

O.E.M. INDUSTRIAL PRESSURE SENSOR
Programmable 0.5 – 4.5 Vdc Output Signal
ma18e Model

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

18 mm Diameter
0...5 bar up to 200 bar
Gage Pressure

Operating temperature range from - 40 up to + 135 °C

Excellent long term stability

Direct on board Electronics

Monolithic sensor structure

All applications
All aggressive fluids (★)

The ma18e “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) |
|---------------|----------------------------|-------------------------|
| ▣ ma18e – 05 | 0...5 | 12 |
| ▣ ma18e – 10 | 0...10 | 25 |
| ▣ ma18e – 20 | 0...20 | 50 |
| ▣ ma18e – 50 | 0...50 | 125 |
| ▣ ma18e – 100 | 0...100 | 200 |
| ▣ ma18e – 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-Repeatability*¹ ≤ ± 0.1% Span

(★)Except hydrofluoric acid

¹According to IEC 61298-2

“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

Oct. 12 Issue

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(continued)

Electrical specification :

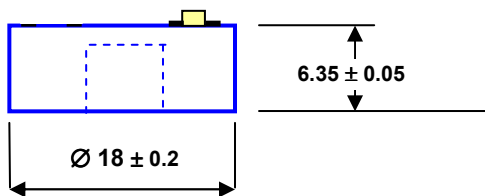
▣ **PRESSURE**

- | | |
|--|------------------------------|
| • Excitation voltage [V_{Supply}] | 2.7 to 5.5 Vdc (Ratiometric) |
| • Consumption | ≤ 2.2 mA at 5 Vdc |
| • Load Impedance | ≥ 10 K Ω |
| • Initial unbalance [% V_{Supply}] | 10 ± 0.5 |
| • Full Scale Output signal | 90 ± 0.5 |
| • Zero point long term stability /year at 25°C | $\pm 0.2\%$ Span, typ. |

Environmental specification :

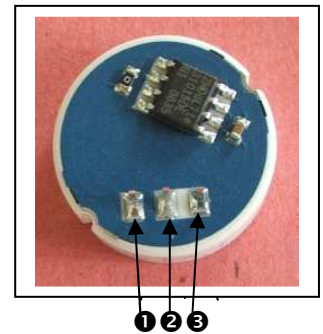
- | | |
|---|---|
| • Material in contact with fluid | Alumina $Al_2O_3 - 96\%$ |
| • Operating temperature range | - 40 to + 135°C |
| • Storage temperature range | - 50 to + 140°C |
| • Residual temperature effect (Zero and Span) | $\leq \pm 0.03\%$ Span* / °C [0°C-100°C]; $\leq \pm 0.04\%$ Span* / °C [-40°C-0°C] and [100°C-135°C]; * Other, please consult us. |
| • Total weight | ~ 7 g |

Dimensions (mm):



Electrical wiring: (3 wires, Pitch = 2,54 mm)

- ❶ : Common / GND
- ❷ : + Output
- ❸ : + Excitation



- ◆ **Ordering Code:** **ma18e -XXX-X-X**
- | | | | |
|----------------------------|-------------|---|--|
| Pressure range (in bar) | | | |
| Electrical connection | (Pads) | 0 | |
| | (Male Pins) | 1 | |
| | (Other) | 2 | |
| Residual temperature drift | (Standard) | C | |
| | (Specific) | S | |

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