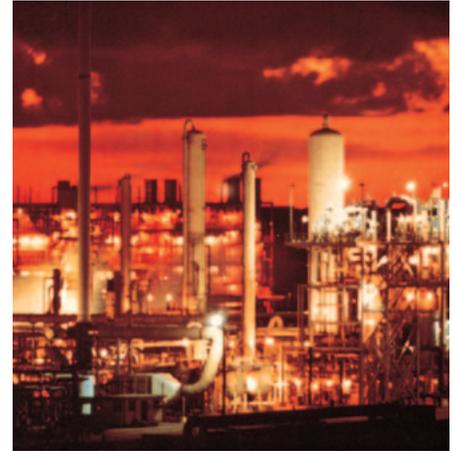


P810 Series

Lined Tube Variable Area Flow Meter



The P810 Series Metal Tube PFA lined Variable Area flow meter is a simple yet highly accurate flow meter conforming to the latest industry standards.

The meter comes with a PFA lined tube which is capable of measuring corrosive fluids and aggressive fluid media.

Additionally, it has excellent chemical resistance, impermeability and stress crack resistance.

The industry standard 250 mm face-to-face dimension on the P810 simplifies piping design, resulting in engineering and installation space savings as well as retrofit capability for other manufacturers.



Contact Information:

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Product Features:

- Standardized face-to-face dimensions for all sizes from 3/4" to 4", enables system design efficiencies
- Reinforced lining to suppress buckling, exfoliation and deformation of PFA layer
- Excellent chemical resistance, impermeability and stress crack resistance
- Scales can be produced in any volume unit or mass flow units.
- Other options include alarm contacts



ENGINEERING YOUR SUCCESS.

Specifications

Materials of Construction

Flange	316 Stainless Steel
Tapered Tube	PFA
Float Guide	PFA
Float	PFA or PTFE/PFA
Housing Support	316 Stainless Steel
Non-wetted	
Indicator	12 Aluminum Die Cast

Performance

Flow Rate Scale Ranges	
Liquid¹	
Minimum	0.6 - 5.2 Gal/min (150 - 1200 L/hr)
Maximum	88 - 220 Gal/min (19980 - 49980 L/hr)
Gas²	
Minimum	For all gas applications, consult factory
Maximum	
Turndown	10:1
Accuracy	±2.0% F.S.
Approx. Weight	5.5 - 40 lbs. (2.5 - 18 kg)
Indicator Construction	IP 65 equivalent to NEMA 12/13 (JIS C920)
Alarm Type	1 Point Reed Switch Alarm
Operating Conditions	
Max. Operating Pressure	
• At ambient temperature	479 psig (33 barg)
• At 248°F (120°C)	479 psig (33 barg)
Oper. Fluid Temp. Range	
Local Indication Model	-14°F to +248°F (-10°C to +120°C)
Oper. Ambient Temp. Range	
Local Indication Model	-13°F to +212°F (-25°C to +100°C)

¹Liquid equivalent to water density 1.0g/cm³, viscosity 1.0cp

²Gases equivalent to Air @ 0°C 1 atm

Connection Size Table

Availability of Connection Size Against Meter Size					
Meter Size		Connection Rating	1 Size Smaller than Meter	Same Size as Meter	1 Size Larger than Meter
(inch)	(mm)				
3/4	20	10K	No	Yes	Yes
		20K	No	Yes	Yes
		150Lb	No	Yes	Yes
		300Lb	No	Yes	Yes
1	25	10K	No	Yes	Yes
		20K	No	Yes	Yes
		150Lb	No	Yes	Yes
		300Lb	No	Yes	Yes
1-1/2	40	10K	No	Yes	Yes
		20K	No	Yes	Yes
		150Lb	No	Yes	Yes
		300Lb	No	Yes	Yes
2	50	10K	No	Yes	Yes
		20K	No	Yes	Yes
		150Lb	No	Yes	Yes
		300Lb	No	Yes	Yes
3	80	10K	No	Yes	Yes
		20K	No	Yes	Yes
		150Lb	No	Yes	Yes
		300Lb	No	Yes	No
4	100	10K	No	Yes	Yes
		20K	No	Yes	Yes
		150Lb	No	Yes	Yes
		300Lb	No	Yes	No

Flow Capacities

Water¹ Flow Rate Table

Meter Size		Water		Max. Pressure Drop (Water)	
(in)	(mm)	(Gal/min)	(L/h)	(psi)	(bar)
3/4	20	0.6 - 5.2	150 - 1200	1.01	0.07
1	25	3 - 15.4	700 - 3500	1.45	0.1
1-1/2	40	13.2 - 26.4	3000 - 6000	0.725	.05
2	50	22 - 66	5000 - 15000	1.3	.09
3	80	44 - 110	10000 - 25000	1.45	0.1
4	100	88 - 220	20000 - 50000	1.16	0.08

¹ Water density 1.0g/cm³, viscosity 1.0cP.

Viscosity Table

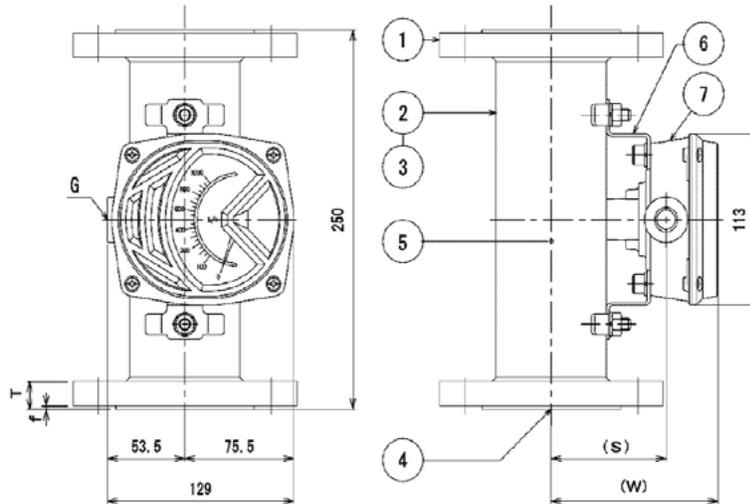
Meter Size	Upper-limit Viscosity for:	
	Assured Accuracy cP	Measurement cP
20mm	10	30
25mm	15	150
40mm	15	150
50mm	50	200
80mm	50	200
100mm	50	200

Accessories

Reed Switch Specification

Contact Type	1 point Reed Switch
Maximum Voltage	125 VAC or 100 VDC
Operating Current Capacity	10 μ A to 0.5 A
Maximum Switching Capacity	10 VA or 10 W
Suitable Wiring	0.2 to 2.5 mm ² / 24 to 12 AWG (single wire or stranded wire)
Insulation Resistance	100 M Ω or more (500 V DC)
Withstand Voltage	1500 V AC (holding time 1 min)

Dimensional Drawing



Parts/Materials

No.	Parts	Material
1	Flange	SUS316
2	Body	SUS316
3	Lining of Main Body	PFA
4	Float Guide	PFA
5	Float	PFA or PTFE/PFA
6	Housing Support	SUS316
7	Indicator	ADC12

Proper material to be selected according to the specification.

Size

Meter Size (mm)	Connection Size JIS A Size (inch)	Dimensions (mm) and (in)		Approx. Mass ¹ (kg) and (lb)
		L	W	
15	15 (1/2)	250 (9.84)	115.5 (4.55)	2.5 (5.5)
25	25 (1)	250 (9.84)	115.5 (4.55)	4.0 (8.8)
40	40 (1-1/2)	250 (9.84)	115.5 (4.55)	4.5 (9.9)
50	50 (2)	250 (9.84)	115.5 (4.55)	7.0 (15.4)
80	80 (3)	250 (9.84)	115.5 (4.55)	13.0 (28.7)
100	100 (4)	250 (9.84)	135.5 (5.33)	18.0 (39.7)

¹Approximate weights are shown for a meter with ANSI 150# flange

Application Information

Fluid Name:

Operating Density or Specific Gravity:

Viscosity:

Flow Rate

Maximum:

Operating Or Normal:

Scale Range:

Pressure

Maximum:

Operating or Normal:

Temperature

Maximum:

Operating or Normal:

Alarm Settings

Alarm 1:

Alarm 2:

Other Options

Use this Application Information form in conjunction with the Ordering Information.

Ordering Information

Use the following guide to determine the specific product number you require.

The following example describes a P810 Series DN20 3/4" flow meter with PFA wetted material, ANSI Flange 150# RF connection, code 1 internal meter size/flow rate, and with no dampener, local indicator, conduit cable entry, intrinsically safe & explosion proof construction and certification, cleaning and inspection or accessories.

Example: P811AA1AAA1A1

Model Number, Example and Options									Description	
P81	1	A	1	A	A	A	1	A	1	
Connection Size / Wetted Material	1									DN20 (3/4"), PFA
	2									DN25 (1"), PFA
	3									DN40 (1-1/2"), PFA
	4									DN50 (2"), PFA
	5									DN65 (2-1/2"), PFA
	6									DN80 (3"), PFA
	7									DN100 (4"), PFA
	Z									Special
Connection Rating / Type	A									ANSI Flange 150# RF
	B									ANSI Flange 300# RF Note: 5" & 6" are not available for this connection rating
	Z									Special
Internal Meter Size	Flow Rate Table									
					Meter Size		Water¹			
			Inch	mm	Gal/min	L/min				
	1		3/4	20	0.7- 5	2.5 - 20				
	2		1	25	3.1-15	11.7 - 58				
	3		1 1/2	40	13.2 - 26	50 - 100				
	4		2	50	22.0 - 66	83.3 - 250				
	5		3	80	44.0 - 110	166.7 - 416				
6		4	100	88.1 - 220	333.3 - 833					
Z										Special
Dampener	A									No Dampener (Typical for liquid applications)
	D									Dampener required (Typical for gas applications)
Indicator Type & Alarm Output	A									Local Indicator
	B									Reed Switch - Contact closes (becomes ON) when value is more than set point
	C									Reed Switch - Contact opens (becomes OFF) when value is more than set point
	D									Reed Switch - Contact closes (becomes ON) when value is less than set point
	E									Reed Switch - Contact opens (becomes OFF) when value is less than set point
	Z									
Conduit Cable Entry	A									None
	B									NPT 1/2" (F)
	C									M20 X 1.5 (F)
	Z									Special
Intrinsically Safe & Explosion Proof Construction and Certification	1									None
	Z									Special
Cleaning and Inspection	A									None
	Z									Special
Accessories	1									None
	3									Tags
	Z									Special

¹Liquid equivalent to water density 1.0 g/cm³, viscosity 1.0cp

⚠ WARNING – USER RESPONSIBILITY

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