

Model P213 Piston Flow Meter (Frequency) 0.5 cc/min to 1800 cc/min

SPECIFICATIONS

| | |
|----------------------------|--|
| Flow Range | 0.5 cc/min to 1800 cc/min |
| Accuracy (at 3 cP) | ± 0.2% of reading over a 200:1 range |
| Maximum Operating Pressure | 3000 psi (210 bar) |
| Weight | 1.0 kg |
| Recommended Filtration | 10 micron |
| Port Size(s) | 1/8" NPT, #4 SAE or manifold mount |
| Fluids | Most non-aqueous, hydrocarbon based fluids |

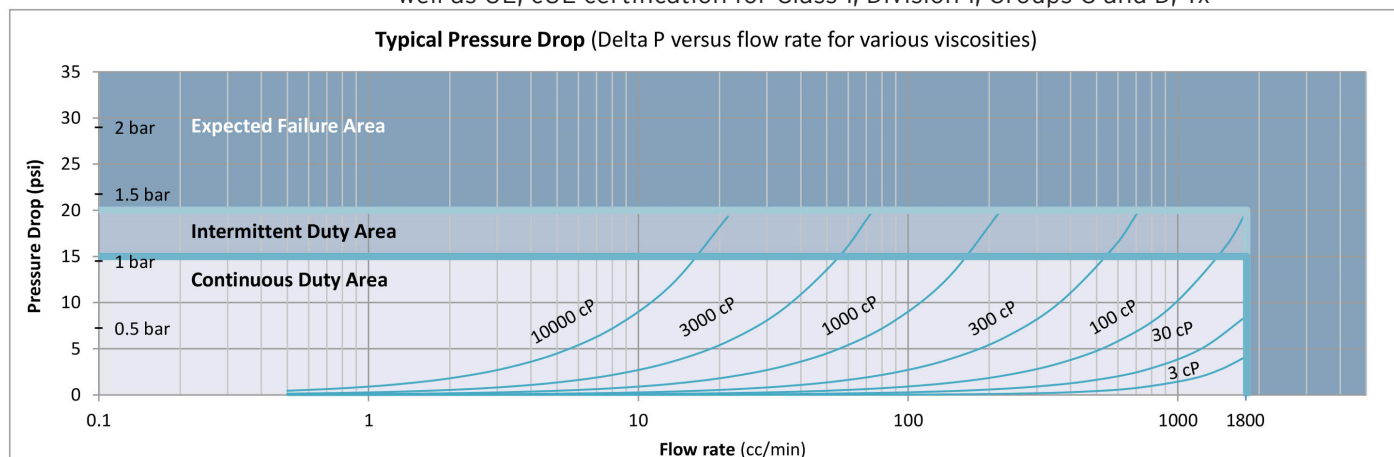


MATERIALS OF CONSTRUCTION

| | |
|----------|---|
| External | Stainless steel, type 303 |
| Wetted | Stainless steel, type 303, type 440C; Cobalt based carbide |
| O-Rings | Standard: Viton® Optional: Teflon®, Perfluoroelastomer, Neoprene |

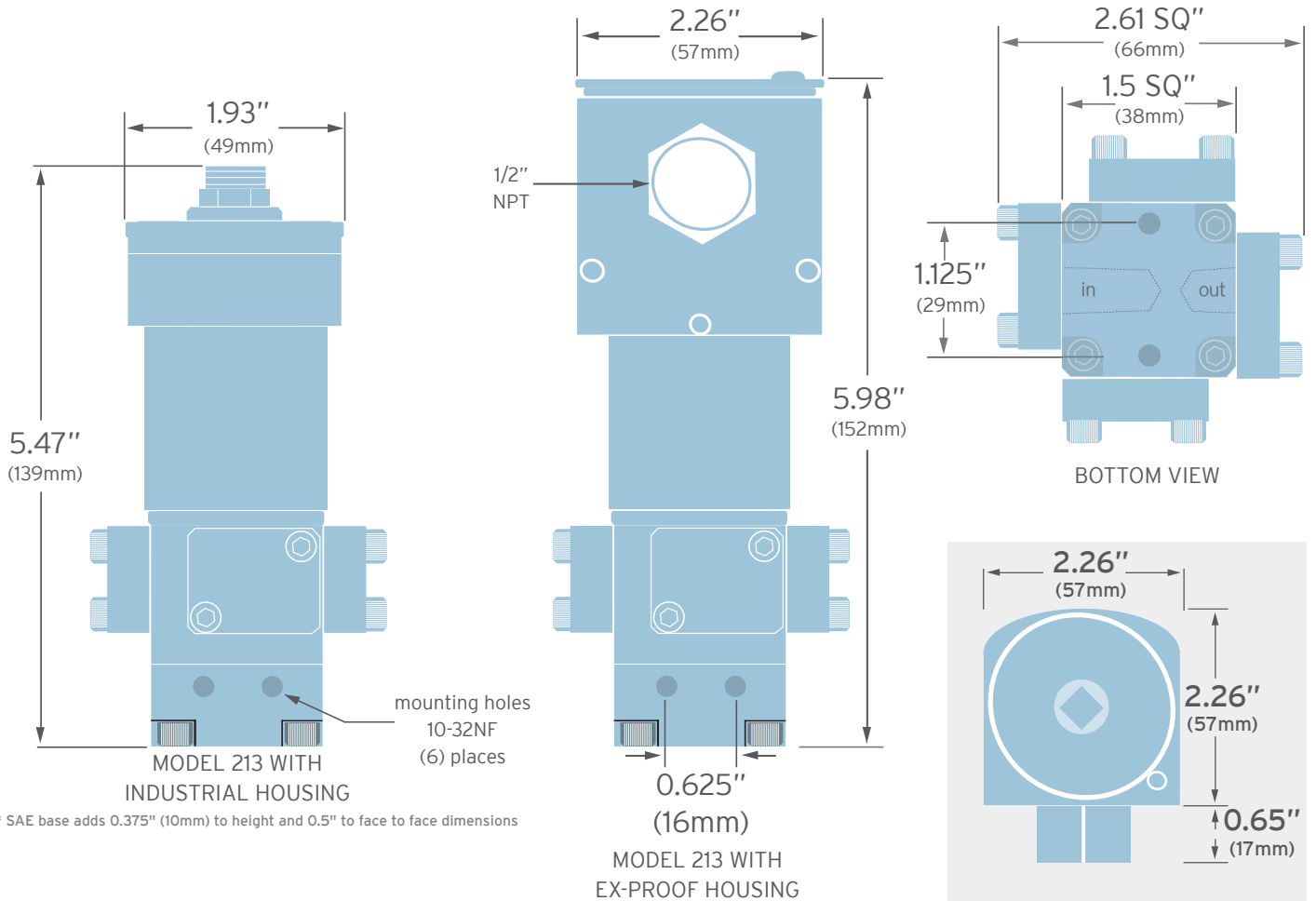
FREQUENCY TRANSMITTER

| | |
|---|--|
| Output Signal | Standard: 5 Vdc, single phase Optional: Quadrature 5 Vdc, two phase Current sinking, 20 mA max., single phase |
| K-Factor | Single Phase: 1,000 pulses/cc Two Phase: 2,000 pulses/cc, 4x decoded (500 pulses/cc/phase, 1x decoded) |
| Power Supply Requirements | 5-26 Vdc @ 30ma |
| Ambient Operational Range | -40°C to 80°C, Single piece – Two piece to 110°C |
| Metered Liquid Temp Range (based on 20° ambient) | -40°C to 90°C, Standard model -40°C to 225°C, Two piece high temperature model |
| Compliance | CE Certified, Ex-proof version available with ATEX/IECEX II 2 G Ex db IIB Tx Gb as well as UL, cUL certification for Class 1, Division 1, Groups C and D, Tx |



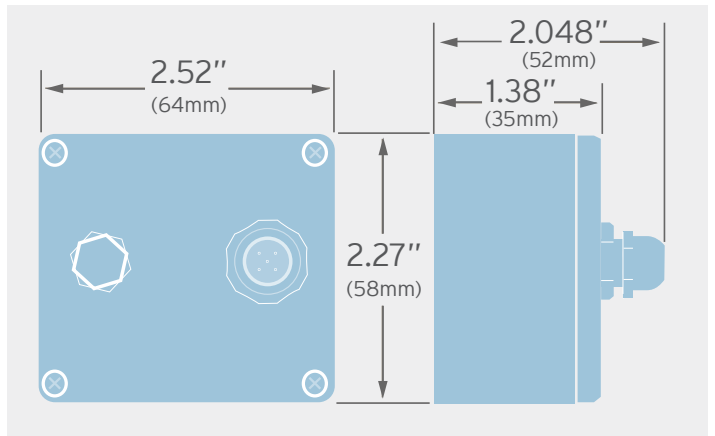
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CONNECTIVITY/DIMENSIONS (Not to scale)



ELECTRICAL CONNECTION – FREQUENCY TRANSMITTERS

| | Turck® Connector | | |
|----------------------------|------------------|-------|-------------------------|
| | PCA Label | Pin # | Mating Cable Wire Color |
| Power (+5 to 26 Vdc) | V+ | 1 | Brown |
| Common | Com | 4 | Black |
| Pulse Output | Ph A | 2 | White |
| Output Phase B (Quad only) | Ph B | 5 | Grey |
| Case Ground | Case | 3 | Blue |



REMOTE PCA ENCLOSURE FOR HIGH TEMPERATURE TRANSMITTERS
(2 meter interconnect cable, not shown)

Positive Displacement Flow Meters Piston Type, P-Series 3000 psi (210 bar) rated

Flow Meter Selections

Transmitter Selections

Model # MS / / 0 - Non-Standard Options

Bi-Directional Cal: BID

0 Transmitter Type

Max Flow Range

| | |
|----------------|------|
| 1.8 Liters/Min | P213 |
| 10 Liters/Min | P214 |
| 35 Liters/Min | P215 |

Pressure

3000 psi (210 bar) MS

Fluid Connection

| | |
|-------------------------------|---|
| NPT | 1 |
| SAE | 2 |
| Manifold | 4 |
| (Not available on model P215) | |

Seal Selection

| | |
|---------------------------|---|
| Viton® - FKM | 1 |
| Teflon® - PTFE | 3 |
| Perfluoroelastomer - FFKM | 5 |
| Neoprene | 7 |

Options

| | |
|-------------------|----|
| None | NA |
| Heat Trace Option | HT |

A
A
A
A
P
Q
P

Output Type

| | |
|---|--------------------------------------|
| A | 4-20mA Output - Powered by 24 Vdc |
| B | 4-20mA Output - Powered by 12 Vdc |
| C | 0-10 Volt Output - Powered by 24 Vdc |
| D | 0-10 Volt Output - Powered by 12 Vdc |
| N | 5V Pulse/Freq. - Powered by 5-26 Vdc |
| N | 5V Quadrature - Powered by 5-26 Vdc |
| S | Current Sinking, Single Phase |

Temperature Rating

| | |
|---|--------------------------------|
| 1 | 90°C Industrial / 75°C Haz-Loc |
| 2 | 130°C Haz-Loc, 2 Part ** |
| 3 | 225°C Industrial, 2 Part † |

Electrical Connection

| | |
|---|---------------------------------------|
| 1 | Industrial, Turck® Connector |
| 2 | Hazardous Location, 1/2 Inch Conduit* |

Signal Type

| | |
|---|------------|
| P | Pulse |
| A | Analog |
| Q | Quadrature |



* See temp chart in product manual.

** Receiver portion of 2 part transmitters are not rated Ex-Proof, consult factory.

† Not available for hazardous location use. (Exceeds 130°C temp. Limit.)
Product includes single directional calibration, bi-directional calibrations for Analog and Quadrature devices are optional.