

ms18u "monolit sensor"® O.E.M. PRESSURE SENSOR

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

18 mm Diameter
0...2 to 0...600 bar
Gage/Relative Pressure

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

Large volume OEM applications
All aggressive media (★)

The ms18u "monolit sensor"® is an ideal Pressure sensing element ready to be integrated inside an housing or directly mounted on board a machine. The Al₂O₃ ceramic substrate ensures an excellent chemical resistance against corrosion of many aggressive media, like solvents and acids. This feature and the wide temperature range make the ms18u suitable for a broad set of application fields and environmental conditions. The ms18u provides a typical 2mV/V-3 mV/V output level allowing a very easy signal conditioning.



▣ Scale 1:1 ▣

- ❖ Large volume, High performance, Low cost O.E.M. applications
- ❖ Wide pressure measuring range, up to 600 bar
- ❖ Direct contact with aggressive media
- ❖ Easy integration on board industrial machines and equipment

**RoHS 2
Compliant**

◆ Main Applications : Pneumatic, hydraulic, medical equipment, 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.
• ms18u – 2	0...2	5	1.6	4.2
• ms18u – 5	0...5	12.5	1.6	4.2
• ms18u – 10	0...10	25	2.3	4.7
• ms18u – 20	0...20	50	2.4	4.8
• ms18u – 30	0...30	60	2.9	4.9
• ms18u – 50	0...50	125	2.4	4.4
• ms18u – 100	0...100	200	2.0	3.6
• ms18u – 200	0...200	400	1.6	2.8
• ms18u – 400	0...400	600	1.6	2.8
• ms18u – 600	0...600	800	1.6	2.8

Combined Error (Non-Linearity + Hysteresis)¹ ≤ ± 0.3% FS [Terminal based] for all the ranges except 2 bar

≤ ± 0.5% FS [Terminal based] for 2 bar range

Non-Repeatability¹ ≤ ± 0.1% FS

(★) Except hydrofluoric acid

¹According to IEC 61298-2

Specification subject to change without prior notice Specification subject to change without prior notice

October 2022

**ms18u "monolit sensor"®
O.E.M. PRESSURE SENSOR**

(Continued)

Electrical specification :

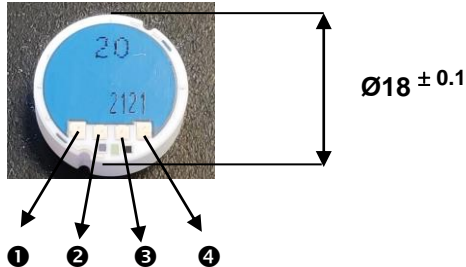
- | | |
|--|---|
| • Maximum excitation voltage | 30 Vdc (10 Vdc typ.) |
| • Bridge Impedance | 11 KΩ ± 30% |
| • Initial zero unbalance | ≤ ± 0.2 mV/V |
| • Dielectric strength | > 2 KV |
| • Zero point Long Term Stability @ 20 °C | ± 0.2% FSO, typ. (not cumulative versus time) |

Environmental specification :

- | | |
|----------------------------------|--|
| • Material in contact with fluid | Alumina Al ₂ O ₃ – 96% |
| • Operating Temperature Range | - 40°C up to + 135°C |
| • Storage Temperature Range | - 50°C up to + 150°C |
| • Zero Thermal shift | ≤ ± 4μV/V/°C |
| • Sensitivity Thermal shift | ≤ ± 0.02%/°C |
| • Sensor Weight | < 7 g |
| • Humidity range | < 95% RH (no condensation) ** |

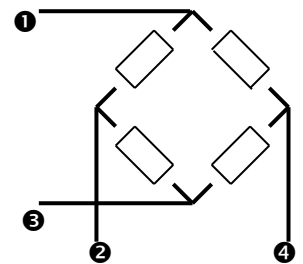
** additional coating available on request

Dimensions (mm) : Height = 6.35 ± 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



Upon request:
Brass Mounting Kit for sensor test
(Standard thread: 1/4 BSP male)

◆ **Ordering information: ms18u – XXX – X**

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

*Examples :

- ms18u – 020 – 0 → Sensor 20 bar *without* male pins
- ms18u – 100 – 1 → Sensor 100 bar *with* male pins

