

## 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 Sizes	1/8" NPT, #4 SAE or manifold mount
Fluids	Most non-aqueous, hydrocarbon based fluids



### MATERIALS OF CONSTRUCTION

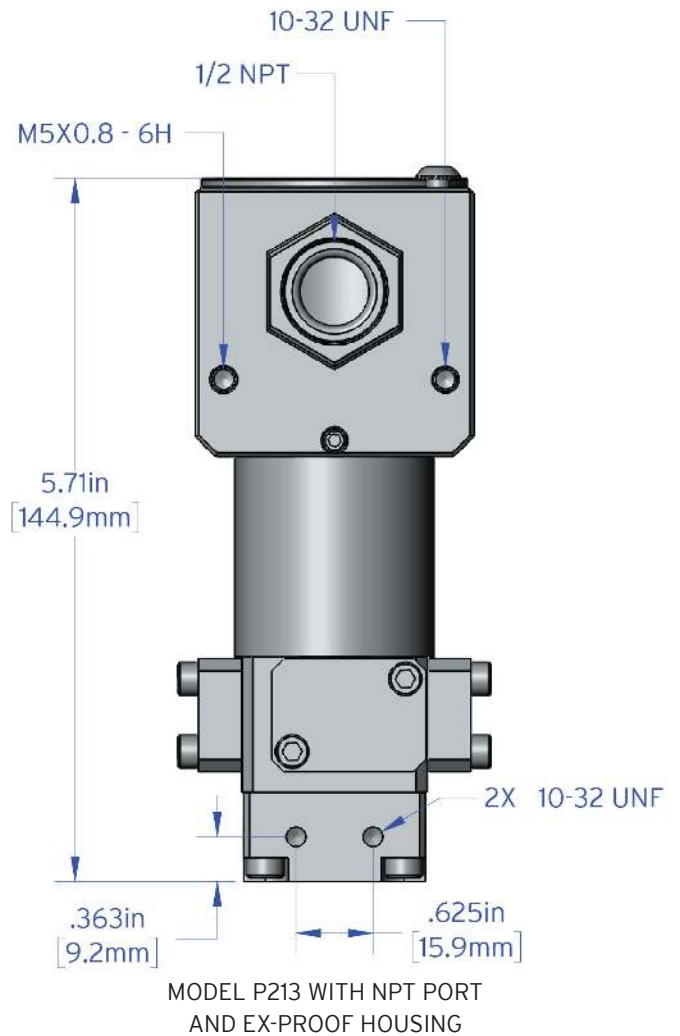
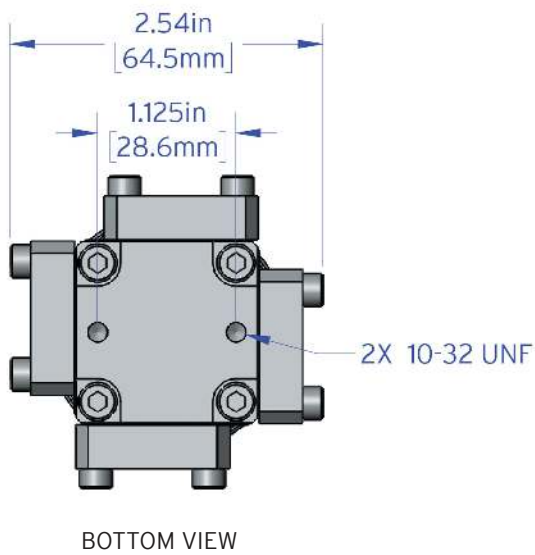
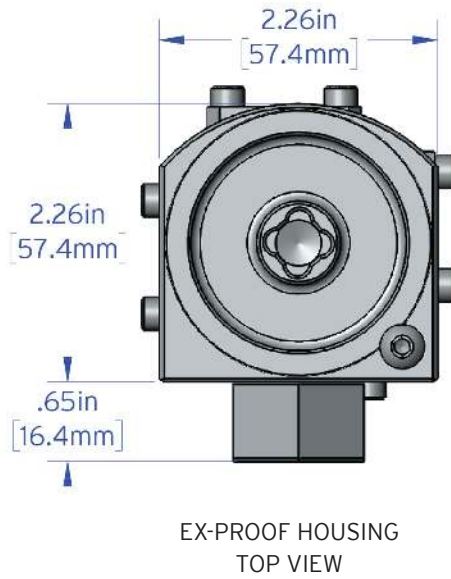
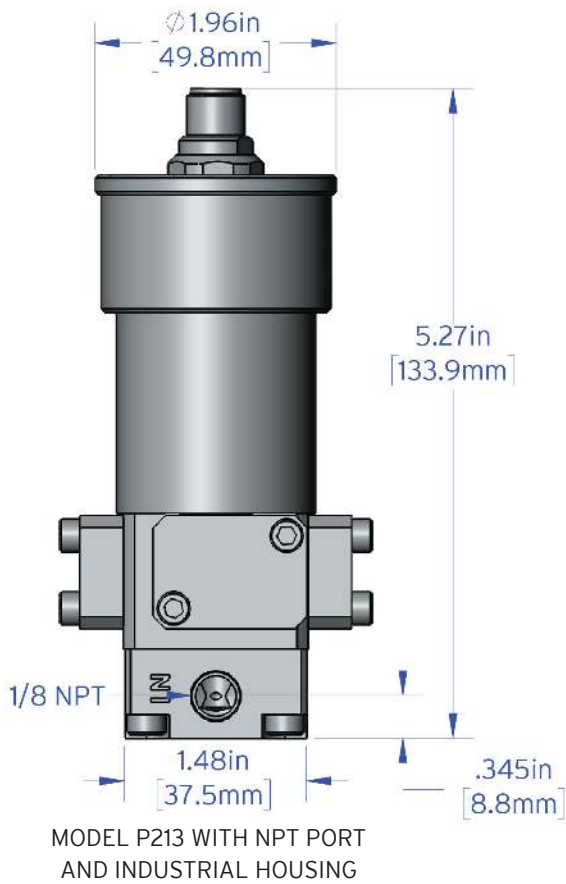
External	Stainless steel, type 303
Wetted	Stainless steel, type 303, type 440C; Cobalt based carbide
O-Rings	Standard: Viton® Optional: Teflon®, Perfluoroelastomer, Neoprene

### 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

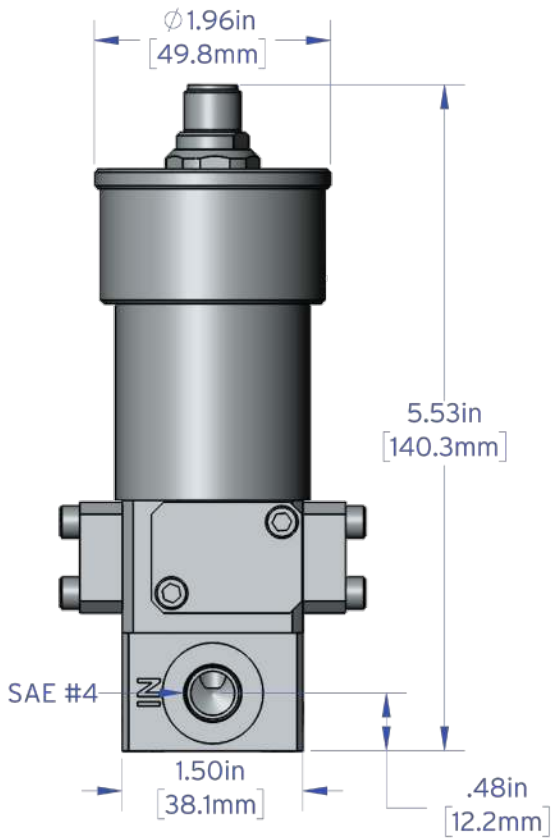
# Model P213 Flow Meter (Frequency)

DIMENSIONS (Not to scale)

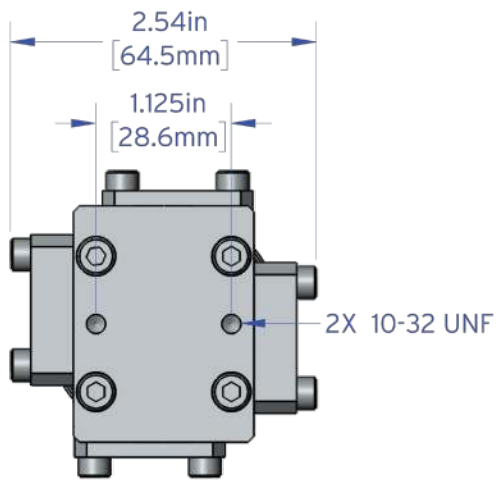


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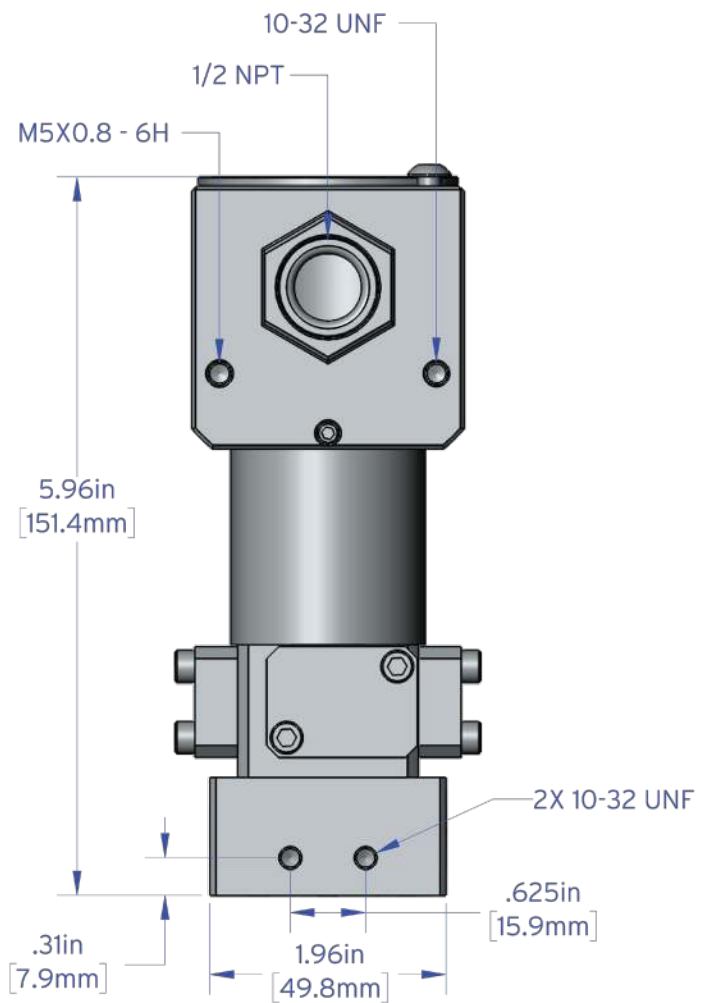
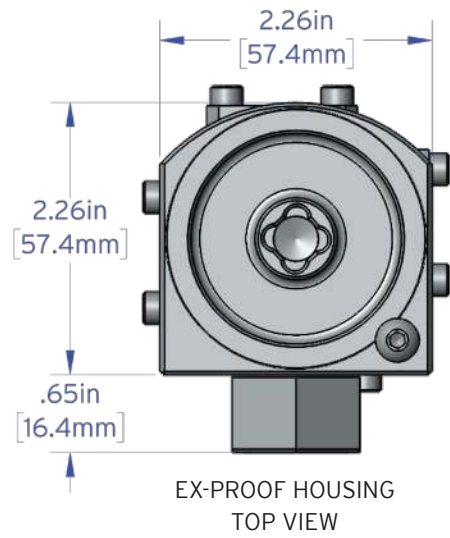
DIMENSIONS (Not to scale)



MODEL P213 WITH SAE PORT AND INDUSTRIAL HOUSING



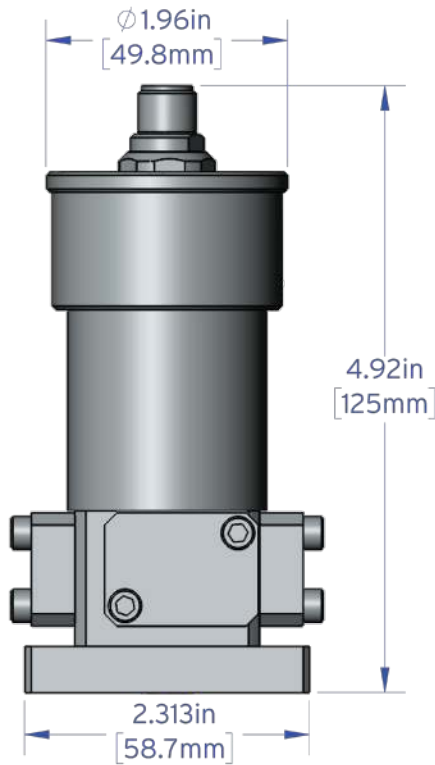
BOTTOM VIEW



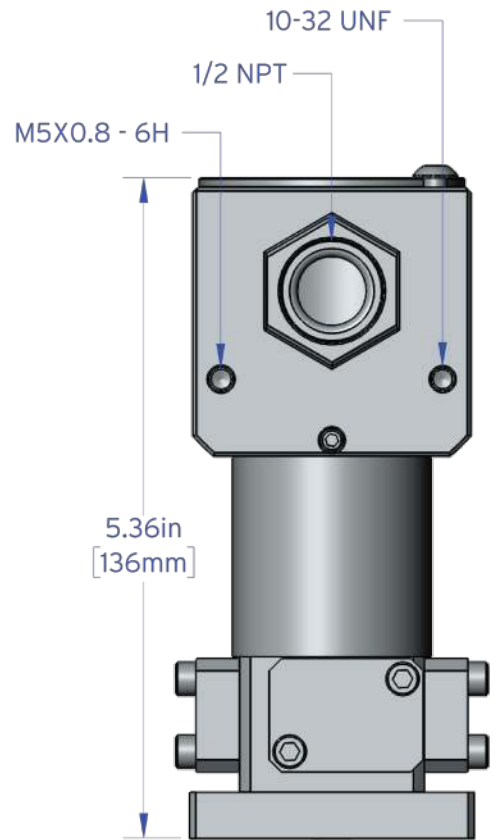
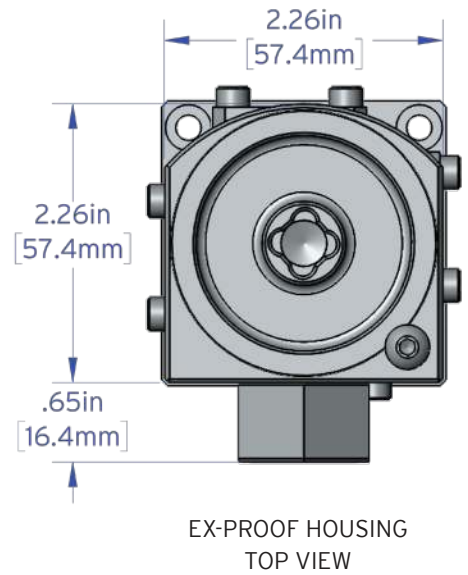
MODEL P213 WITH SAE PORT AND EX-PROOF HOUSING

# Model P213 Flow Meter (Frequency)

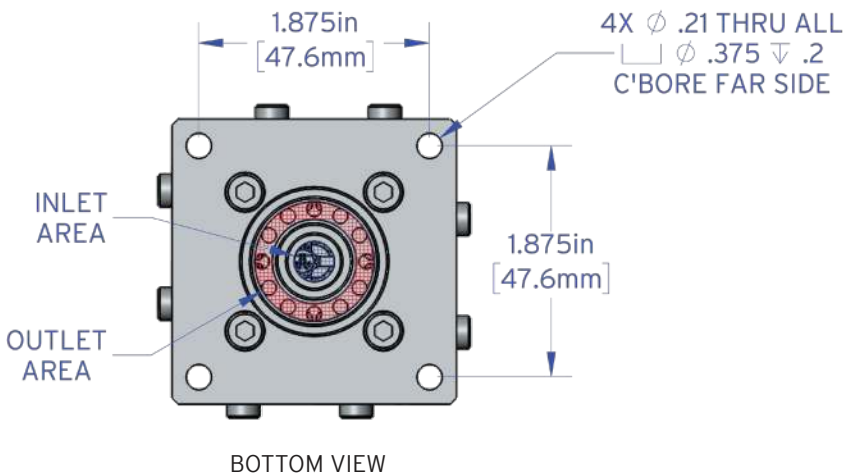
DIMENSIONS (Not to scale)



MODEL P213 WITH MANIFOLD PORT AND INDUSTRIAL HOUSING

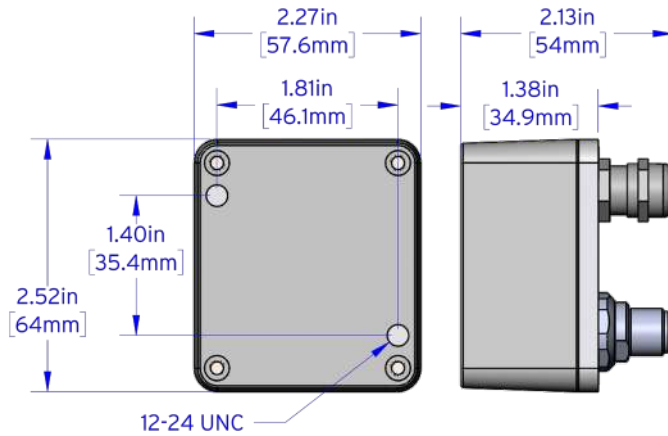


MODEL P213 WITH MANIFOLD PORT AND EX-PROOF HOUSING



# Model P213 Flow Meter (Frequency)

## DIMENSIONS (Not to scale)



REMOTE PCA ENCLOSURE FOR HIGH TEMPERATURE TRANSMITTERS  
 (Not Shown: Industrial 2 meter interconnect cable included, Ex-Proof user supplied interconnect cable required)

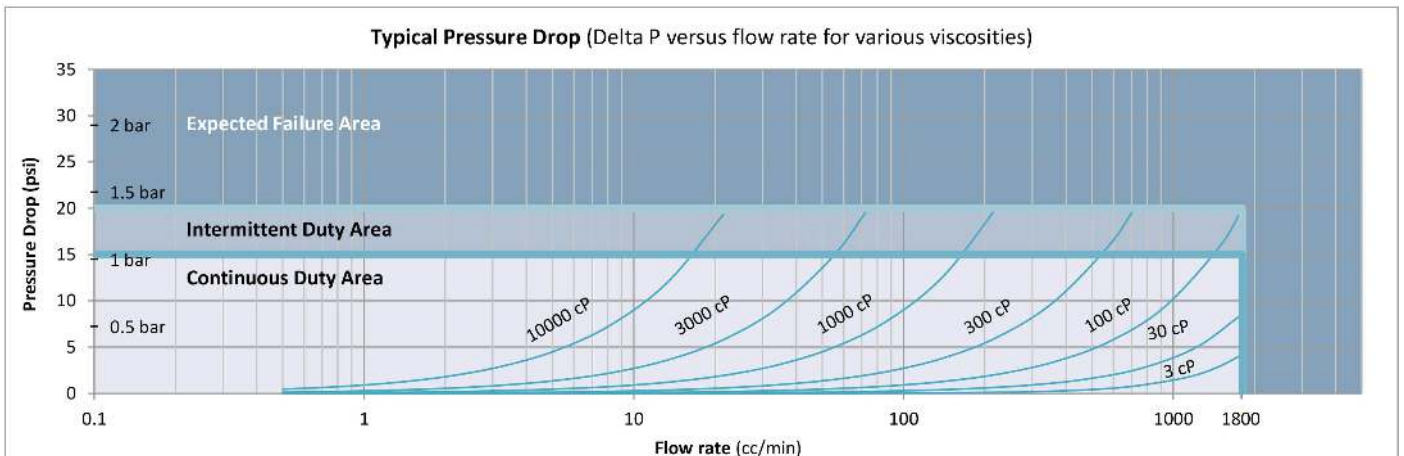
## CONNECTIVITY

### ELECTRICAL CONNECTION – FREQUENCY TRANSMITTERS

PCA Label	Turck® Connector	
	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

\* Please specify 12Vdc or 24Vdc operation

## PRESSURE DROP GRAPH



## 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.