitation) or RE* (if current excitation)
- Value of resistor (temperature compensation) for adjustment of zero, R1 or R2
- Date of testing

Note

- The voltage output is proportional to the current voltage excitation
- If the compensations resistors are exposed to different temperatures, it is advisable to use temperature coefficients below 50 ppm/°C
- The resistors can be supplied on a miniature printed circuit as an extra



Stainless steel type 316 L
Elastomer silicone
Screened cable ø 0,6 mm, length 0,5 m,
non halogen MIL-ENE, 5 single strand copper AWG
40 nylon insulated

Intermediate ranges
Other cable lengths
Other housings and materials
Protection IP68 on cable side
Voltage supply

Electrical Connections

Black	+ IN
Yellow	- IN
White	- IN
Red	+ OUT
Blue	- OUT