

O.E.M. INDUSTRIAL PRESSURE SENSOR
Programmable 0.5 – 4.5 Vdc Output Signal
ma18i Model

◆ Technology : **Thick Film Strain Gage on Ceramic**

18 mm Diameter
0...10 bar up to 200 bar
Gage Pressure

Operating temperature range from - 25 up to + 85 °C

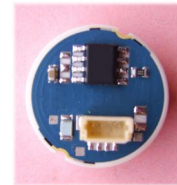
Excellent long term stability

Direct on board Electronics

Monolithic sensor structure

All applications
All aggressive fluids (★)

The ma18i "monolit sensor"[®] combines a monolithic ceramic sensor with direct on board electronics SMD components (without PCB), allowing a very compact design for industrial applications.



– Actual size –

- ❖ Easy mechanical integration
- ❖ **Programmable Signal Conditioner ICs (digital compensation of sensor offset, temperature drift and non-linearity)**
- ❖ OEM Low Cost sensor for large volume applications

- ◆ Low current consumption < 2.2 mA
- ◆ OEM industrial equipment - Low cost transmitters manufacturing

Mechanical specification:

MODEL	Full Scale [F.S.] (bar)	Burst pressure (bar)
▣ ma18i – 05	0...5	12
▣ ma18i – 10	0...10	25
▣ ma18i – 20	0...20	50
▣ ma18i – 50	0...50	125
▣ ma18i – 100	0...100	200
▣ ma18i – 200	0...200	400

Other ranges up to 600 bar available on request.

- ▣ Combined error (Linearity + Hysteresis) @ 25°C ≤ ± 0,3% Span [Terminal based]
- ▣ Repeatability ≤ ± 0,1% Span

(★) Except hydrofluoric acid

"monolit sensor"[®] is a Registered Trade Mark of CiTy Sensors S.A.

RoHS Compliant
Directive 2002/95/EC

Specification subject to change without prior notice

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(continued)

Electrical specification :

▣ **PRESSURE**

- | | |
|--|------------------------------|
| • Excitation voltage [V _{Supply}] | 2.7 to 5.5 Vdc (Ratiometric) |
| • Consumption | ≤ 2.2 mA at 5Vdc |
| • Load Impedance [Ω] | ≥ 10 KΩ |
| • Initial unbalance | 10% of V _{Supply} |
| • Full Scale Output signal | 90% of V _{Supply} |
| • Zero point long term stability / year @ 25°C | ± 0.2% Span, typ. |

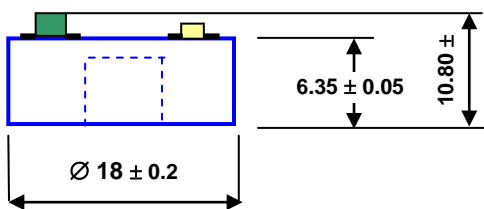
▣ **TEMPERATURE (Option)**

- | | |
|---------------------------|----------------------------------|
| • Pt 1000 Probe | 1000 Ω at 0 °C |
| • Class | B |
| • Sensitivity Coefficient | + 3850 ppm / °C |
| • Norms | Conformity to IEC 751 / EN 60751 |

Environmental specification :

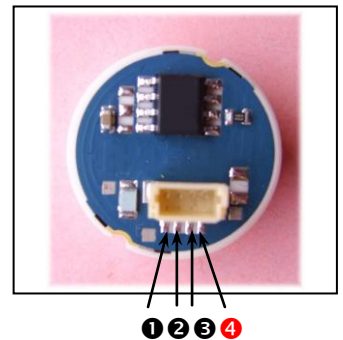
- | | |
|---|--|
| • Material in contact with fluid | Alumina Al ₂ O ₃ – 96% |
| • Operating temperature range | - 25 to + 85°C |
| • Storage temperature range | - 30 to + 85°C |
| • Residual temperature effect (Zero and Span) | ≤ ± 0.03% Span* / °C |
| | * Other, please consult us. |
| • Relative Humidity | 0~70% |
| • Total weight | ~ 7 g |

Dimensions (mm):



Electrical wiring: (4 wires / JST connector⁽¹⁾, Pitch = 1.27 mm)

- ❶ : + Excitation
- ❷ : + Output
- ❸ : Common / GND
- ❹ : PT1000 Output (option)



◆ **Ordering Code:**

ma18i -XXX-X-X

Pressure range (in bar) _____

Electrical connection	(JST standard)	0
	(Male Pins)	1
	(Other)	2
Residual temperature drift	(Standard)	C
	(Specific)	S

⁽¹⁾ **JST connector - Reference:** BM04B-SRS-TB

Important Notice:

- ▣ Refer to **Inst04a** (ms18c/ma18i - Instruction For Use)
- ▣ Additional Info : Consult **Technical Notes on website**

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