

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...5 bar up to 200 bar
Gage Pressure

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

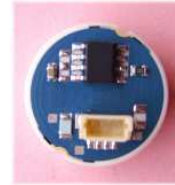
Excellent long term stability

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 (Non-Linearity + Hysteresis)¹ ≤ ± 0.3% Span [Terminal based]
- ▣ Non-Repeatability¹ ≤ ± 0.1% Span

RoHS Compliant
Directive 2002/95/EC

(★)Except hydrofluoric acid

¹According to IEC 61298-2

"monolit sensor"[®] is a Registered Trade Mark of CiTy Sensors S.A.
 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 K Ω
- Initial unbalance [% V_{Supply}] 10 ± 0.5
- Full Scale Output signal [% V_{Supply}] 90 ± 0.5
- Zero point long term stability /year at 25°C $\pm 0.2\%$ Span, typ.

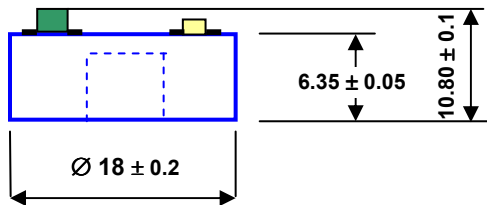
▣ **TEMPERATURE (Option)**

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

Environmental specification :

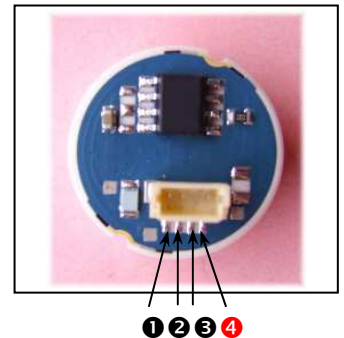
- Material in contact with fluid Alumina Al₂O₃ – 96%
- Operating temperature range - 25 to + 85°C
- Storage temperature range - 30 to + 85°C
- Residual temperature effect (Zero and Span) $\leq \pm 0.03\%$ Span* / °C
** Other, please consult us.*
- Total weight ~ 7 g

Dimensions (mm):



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

- ① : + Excitation
- ② : + Output
- ③ : Common / GND
- ④ : **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**