

MRA22

OEM Flush Diaphragm Piezo-resistive Pressure Sensor

MeasureX

Features

- Suitable for viscous and suspension fluids
- Pressure Measurement Range of -1 to 350bar (100 bar for 2" clamp)
- Wide Range of Media Compatibility
- Low Static and Thermal Errors



Description

MRA22 series with SS316L flush type diaphragm is a rugged Piezo-resistive silicon technology based pressure sensing element suitable for OEM applications in harsh environments. This compact pressure sensor offers great flexibility and reliability for a wide range of applications with highly competitive pricing.

MRA22 is available in pressure ranges from -1 to 100bar for 2" clamp and 350 bar for G1/2" connection with an output of mV. It is suitable for pressure measurement of gases & liquids compatible with SS316L. While the standard Precision is 0.5% FS, you can optionally get a precision of 0.25% FS. It finds applications in food and beverage industries among many others.

The robust construction of MRA22 with its high performance makes it ideal for demanding long term applications.

Applications

- Food and beverage industries
- Pharmaceutical industries
- General industrial applications
- Process control systems
- Chemical industries
- Agricultural equipment
- Hydrology research
- Hydraulic and pneumatic pumps

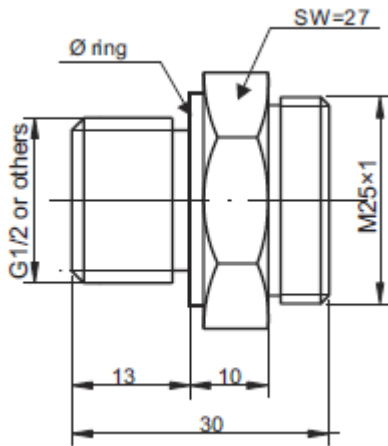
Technical Specifications

- **Pressure media:** all fluids compatible with SS316L
- **Ranges:** -1 to 100bar(2" clamp)
-1 to 350 bar (G1/2 and NPT1/2)
- **Pressure references:** Gauge, Sealed Gauge, Absolute
- **Overpressure rating:** 200% FS
- **Excitation:** 1.5mA(standard) or 10VDC
- **Output signals:** ~70mV (Typical)
- **Precision:** 0.5% FS (standard), 0.25% FS (for the range > 1bar), combined LRH error
- **Long term stability:** <0.2% FS/year
- **Zero offset:** $\leq \pm 2\text{mV}$
- **Life cycle:** $> 10^8$ cycles
- **Response time:** $\leq 1\text{ms}$
- **Compensated temp. range:** 0 to 60°C
- **Operating temp. range:** -40 to +120°C
- **Media Temperature range:** -40 to 120°C
- **Temp. coefficient of zero:** 0.02% FS /°C
- **Temp. coefficient of span:** 0.02% FS /°C
- **Input / output resistance:** 2-6kΩ
- **Insulation resistance:** 100MΩ @ 50VDC
- **Electrical connection:** 4- wire
- **Process connection:** G1/2, 2" clamp or others
- **Diaphragm materials:** SS316L
- **Sealing:** fluoro-rubber sealing ring
- **Filled oil:** silicon oil or olive oil (for sanitary applications)
- **Vibration:** 20g (20 to 5000Hz)

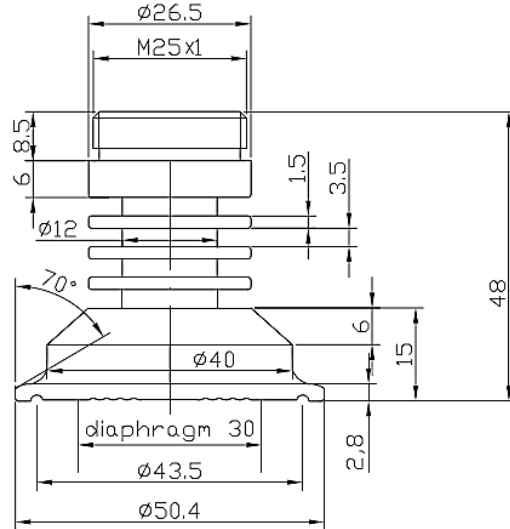
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Dimensions

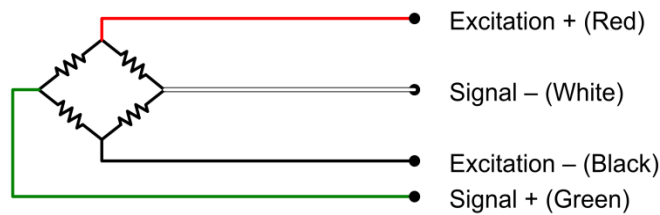


MRA22 with 1/2" process connection



MRA22 with 2" clamp process connection

Connection Diagrams



4-wire connection

Ordering Code

| | | | | | | | |
|--------------|--------------|--|--------------------------|-----------------------|-------------|----------------|--|
| MRA22 | | | | | | | |
| | Range | 0.2, 0.35, 1, 2.5, 4, 6, 10, 16, 25, 60, 100, 200, 300, 350 bar or other ranges in bar or psi | | | | | |
| | | Pressure Reference | | | | | |
| | | VG (vented gauge) | SG (sealed gauge) | Abs (absolute) | | | |
| | | Precision ± | | | | | |
| | | 0.5% FS | | | 0.25% FS | | |
| | | Output Signal | | | | | |
| | | 70mV | | | | | |
| | | Process Connection | | | | | |
| | | G1/2 | 1/2 NPT | 2" Clamp | | | |
| | | Filled Oil | | | | | |
| | | Silicon | | | | | |
| | | Olive | | | | | |
| MRA22 | 60bar | SG | 0.5% | 70mV | G1/2 | Silicon | |

Note: All specifications are subject to change without prior notice

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