

Turbine

- Up to 6000 psi (420 bar)
- For low viscosity liquids such as H2O, light fuels, solvents, hydraulic oil, lubricating oils
- 4...20mA, linearized pulse and pulse width outputs
- Programmable switching functions optional
- Media temps from -40°F to 446°F (-40°C to 230°C)
- Up to 154 gallons per minute
- With or without visual display
- Stainless steel 304 wetted parts



About

The P76 Turbine Flow Meter is designed for high-performance flow measurement of low to medium viscosity liquids. Its stainless-steel construction ensures durability under extreme conditions, withstanding pressures up to 6000 psi (420 bar) and temperatures from -40°F to 446°F (-40°C to 230°C). The P76 provides high accuracy ($\pm 1\%$, optional $\pm 0.5\%$) and repeatability ($\pm 2\%$), making it ideal for critical industrial applications. Multiple output options, including pulse, analog, and digital displays, allow seamless integration into diverse systems. Its compact design and robust materials make it suitable for petrochemical, hydraulic, and water treatment environments.

Applications

- ✓ Petrochemical
- ✓ Oil and gas
- ✓ Hydraulic Systems
- ✓ Lubrication Circuits
- ✓ Water Treatment
- ✓ Solvent Handling

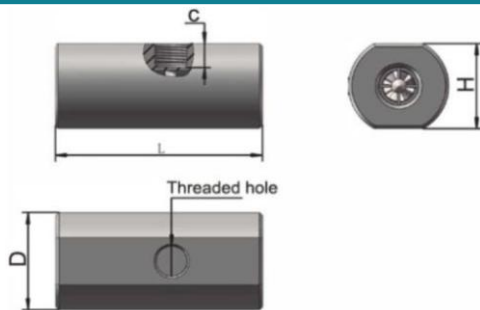
Flow Ranges, Pressure Drops & Sizes

Measuring Ranges and Pressure Drop

End Fitting (Inch)	Measuring Range		Extended Measuring Range		Max. Filter Diameter	Max Pressure		Pressure Drop (% Measuring Range)													
								10%		25%		40%		55%		70%		85%		100%	
	Gal/min	L/min	Gal/min	L/min		PSI	Bar	PSI	Bar	PSI	Bar	PSI	Bar	PSI	Bar	PSI	Bar	PSI	Bar	PSI	Bar
¼"	0.16...1.32	0.6...5	0.08...1.32	0.3...5	75	6000	420	0	0	0.15	0.01	0.44	0.03	0.73	0.05	1.16	0.08	1.60	0.11	2.18	0.15
¼"	0.43...2.64	1.6...10	0.13...3.17	0.5...12	100			0.15	0.01	0.44	0.03	0.87	0.06	2.32	0.16	2.76	0.19	3.92	0.27	5.08	0.35
3/8"	0.79...5.28	3.0...20	0.19...6.60	0.7...25	150			0.15	0.01	0.29	0.02	0.87	0.06	1.60	0.11	2.32	0.16	3.34	0.23	4.64	0.32
½"	1...10	3.8...38	0.27...10.03	1.38...	150			0.15	0.01	0.73	0.05	1.60	0.11	2.90	0.20	4.35	0.30	6.67	0.46	8.85	0.61
½"	2.64...26.4	10...100	0.80...26.41	3...100	150			0.87	0.06	1.74	0.12	3.34	0.23	5.95	0.41	8.85	0.61	13.35	0.92	17.70	1.22
¾"	3.43...34.3	13...130	1.32...38.30	5...145	150	4350	300	0.87	0.06	1.89	0.13	3.48	0.24	6.10	0.42	9.29	0.64	13.49	0.93	17.70	1.22
1"	4.49...44.9	17...170	1.59...50.19	6...190	200	4350	300	0.87	0.06	1.31	0.09	2.32	0.16	3.92	0.27	5.66	0.39	8.27	0.57	10.74	0.74
1 ¼"	6.6...66	25...250	2.38...71.32	9...270	200	3625	250	0.87	0.06	1.89	0.13	3.48	0.24	6.24	0.43	9.00	0.62	13.93	0.96	19.00	1.31
1 ½"	8.45...84.5	32...320	3.17...95.10	12...360	200	2320	160	1.02	0.07	2.32	0.16	4.64	0.32	8.70	0.60	12.91	0.89	19.15	1.32	25.24	1.74
2"	17.7...177	67...670	6.60...184.92	25...700	200	2175	150	1.02	0.07	1.16	0.08	2.03	0.14	3.48	0.24	4.93	0.34	7.40	0.51	9.58	0.66



Sizes / Dimensions



End Fitting	L		H		D		C	
	inch	mm	inch	mm	inch	mm	inch	mm
¼"	2.68	68	1.06	27	1.3	33	0.38	9.7
¼"	2.68	68	1.06	27	1.3	33	0.36	9.2
3/8"	2.68	68	1.18	30	1.42	36	0.34	8.7
½"	3.8	96.6	1.61	41	1.85	47	0.46	11.7
½"	3.8	96.6	1.61	41	1.85	47	0.46	11.7
¾"	4.53	115	1.81	46	2.05	52	0.46	11.7
1"	5.59	142	1.97	50	2.2	56	0.43	11
1 ¼"	6.46	164	2.36	60	2.6	66	0.49	12.5
1 ½"	7.76	197	2.76	70	3	76	0.53	13.5
2"	8.27	210	2.95	75	3.26	83	0.43	11

Build Your Part Number

Series P76

Example: P76WA3S1G1

Series

P76

Accuracy - select one

W	1% (standard)
Y	0.5%

Output- select one (see pictorials below & page 5 for dimensions)

A1	4...20mA (see page 5 for dimensions & pin-out)
A2	Pulse Width Modulation: PNP / NPN square wave switching once per impeller revolution (see page 5 for dimensions & pin-out)
A3	Linearized Pulse: PNP / NPN continuous output proportional to flowrate and can be used for totalizing flow (see page 6 for dimensions & pin-out)
A4	4...20mA with 2 programmable push-pull PNP /NPN switching transistors; includes visual display (see page 6 for dimensions & pin-out)

Media Temperature- select one

S1	-40...212°F (-40...100°C) (standard)
S2	-40...302°F (-40...150°C)
S3	-40...446°F (-40...230°C)

Process Connection & Flow Rate (see page 2 for pressure drop and dimensions) - select one

N1	¼" NPT @ 0.16...1.32 GPM / Extended 0.08...1.32 GPM
N2	¼" NPT @ 0.43...2.64 GPM / Extended 0.13...3.17 GPM
N3	3/8" NPT @ 0.79...5.28 GPM / Extended 0.19...6.60 GPM
N4	½" NPT @ 1...10 GPM / Extended 0.27...10.03 GPM
N5	½" NPT @ 2.64...26.4 GPM / Extended 0.80...26.41 GPM
N6	¾" NPT @ 3.43...34.3 GPM / Extended 1.32...38.30 GPM
N7	1" NPT @ 4.49...44.9 GPM / Extended 1.59...50.19 GPM
N8	1 ¼" NPT @ 6.6...66 GPM / Extended 2.38...71.32 GPM
N9	1 ½" NPT @ 8.45...84.5 GPM / Extended 3.17...95.10 GPM
G1	2" NPT @ 17.7...177 GPM / Extended 6.60...184.92 GPM
G2	G ¼" @ 0.16...1.32 GPM / Extended 0.08...1.32 GPM
G3	G ¼" @ 0.43...2.64 GPM / Extended 0.13...3.17 GPM
G4	G 3/8" @ 0.79...5.28 GPM / Extended 0.19...6.60 GPM
G5	G ½" @ 1...10 GPM / Extended 0.27...10.03 GPM
G6	G ½" @ 2.64...26.4 GPM / Extended 0.80...26.41 GPM
G7	G ¾" @ 3.43...34.3 GPM / Extended 1.32...38.30 GPM
G8	G 1" @ 4.49...44.9 GPM / Extended 1.59...50.19 GPM
G9	G 1 ¼" @ 6.6...66 GPM / Extended 2.38...71.32 GPM
K1	G 1 ½" @ 8.45...84.5 GPM / Extended 3.17...95.10 GPM
K2	G 2" @ 17.7...177 GPM / Extended 6.60...184.92 GPM

Pulse Output (A2)	Linearized Pulse Output (A3)	Analog Output (A1)	With Display (A4)
			

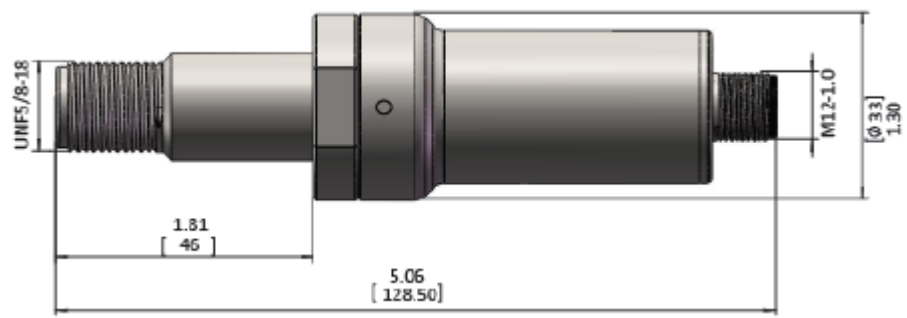
Technical Parameters

Technical Parameters

Measuring	Measuring Range	0.16...154 gal/min (0.6...700 L/min)
	Applicable Medium	Liquids with medium or lower viscosity
	Accuracy	1% 0.5%
	Repeatability	±2% of Reading
Electrical	Output Signal	4...20mA output, 10...30VDC supply M12x1, 5-pole, 3-wire, IP67 Reverse polarity protected, Short circuit protected No load current <12mA
		Pulse Width Modulation PNP / NPN, 10...30VDC supply Square wave switching once per impeller revolution M12x1, 5-pole, 3-wire, IP67 No load current <9mA
		Linearized Pulse: PNP / NPN, 12...30VDC supply Continuous pulse output proportional to flowrate and can be used for totalizing flow M12x1, 5-pole, 3-wire, IP67 No load current <20mA
		4...20mA with 2 programmable push-pull PNP /NPN switching transistors M12x1, 5-pole, 5-wire, IP67 No load current <12mA Switching capacity 500mA (24VDC) Analog load RA (Ω) ≤ (Us-10)V/0.2A Visual display included
Environmental	Ambient Temperature	-40...185°F (-40...85°C)
	Medium Temperature	-40...212°F (-40...100°C)
	Ambient Humidity	≤ 85% Relative Humidity (68°F / 20°C)
Materials	Body	304 Stainless Steel
	Rotor	304 Stainless Steel
	Bearing	Tungsten Carbide Journal Bearing
	Process Connection	NPT female threaded BSPP (G) female threaded

Dimensions & Pin-Out

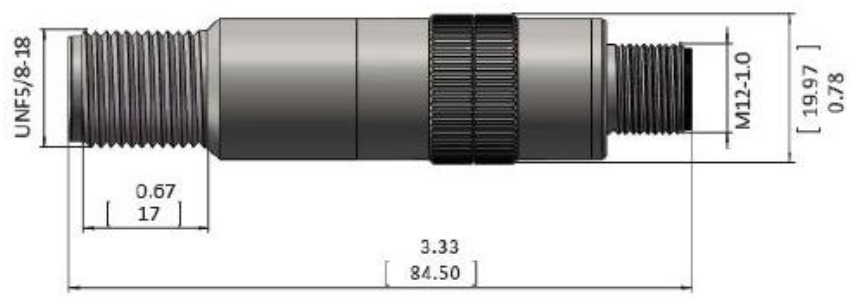
4...20mA (output option A1)



Wiring

M12 plug			4...20mA												
	<table><thead><tr><th>Pin</th><th>Color</th><th>Signal</th></tr></thead><tbody><tr><td>1</td><td>Brown</td><td>Power +</td></tr><tr><td>2</td><td>White</td><td>Analog output</td></tr><tr><td>3</td><td>Blue</td><td>Power -</td></tr></tbody></table>	Pin	Color	Signal	1	Brown	Power +	2	White	Analog output	3	Blue	Power -		
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2	White	Analog output													
3	Blue	Power -													

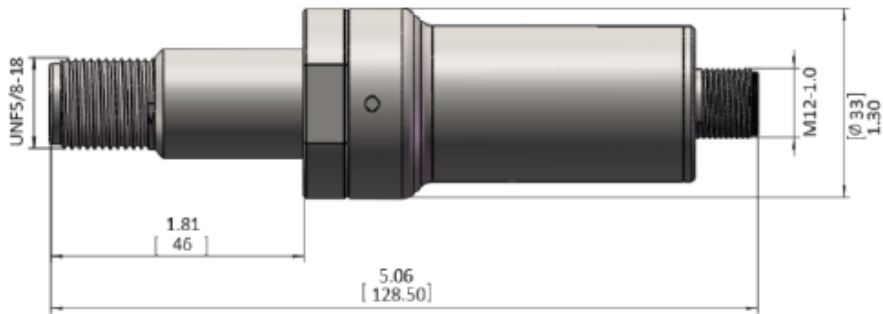
Pulse Width Modulation (output option A2)



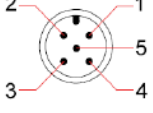
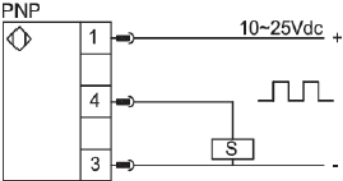
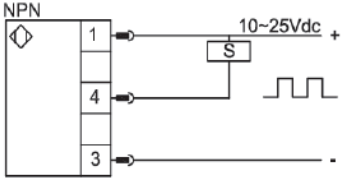
Wiring

M12 plug			PNP		NPN												
	<table><thead><tr><th>Pin</th><th>Color</th><th>Signal</th></tr></thead><tbody><tr><td>1</td><td>Brown</td><td>Power +</td></tr><tr><td>4</td><td>Black</td><td>Pulse</td></tr><tr><td>3</td><td>Blue</td><td>Power -</td></tr></tbody></table>	Pin	Color	Signal	1	Brown	Power +	4	Black	Pulse	3	Blue	Power -				
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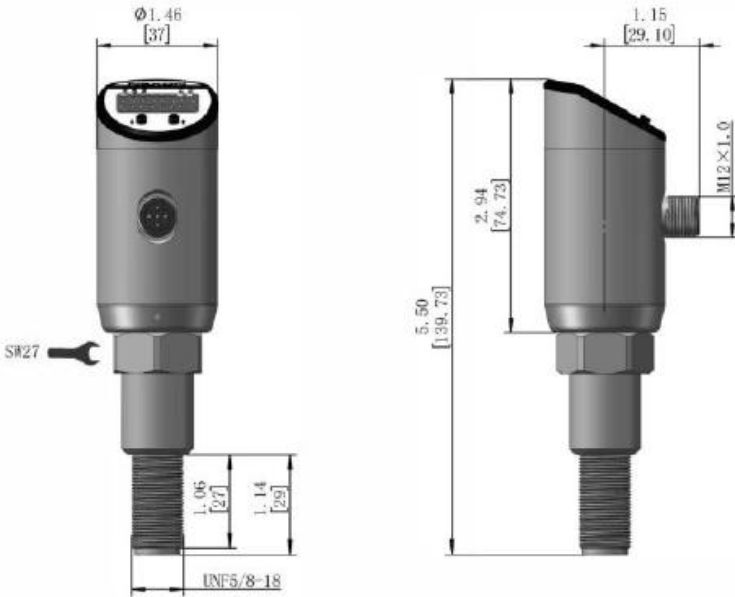
Linearized Pulse (output option A3)



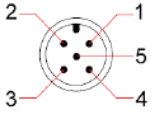
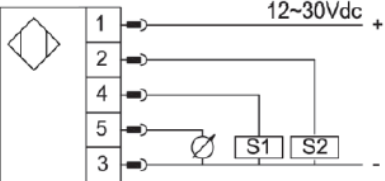
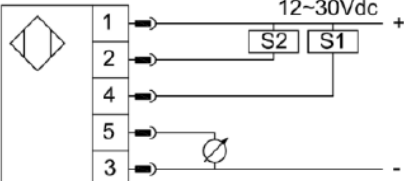
Wiring

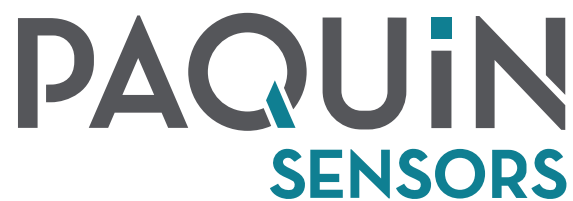
M12 plug	PNP	NPN												
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Pin	Color	Signal												
1	Brown	Power +												
4	Black	Pulse												
3	Blue	Power -												

4...20mA with 2 programmable push-pull switching transistors (output option A4)



Wiring

M12 plug	Analog + 2 x PNP	Analog + 2 x NPN																		
 <table><tr><th>Pin</th><th>Color</th><th>Signal</th></tr><tr><td>1</td><td>Brown</td><td>Power +</td></tr><tr><td>3</td><td>Blue</td><td>Power -</td></tr><tr><td>4</td><td>Black</td><td>Switching S1</td></tr><tr><td>2</td><td>White</td><td>Switching S2</td></tr><tr><td>5</td><td>Gray</td><td>Analog</td></tr></table>	Pin	Color	Signal	1	Brown	Power +	3	Blue	Power -	4	Black	Switching S1	2	White	Switching S2	5	Gray	Analog		
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3	Blue	Power -																		
4	Black	Switching S1																		
2	White	Switching S2																		
5	Gray	Analog																		



Paquin Sensors' product portfolio is designed to provide options to fit the most diverse range of specifications.

We collaborate with our customers to match the best product technologies with your unique application requirements.

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