

Model PM310 Food and Beverage Industry



Features

- Measuring ranges from 1 bar to 100bar
- Absolute, gauge and sealed gauge
- Accuracy: $\pm 0.25\%$ FSO or $\pm 0.5\%$ FSO
- Calibrated and temperature compensated
- Flush diaphragm construction
- Piezoresistive pressure sensor design
- Variety of Pressure & Electrical connections
- Output 4...20mA, 0...10V, 0...5V and others

Product Overview

PM310 is made from high-quality silicon piezoresistive chip. All process connections of the flush pressure transmitter are made of stainless steel, fully welded and isolate the process medium from the pressure measuring instrument via a positive seal. The PM310 is precision engineered to fit food, pharmaceutical and chemical liquid pressure measurement.

A wide range of process connection and electrical connection options are available to meet almost requirement.

Standard Pressure Ranges

| Nominal pressure | gauge | sealed gauge | absolute |
|------------------|-------|--------------|----------|
| 0...1bar | ● | | ● |
| 0...1.6bar | ● | | ● |
| 0...2.5bar | ● | | ● |
| 0...4bar | ● | | ● |
| 0...6bar | ● | | ● |
| 0...10bar | ● | ● | ● |
| 0...16bar | ● | ● | ● |
| 0...25bar | ● | ● | |
| 0...60bar | | ● | |
| 0...100bar | | ● | |

Other pressure ranges available. Please consult the factory.

Applications

- Process control systems
- Food and beverage
- Medical
- Papermaking

Flush Diaphragm Pressure Transmitter

Performance Specifications

| Parameter | Value | Units | Notes |
|--------------------------------|--|--------|----------------|
| General | | | |
| Pressure Range | 0-1,....,100 | bar | 1bar=14.5psi |
| Overpressure | 1.5xFS | bar | |
| Environmental | | | |
| Operating Temperature Range | -20 to +85(standard), -20 to +150 | °C | -4°F to 185°F |
| Compensated Temperature Range | -10 to +70 | °C | 14°F to 158°F |
| Storage Temperature Range | -40 to +125 | °C | -40°F to 257°F |
| Vibration | 10 | g | 20 to 2000Hz |
| Shock | 100 | g | 10ms |
| Cycles | 10x10 ⁵ | cycles | |
| Electrical @25°C(77°F) | | | |
| Output Signal | 4...20mA 0...5Vdc 1...5Vdc 0...10Vdc 0.5...4.5Vdc(ratiometric) | | |
| Power Supply(Vs) | 12...36Vdc 12...36Vdc 12...36Vdc 15...36Vdc 5Vdc | | |
| Load Resistance | <(Vs-12)/0.02A (For current output), >10kΩ (For voltage output) | | |
| Insulation Resistance | 100MΩ@50Vdc | | |
| Physical Specifications | | | |
| Media Compatibility | All media compatible with 316L stainless steel | | |
| Housing | 304 stainless steel | | |
| Diaphragm | 316L stainless steel | | |
| Seal Ring | Viton or NBR | | |
| Oil Filling | Silicone oil | | |
| Protection | IP65(Standard) | | |
| Net Weight | Approx.285g | | |

| Parameter | Minimum | Typical | Maximum | Units | Notes |
|---------------------|---------|---------|---------|-----------|-------|
| Performance | | | | | |
| Accuracy | 0.1 | 0.25 | 0.5 | %FSO | 1,2 |
| Temp Coeff - Zero | | ±1.5 | ±2 | %FSO | 3 |
| Temp Coeff - Span | | ±1.5 | ±2 | %FSO | 3 |
| Long-Term Stability | | ±0.2 | ±0.3 | %FSO/year | 1 |

Notes

- All values measured at 25°C(77°F)
- Including non-linearity, hysteresis and repeatability.
- 10°C to 70°C(14°F to 158°F) with reference to 25°C(77°F).

The listed specifications and dimensions are subject to change without prior notice.

Connection Diagrams

Connector DIN43650



| | 2-wire(current) | 3-wire(voltage) |
|---------|-----------------|-----------------|
| Supply+ | 1 | 1 |
| Signal+ | 2 | 3 |
| Gnd | - | 2 |

Cable outlet

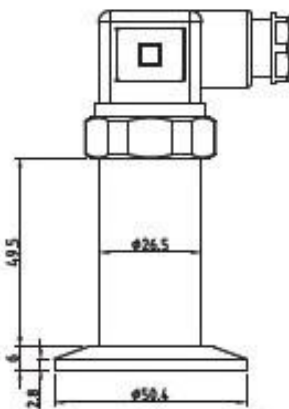


| | 2-wire(current) | 3-wire(voltage) |
|---------|-----------------|-----------------|
| Supply+ | red | red |
| Signal+ | black | green |
| Gnd | - | black |

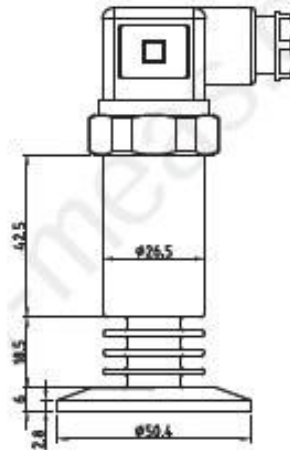
Flush Diaphragm Pressure Transmitter

Dimensions (in mm)

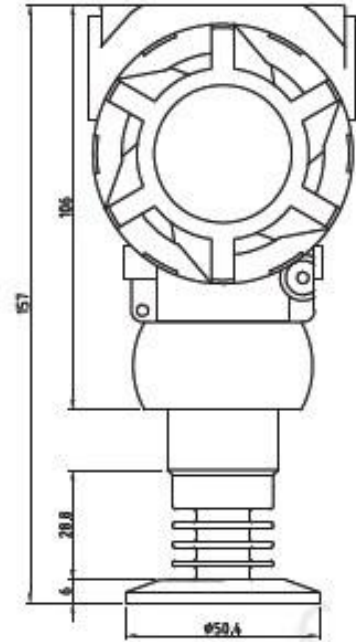
Connector DIN43650
Operating Temperature Range
-20 to +85°C



Connector DIN43650
Operating Temperature Range
-20 to +150°C



2088 housing
Operating Temperature Range
-20 to +150°C



Ordering Information

| Option1: Model | | | | | | | |
|--------------------------------|---|------|------------------|----|----|----|--|
| PM310 | Flush Diaphragm Pressure Transmitter | | | | | | |
| Option2: Pressure Ranges | | | | | | | |
| 0010 | 0...1bar | 0250 | 0...25bar | | | | |
| 0016 | 0...1.6bar | 0400 | 0...40bar | | | | |
| 0025 | 0...2.5bar | 0600 | 0...60bar | | | | |
| 0040 | 0...4bar | 1000 | 0...100bar | | | | |
| 0060 | 0...6bar | Cxxx | Customized range | | | | |
| 0100 | 0...10bar | | | | | | |
| 0160 | 0...16bar | | | | | | |
| Option3: Pressure Type | | | | | | | |
| G | gauge | | | | | | |
| A | absolute | | | | | | |
| S | sealed gauge | | | | | | |
| Option4: Output Signal | | | | | | | |
| 42 | 4...20mA | | | | | | |
| 05 | 0...5Vdc | | | | | | |
| 15 | 1...5Vdc | | | | | | |
| 10 | 0...10Vdc | | | | | | |
| 45 | 0.5...4.5(ratiometric) | | | | | | |
| Option5: Accuracy | | | | | | | |
| 02 | 0.25%FSO | | | | | | |
| 05 | 0.5%FSO | | | | | | |
| Option6: Electrical Connection | | | | | | | |
| DL | Connector DIN43650, Operating Temperature Range:-20 to +85°C | | | | | | |
| DH | Connector DIN43650, Operating Temperature Range:-20 to +150°C | | | | | | |
| H | 2088 housing, Operating Temperature Range:-20 to +150°C | | | | | | |
| - | - | | | | | | |
| Option7: Mechanical Connection | | | | | | | |
| K2 | 2 inch clamp flange in terface(Ø50.4mm) | | | | | | |
| K25 | 2.5 inch clamp flange interface(Ø64mm) | | | | | | |
| Nx | Customized | | | | | | |
| PM310 | 0010 | G | 42 | 02 | DL | G2 | Examples of Ordering Code: PM310-0010-G-42-02-D-K2 |