

ms18c "monolit sensor"[®]
Temperature Compensated
O.E.M. PRESSURE SENSOR

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

Excellent long term stability
Efficient temperature compensation
Operating temperature range - 40 to + 135°C
High reliability level

The ms18c "monolit sensor"[®] is an **ideal Pressure sensing element** ready to be integrated inside an housing or directly mounted on board a machine. It is **fully temperature compensated** and guarantees a residual temperature effect inside the operating temperature range within $\pm 0.03\%$ FS / °C.

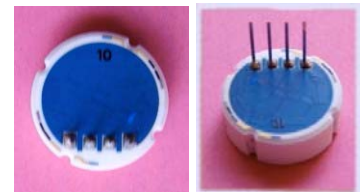
This feature results in a very stable sensor under very harsh conditions.

The internal sensing elements are fully protected against humidity, moisture and corrosion of most chemical products. It does not fear condensation⁽¹⁾ and provides a typical 3 mV/V output level allowing a very easy signal conditioning.

- ❖ **Large volume, High performance, Low cost O.E.M. applications**
- ❖ **Full internal protection against Humidity and Condensation⁽¹⁾**
- ❖ **Direct contact with aggressive media**
- ❖ **Easy integration on board industrial machines and equipments**

18 mm Diameter
0...2 to 0...200 bar
Gage/Relative Pressure

Large volume OEM applications
All aggressive media (★)



▣ Scale 1:1 ▣

RoHS Compliant
Directive 2002/95/EC

◆ **Main Applications : Pneumatic, hydraulic, medical equipments, air compressors, refrigeration systems, domestic appliances, battery powered instruments ...**

Mechanical specification :

MODEL	Rated Range (bar)	Burst Pressure (bar)	Full Scale Output Signal (mV/V)	
			Min.	Max.
• ms18c – 2	0...2	4	2.0	3.7
• ms18c – 5	0...5	12.5	2.4	3.6
• ms18c – 10	0...10	25	2.4	3.6
• ms18c – 20	0...20	50	2.4	3.6
• ms18c – 50	0...50	125	2.4	3.6
• ms18c – 100	0...100	200	2.3	3.2
• ms18c – 200	0...200	400	1.6	2.8

Combined Error (Linearity + Hysteresis) $\leq \pm 0.3\%$ FS [Terminal based]
 Repeatability $\leq \pm 0.1\%$ FS

(1) Refer to Technical Note # *Inst04_ms18c - Instructions for Use*
 (★) Except hydrofluoric acid

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 Specification subject to change without prior notice

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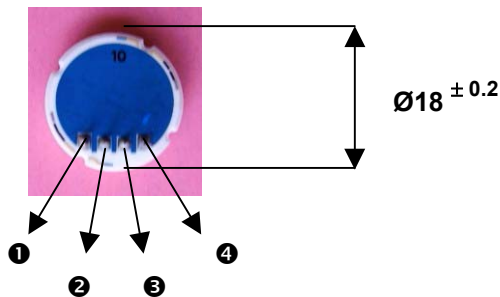
Electrical specification :

- | | |
|--|--|
| • Maximum excitation voltage | 30 Vdc (10 Vdc typ.) |
| • Bridge Impedance | 11 K Ω \pm 30% |
| • Initial zero unbalance | $\leq \pm 0.2$ mV/V |
| • Dielectric strength | > 2 KV |
| • Zero point Long Term Stability @ 20 °C | $\pm 0.2\%$ FSO, typ. (non cumulative versus time) |

Environmental specification :

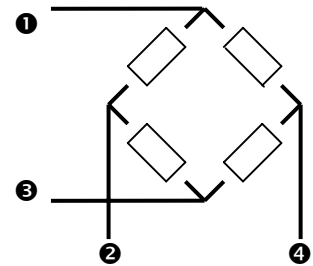
- | | |
|---|--|
| • Material in contact with fluid | Alumina Al ₂ O ₃ – 96% |
| • Operating Temperature Range | - 40 up to + 135°C |
| • Storage Temperature Range | - 50 up to + 150°C |
| • Residual Temperature Effects (Zero & Sensitivity) | $\leq \pm 0.03$ % FS / °C [Ranges 2 up to 100 bar] |
| • | $\leq \pm 0.04$ % FS / °C [Range 200 bar] |
| • Relative Humidity ⁽¹⁾ | 0 - 100% |
| • Sensor Weight | < 7 g |

Dimensions (mm) : Height = 6.35 \pm 0.05



Electrical Wiring :

- ① : + Excitation
- ② : - Output
- ③ : - Excitation
- ④ : + Output



Remark: Other electrical connection upon request

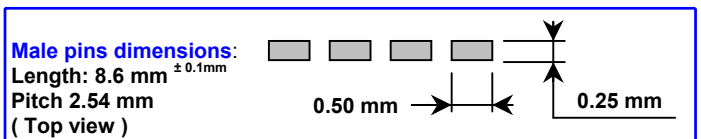
① to ④ = Printed tinned pads
 or 4 male pins for electrical connection
 ■ ⁽¹⁾ Refer to Technical Note # *Inst04*
ms18c - Instructions for Use
 ➤ Download TN on www.citysensors.com



◆ **Ordering information*:** ms18c – xxx – x

Range (in bar) _____
 Electrical Connection _____
 0 = Tinned pads
 1 = Male pins

*Examples :
 ms18c – 020 – 0 → Sensor 20 bar without male pins
 ms18c – 100 – 1 → Sensor 100 bar with male pins



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