

PFMH

Fully welded pressure sensor with hygienic connection and touch screen

PFMH-64.###R.A1153.77202.2000

Overview

- Flush membrane with 3-A sanitary standards (FDA-compliant)
- Resistant to all common CIP cleaning media and SIP-capable
- Available for high media temperatures (300 °F)
- Built in graphical display (CombiView DFON) and programmable by touch screen



Technical data

Performance characteristics

| | |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pressure type | Relative (gauged) |
| Compensated temperature range | -40 ... 185 °F |
| Long term stability | ≤ 0.1 % FSR/a , IEC 770 6.3.2 |
| Max. measuring error | ± 0.25 % FSR , up to 4:1 turndown ratio Including zero-point and span error, non-linearity (by terminal base line), hysteresis and non-repeatability (EN 61298-2) For turndown, multiply this value by the applied turndown ratio |
| Max. turndown ratio | 10 : 1 |
| Measuring range | 0 ... 140 "H2O 0 ... 415 "H2O 0 ... 830 "H2O 0 ... 1385 "H2O |
| Standard error of measurement (BFSL) | ± 0.1 % FSR , up to 4:1 turndown ratio Including non-linearity, hysteresis and non-repeatability according BFSL For turndown, multiply this value by the applied turndown ratio |
| Min. measuring span | 20 "H2O |
| Power-up time | < 10 s |
| Rise time (10 ... 90 %) | ≤ 0.3 s |
| Sample time | ≤ 0.3 s |
| Temperature coefficient | ≤ 0.05 % FSR/10 K , measuring span ≤ 0.05 % FSR/10 K , zero point |

Process conditions

| | |
|-----------------------|---------------------------------------------|
| Process temperature | 0 ... 265 °F |
| Process pressure | Refer to section "Operating conditions" |
| SIP/CIP compatibility | < 60 min, @ medium temperature up to 300 °F |

Process connection

| | |
|---------------------|-----------------------------------------|
| Connection variants | Refer to section "Dimensional drawings" |
|---------------------|-----------------------------------------|

Process connection

| | |
|-------------------------------------------|--------------------|
| Wetted parts material, process connection | AISI 316L (1.4404) |
| Wetted parts material, membrane | AISI 316L (1.4435) |

Surface roughness (in contact with medium)

| | |
|--------------------|-------------|
| Membrane | Ra ≤ 0.4 µm |
| Process connection | Ra ≤ 0.8 µm |
| Weld joint | Ra ≤ 0.8 µm |

Ambient conditions

| | |
|---------------------------------------|----------------------------------------------------------------|
| Operating temperature range | -40 ... 185 °F |
| Storage temperature range | -40 ... 185 °F |
| Degree of protection (EN 60529) | IP 69K , with connector M12 |
| Humidity | < 98 % RH , condensing |
| Vibration | DNV high vibration strain, class B |
| Vibration (sinusoidal) (EN 60068-2-6) | 1.6 mm p-p (2 ... 25 Hz), 4 g (25 ... 100 Hz), 1 octave / min. |

Output signal

| | |
|-----------------------|------------------------------------------------------------|
| Current output | 4 ... 20 mA 20 ... 4 mA , programmable |
| Load resistance | RQ = (U _{supply} - 10 V)/20 mA |
| Insulation resistance | > 100 MΩ , 500 V DC |
| Sensor failure | 20 ... 23 mA , programmable 3.6 ... 4 mA , programmable |

Housing

| | |
|--------------|-----------------------------------------|
| Style | Rear process connection |
| Overall size | Refer to section "Dimensional drawings" |
| Material | AISI 304 (1.4301) |

Electrical connection

| | |
|-----------|-------------------------------|
| Connector | M12-A, 5-pin, stainless steel |
|-----------|-------------------------------|

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Technical data

Power supply

Voltage supply range 10 ... 35 V DC

Compliance and approvals

Hygiene 3-A (74-07)
FDA

Compliance and approvals

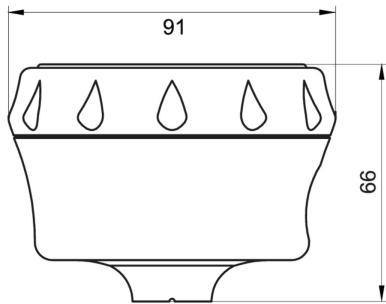
EMC EN 61000-6-2
EN 61000-6-3

Operating conditions

| Measuring range ("H2O) | Proof pressure ("H2O) | Burst pressure ("H2O) |
|------------------------|-----------------------|-----------------------|
| 0 ... 140 | 1204 | 2409 |
| 0 ... 415 | 1204 | 2409 |
| 0 ... 830 | 6022 | 12044 |
| 0 ... 1385 | 6022 | 12044 |

Dimensional drawings (mm)

Housing



FlexHousing with rear process connection

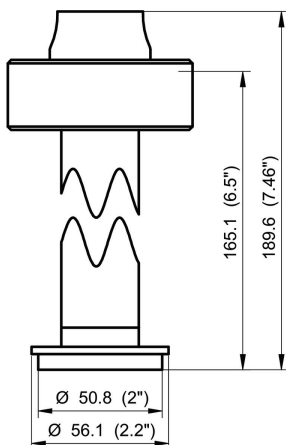


FlexHousing front view



Optional display layout

Process connection



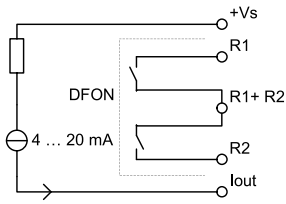
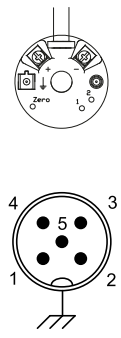
Anderson-Negele Type SL Long, 6 1/2", membrane Ø 19.5 mm (BCID: Y05)

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Electrical connection

| Equivalent circuit | Electrical connection | Function | Pin assignment |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------|----------------|
|  |  | +Vs | + |
| | | Iout | - |
| | | +Vs | 1 |
| | | Iout | 3 |
| | | R1 | 5 |
| | | R2 | 4 |
| | | R1 + R2 | 2 |

Ordering information

Ordering key - Configuration possibilities see website

| | PFMH | - | 6 | 4 | . | ### | R | . | A1 | 15 | 3 | . | 77 | 2 | 0 | 2 | . | 2 | 0 | 0 | 0 |
|--------------------------------------|------|---|---|---|---|-----|---|---|-----|----|---|---|----|---|---|---|---|---|---|---|----|
| Product | PFMH | | | | | | | | | | | | | | | | | | | | |
| Housing | | | | | | | | | | | | | | | | | | | | | |
| Stainless steel 1.4301 / AISI304 | | | | 6 | | | | | | | | | | | | | | | | | |
| Rear connection | | | | | | | | | | | | | | | | | | | | | |
| Accuracy | | | | | | | | | | | | | | | | | | | | | |
| ±0.25 % FS | | | | 4 | | | | | | | | | | | | | | | | | |
| Pressure range and unit | | | | | | | | | | | | | | | | | | | | | |
| Min 0.0 / Max 140 "H2O | | | | | | | | | S11 | | | | | | | | | | | | |
| Min 0.0 / Max 415 "H2O | | | | | | | | | S15 | | | | | | | | | | | | |
| Min 0.0 / Max 830 "H2O | | | | | | | | | S17 | | | | | | | | | | | | |
| Min 0.0 / Max 1385 "H2O | | | | | | | | | S19 | | | | | | | | | | | | |
| Kind of pressure | | | | | | | | | | | | | | | | | | | | | |
| Relative (gauged) | | | | | | | | | R | | | | | | | | | | | | |
| Output signal | | | | | | | | | | | | | | | | | | | | | |
| 4...20 mA | | | | | | | | | A1 | | | | | | | | | | | | |
| Output Connection | | | | | | | | | | | | | | | | | | | | | |
| M12-A, 5-pin | | | | | | | | | | | | | 15 | | | | | | | | |
| Material of el. connection | | | | | | | | | | | | | | | | | | | | | |
| Stainless steel, AISI 304 (1.4301) | | | | | | | | | | | | | | | | | | | | | 3 |
| Process connection | | | | | | | | | | | | | | | | | | | | | |
| Anderson-Negele Type SL Long, 6 1/2" | | | | | | | | | | | | | | | | | | | | | 77 |
| Wetted parts material | | | | | | | | | | | | | | | | | | | | | |
| Stainless steel 1.4404 / AISI 316L | | | | | | | | | | | | | | | | | | | | | 2 |
| Seal | | | | | | | | | | | | | | | | | | | | | |
| None | | | | | | | | | | | | | | | | | | | | | 0 |
| Oil filling | | | | | | | | | | | | | | | | | | | | | |
| NSF H1 listed (FDA approved) | | | | | | | | | | | | | | | | | | | | | 2 |
| Display | | | | | | | | | | | | | | | | | | | | | |
| With display, no relays activated | | | | | | | | | | | | | | | | | | | | | 2 |
| ATEX | | | | | | | | | | | | | | | | | | | | | |
| Standard safety | | | | | | | | | | | | | | | | | | | | | 0 |
| Approvals | | | | | | | | | | | | | | | | | | | | | |
| Standard approvals | | | | | | | | | | | | | | | | | | | | | 0 |
| Configuration | | | | | | | | | | | | | | | | | | | | | |
| No configuration | | | | | | | | | | | | | | | | | | | | | 0 |

The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.

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Ordering information

Ordering key - Configuration possibilities see website

Remarks orderkey

- Material no. 11228889 (S11: 0...140 "H2O)
- Material no. 11229203 (S15: 0...415 "H2O)
- Material no. 11229204 (S17: 0...830 "H2O)
- Material no. 11229205 (S19: 0...1385 "H2O)

Following has to be ordered separately:

- Weld-in adaptor: ZPW2-829 (11228672)
- Gasket: ZPX3-C5E3 (11210891)