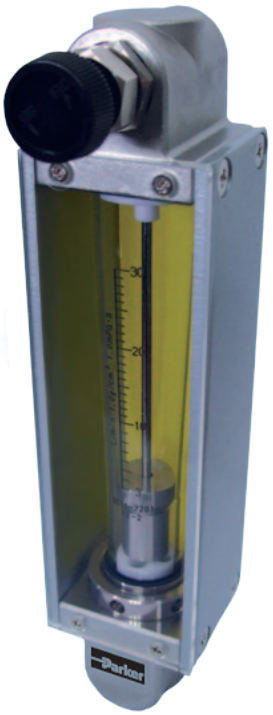
P240 Series

Glass Tube Variable Area Flow Meter

The P240 Series flow meters are designed to extend the flow capacity of a traditional purgemeter given an outstanding performance for a wide range of liquids and gases.

The SCS14 (equivalent to 316 SS) construction allows for usage with many types of corrosive gases and liquids making it optimal for demanding industrial applications.



Contact Information:

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Product Features:

- Ideal for general purpose use, as well as for industrial process applications
- SCS14 (equivalent to 316 SS) construction for challenging corrosive applications
- Front panel mounting hardware
- Easy-to-read scale
- Suitable for both liquids and gases
- Optional alarm output

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Specifications

Materials of Construction

Wetted	
Body	Standard: • SCS14 (equivalent to 316 SS)
Tapered Tube	Heat-resistant glass
Float	304 Stainless Steel and PTFE (316 Stainless Steel available)
Packing	Standard: • NBR (Nitrile Rubber) Optional: • FPM (Fluorinated Propylene Monomer) • CR (Neoprene) • EPDM (Ethylene Propylene Diene Monomer)
Spindle	Standard: • 304 Stainless Steel
Valve	Standard: • 304 Stainless Steel

Non-wetted	
Mounting Board	Standard: • SPCC (cold rolled carbon steel sheets and Strip) Optional: • 304 Stainless Steel available Contact factory for details
Cover	Acrylic
Connection Size and Type	Standard: • NPT or RC 3/8"

Performance

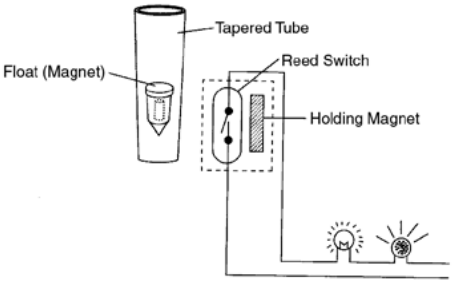
Flow Rate Scale Ranges	
Water[1]	
Minimum	1.6 - 16 Gal/h (6 - 60 L/h)
Maximum	48 - 476 Gal/h (180 - 1800 L/h)
Air[2]	
Minimum	5.3 - 53 ft^3/h (150 - 1500 L/h) (nor)
Maximum	127 - 1271 ft^3/h (3600 - 36000 L/h) (nor)
Turndown	10:1
Accuracy	±5% F.S. for 65mm tube
Approx. Weight	4.4 lbs. (2 kg)
Alarm Type	Self-holding Reed Switch

Operating Conditions	
Max. Operating Pressure	116 psig (8 barg)
Max. Operating Temperature	
• NBR (Nitrile Rubber)	176°F (80°C)
• CR (Neoprene)	176°F (80°C)
• EPDM (Ethylene Propylene Diene Monomer	176°F (80°C)
• FPM (Fluorinated Propylene Monomer)	248°F (120°C)

[1] Liquid equivalent to water density 1.0g/cm^3, viscosity 1.0cp
[2] Gases equivalent to Air @ 0°C 1 atm

Reed Switch Specification

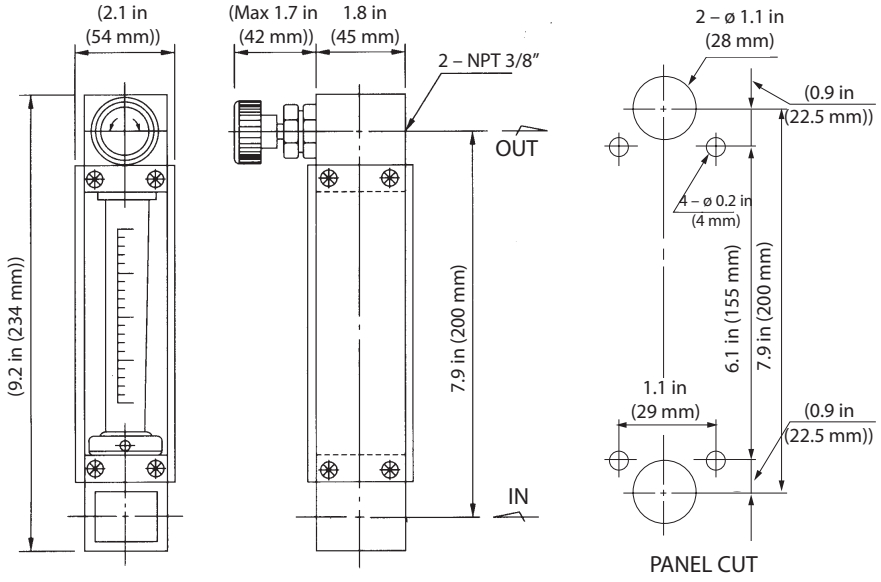
Number of Point	1 point (high or low) 2 point alarm also available as an option Consult factory for details
Alarm Setting Range	Standard 20% to 80% of full scale (H: 50% to 80%, L: 20% to 50%)
Contact	Reed switch (self-holding type) Max. contact capacity: AC10VA, DC10W Max. voltage: AC125V, DC100V Max. current: 0.5A
Connection	Lead wire connection of 50cm (2m is also available)
Reset-Span	25% Full Scale
Ambient Temperature	-10°C to 60°C



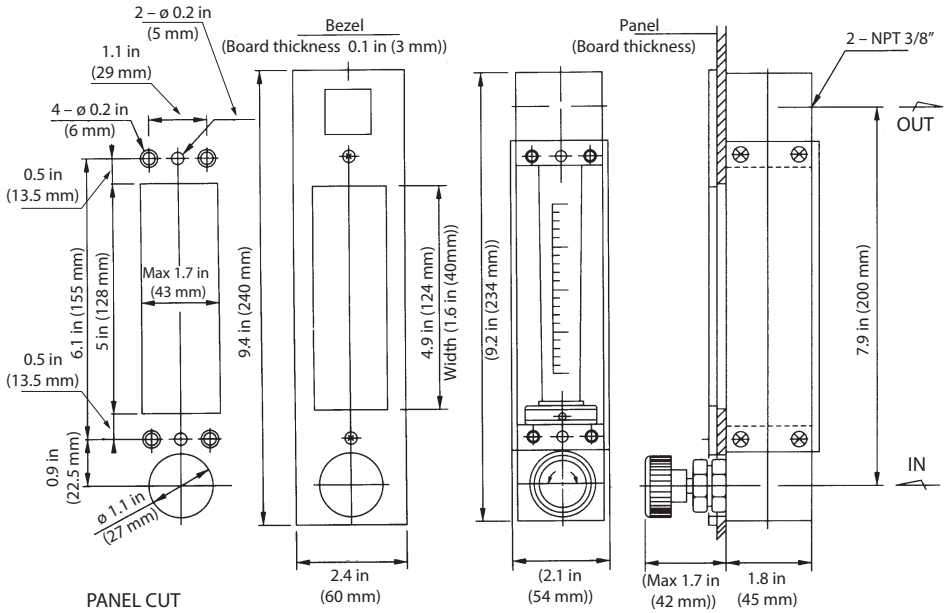
Caution must be taken when mounting multiple alarmed meters. Close proximity may cause interference with alarm signal.

Dimensional Drawing

Standard valve provided at outlet, panel front thread (M3) mounting type



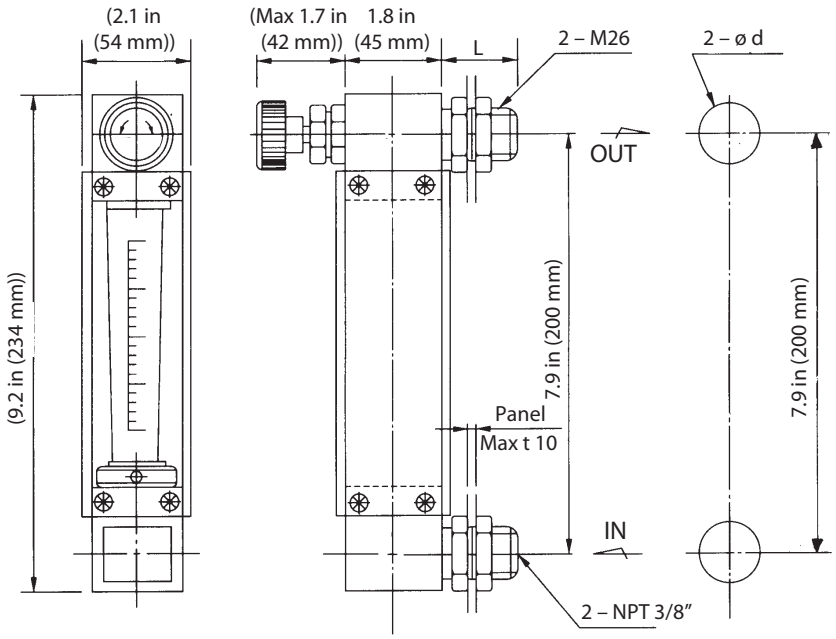
Bezel valve provided at outlet, bezel installation, mounting option code C



Panel Cut Dimensions					
Connection Size		Hole Diameter (ø)		Rear Length (L)	
in	mm	in	mm	in	mm
3/8" NPT	10	ø 1.1	ø 28.0	ø 1.0	ø 26.0

Dimensional Drawing (continued)

Panel front installation valve provided at outlet, option includes locknuts for front panel mounting



Panel Cut Dimensions					
Connection Size		Hole Diameter (ø)		Rear Length (L)	
in	mm	in	mm	in	mm
3/8" NPT	10	ø 1.1	ø 28.0	ø 1.0	ø 26.0

Flow Range Alarm Settings

Air[1] Flow Rate Table

If LO, LC, HO, or HC Alarm Output			
Air		Alarm Setting Range	
ft³/h	L/h (nor)	ft³/h	L/h (nor)
11 - 106*	300 - 3000*	21 - 85	600 - 2400
21 - 212	600 - 6000	42 - 170	1200 - 4800
42 - 424	1200 - 12000	85 - 339	2400 - 9600
64 - 636	1800 - 18000	127 - 509	3600 - 14400
85 - 848	2400 - 24000	170 - 678	4800 - 19200
106 - 1059	3000 - 30000	212 - 848	6000 - 24000
127 - 1271	3600 - 36000	254 - 1017	7200 - 28800

[1] Air measured at 0 psig and 32°F (0°C)
* Float material should be PVC

Water[2] Flow Rate Table

If LO, LC, HO, or HC Alarm Output			
Water		Alarm Setting Range	
Gal/h	L/h	Gal/h	L/h
3.2 - 32*	12 - 120*	6.3 - 25	24 - 96
4.8 - 48	18 - 180	9.5 - 38	36 - 144
7.9 - 79	30 - 300	16 - 63	60 - 240
16 - 159	60 - 600	32 - 127	120 - 480
24 - 238	90 - 900	48 - 190	180 - 720
32 - 317	120 - 1200	63 - 254	240 - 960
48 - 476**	180 - 1800**	95 - 380	360 - 1440

[2] Liquid equivalent to water density 1.0g/cm³, viscosity 1.0cp
* Float material should be PVC
** Available for viscosity 1 cP only

Ordering Information

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

The following example describes a P240 Series bottom rear to top rear (standard) flow meter with air equivalent flow rates from 150-1500 nL/hr[1] up to 3600-36000 nL/hr[1], water equivalent flow rates from 6-60 L/hr[2] up to 180-1800 L/hr[2], no valve or alarm, wetted parts of SCS14; FPM/FKM packing material, and 3/8" NPT standard thread connection with front panel threaded mounting.

Example: P241A1B1A3A

Model Number, Example and Options									Description
P24	**1**	**A**	**1**	**B**	**1**	**A**	**3**	**A**	
Flow / Direction	1								Bottom rear to top rear (standard) Air equivalent flow rates from 150-1500 nL/hr[1] up to 3600-36000 nL/hr[1] Water equivalent flow rates from 6-60 L/hr[2] up to 180-1800 L/hr[2]
	2								Bottom to top Air equivalent flow rates from 150-1500 nL/hr[1] up to 3600-36000 nL/hr[1] Water equivalent flow rates from 6-60 L/hr[2] up to 180-1800 L/hr[2]
	Z								Special
Valve		A							None
		B							Bottom
		C							Top
		Z							Special
Alarm Output			1						None
			2						Reed Switch - Contact closes (becomes ON) when value is more than set point
			3						Reed Switch - Contact opens (becomes OFF) when value is more than set point
			4						Reed Switch - Contact closes (becomes ON) when value is less than set point
			5						Reed Switch - Contact opens (becomes OFF) when value is less than set point
			Z						Special
Wetted Parts				B					SCS14 (Equivalent to 316 SS)
				Z					Special
Packing Material					1				Fluorinated Propylene Monomer (FPM/FKM)
					2				Nitrile Rubber (NBR)
					3				Chloroprene Rubber (CR)
					5				Ethylene Propylene Diene Monomer (EPDM)
					Z				Special
Connection Type						A			NPT thread (Standard)
						B			RC thread (Typical for Non-USA Market)
						Z			Special
Connection Size							3		3/8" (Standard, Mounting option A)
							4		1/2" (Mounting option B required)
							5		3/4" (Mounting option B and Connection Type B required)
							6		1" (Flow Direction Bottom to Top required; only P242 is available for this connection)
							Z		Special
Mounting Options								A	Panel front threaded mounting type
								B	Front panel locknut mounting type
								C	Bezel Installation
								Z	Special

[1]Gases equivalent to Air @ 21.1°C 1 atmos (Snormal)

[2]Liquid equivalent to water density 1.0 g/cm^3, viscosity 1.0cp

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.

⚠ WARNING – USER RESPONSIBILITY

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