



The Signet 2537 Flowmeter is the next generation in fluid measurement technology from the inventor of the original paddlewheel flowmeter. This sensor is an improvement on what's already an industry standard. It has the added functionality of various output options including flow switch, multi-functional pulse, digital (S³L) or 4 to 20 mA. Additionally, it offers low flow, low power and high resolution and can be configured on-site directly through the built-in user interface.

Installation is simple because the Signet 2537 utilizes the same fittings as the popular Signet 515 and 2536 Paddlewheel Sensors and fits into pipe sizes ranging from DN15 to DN200 (½ to 8 inches). Available in Polypropylene and PVDF, it is ideal for a variety of applications including chemical processing, water and wastewater monitoring and scrubber control.

Features

- Digital (S³L) or 4 to 20 mA outputs or (Multi-function)
- Allows for up to six sensors to Signet 8900 Controller
- Low flow capabilities down to 0.1 m/s (0.3 ft/s)
- Polypropylene or PVDF sensor bodies
- Installs into pipe sizes DN15 to DN200 (½ to 8 in.)
- Test certificate included for -X0, -X1
- Low power and high resolution



Applications

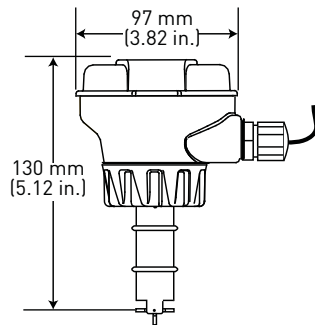
- Process Flow Monitoring
- Pump Protection
- Pure Water Production
- Filtration Systems
- Chemical Production
- Reverse Osmosis
- Demineralization/Regeneration
- Fume Scrubbers
- Cooling Towers
- Proportional Metering Pump

Specifications

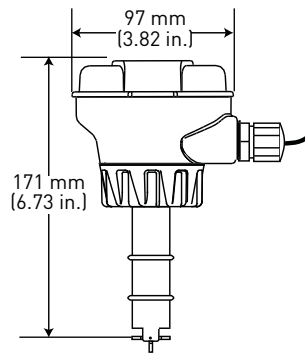
General				
Operating Range	0.1 m/s to 6 m/s	0.3 ft/s to 20 ft/s		
Linearity	±1% of max. range @ 25 °C (77 °F)			
Repeatability	±0.5% of max. range @ 25 °C (77 °F)			
System Response	100 ms update rate nominal			
Wetted Materials				
Sensor Body	Glass-filled PP (black) or PVDF (natural)			
O-rings	FPM (std) optional EPR (EPDM) or FFPM			
Rotor Pin	Titanium, Hastelloy-C or PVDF; optional Ceramic, Tantalum or Stainless Steel			
Rotor	Black PVDF or Natural PVDF; optional Tefzel®, with or w/o Fluoroloy G® sleeve for rotor pin			
Electrical				
Multi	With Dry-Contact Relay	24 VDC nominal, ±10%, regulated, 30 mA max current		
	With Solid-State Relay	6 V to 24 VDC, ±10%, regulated, 30 mA max current		
	Digital (S ² L)	5.0 VDC min to 6.5 VDC max., 30 mA max current (1.5 mA nominal)		
	4 to 20 mA	400 mV max ripple voltage, 30 mA max current		
	Maximum Pulse Rate	300 Hz		
	Maximum Pulse Width	50 ms		
	Minimum Pulse Rate	0.5 Hz		
	Compatible with PLC, PC or similar equipment			
	Compatible with customer supplied metering pump			
	Digital (S ³ L) Version	5 VDC nominal, regulated, 3 mA max current		
Type	Serial ASCII, TTL level 9600 bps			
Max. Cable Length	Refer to Signet 8900 wiring specifications.			
Compatible with Model Signet 8900 controller				
4 to 20 mA Version	12 to 32 VDC nominal, ±10%, regulated, 21 mA max current			
Loop Accuracy	±32 µA @ 25 °C @ 24 VDC			
Loop Resolution	5 µA			
Temp. Drift	±1µA per °C max.			
Power Supply Rejection	±1µA per V			
Max. Cable	305 m	1000 ft		
Maximum Loop Resistance	600 Ω @ 24 VDC	1 KΩ @ 32 VDC		
Load impedance	375 Ω			
Reverse Polarity and Short Circuit Protected	Up to 40 V, 1 hour			
Over-voltage Protection	> 40 VDC over 1 hour			
Relay Specifications				
Mechanical SPDT	5 A @ 30 VDC, 5 A @ 250 VAC			
Solid-State Relay	100 mA @ 40 VDC, 70 mA @ 33 VAC			
Relay Modes	Low, High			
Time Delay	0.0 to 6400.0 seconds			
Hysteresis	Adjustable for exiting alarm condition			
Max. Temperature/Pressure Rating				
Storage Temperature	-10 °C to 75 °C	14 °F to 167 °F		
Operating Temperature	0 °C to 65 °C	32 °F to 149 °F		
Relative Humidity	0 to 90%, non-condensing			
Flow Sensor	PP	12.5 bar @ 20 °C	181 psi @ 68 °F	
		1.7 bar @ 85 °C	25 psi @ 185 °F	
	PVDF	14 bar @ 20 °C	203 psi @ 68 °F	
		1.7 bar @ 85 °C	25 psi @ 185 °F	
Operating Temperature				
	PP	-18 °C to 85 °C	0 °F to 185 °F	
	PVDF	-18 °C to 85 °C	0 °F to 185 °F	
Environmental				
Enclosure	NEMA 4X/IP65			
Standards and Approvals				
CE, UL, CUL				
RoHS compliant, China RoHS				
Manufactured under ISO 9001 for Quality and ISO 14001 for Environmental Management				

Dimensions

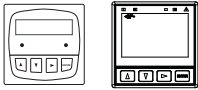

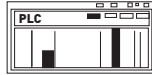
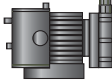

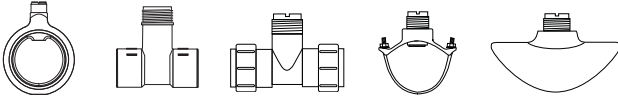
1/2 in. to 4 in. pipe



5 to 8 in. pipe



In-Line Installation

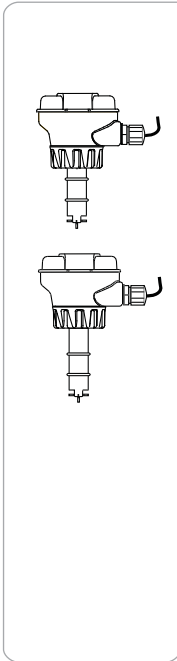
System Overview	Panel Mount	4 to 20 mA Input	4 to 20 mA Dry Contact, Solid State
	Signet Instruments 8900 9900	Customer Supplied Chart Recorder or Programmable Logic Controller	Customer supplied Metering Pump
		 OR 	
	Signet 2537 Paddlewheel Flowmeter 		
Signet Fittings			All sold separately

Application Tips

- Select PVDF Rotor Pin for use in Deionized Water.
- Use a sleeved rotor in abrasive liquids to reduce wear.
- Sensor plug is used to plug installation fitting after extraction of sensor from pipe.
- For liquids containing ferrous particles, use Signet Magmeters.
- For systems with components of more than one material, the maximum temperature/pressure specification must always be referenced to the component with the lowest rating.

Please refer to Wiring, Installation, and Accessories sections for more information.

Ordering Information



Mfr. Part No.	Code	Output
Paddlewheel Flowmeter - Integral Mount (8512 sensors)		
DN15 to DN100 - ½ to 4 in.		
Polypropylene body, black PVDF rotor, Titanium pin, FPM O-rings		
3-2537-1C-P0	159 001 291	Pulse/Flow Switch DCR
3-2537-2C-P0	159 001 292	Pulse/Flow Switch SSR
3-2537-5C-P0	159 001 295	Digital (S ³ L)
3-2537-6C-P0	159 001 296	4 to 20 mA
Natural PVDF body, rotor and pin, FPM O-rings		
3-2537-1C-T0	159 001 315	Pulse/Flow Switch DCR
3-2537-2C-T0	159 001 316	Pulse/Flow Switch SSR
3-2537-5C-T0	159 001 319	Digital (S ³ L)
3-2537-6C-T0	159 001 320	4 to 20 mA
DN125 to DN200 - 5 to 8 in.*		
Polypropylene body, black PVDF rotor, Titanium pin, FPM O-rings		
3-2537-1C-P1	159 001 303	Pulse/Flow Switch DCR
3-2537-2C-P1	159 001 304	Pulse/Flow Switch SSR
3-2537-5C-P1	159 001 307	Digital (S ³ L)
3-2537-6C-P1	159 001 308	4 to 20 mA

*PVDF available ½ in. to 4 in. only

Accessories and Replacement Parts

Mfr. Part No.	Code	Description
Rotors		
3-2536.320-1	198 820 052	Rotor, PVDF Black
3-2536.320-2	159 000 272	Rotor, PVDF Natural
3-2536.320-3	159 000 273	Rotor, Tefzel®
3-2536.322-1	198 820 056	Sleeved rotor, PVDF Black
3-2536.322-2	198 820 057	Sleeved rotor, PVDF Natural
3-2536.322-3	198 820 058	Sleeved rotor, Tefzel®
Rotor Pins		
M1546-1	198 801 182	Pin, Titanium
M1546-2	198 801 183	Pin, Hastelloy-C
M1546-3	198 820 014	Pin, Tantalum
M1546-4	198 820 015	Pin, Stainless Steel
P51545	198 820 016	Pin, Ceramic
3-2500.565	159 001 733	Pin, PVDF Natural
O-Rings		
1220-0021	198 801 186	O-ring, FPM (2 required per sensor)
1224-0021	198 820 006	O-ring, EPR (EPDM) (2 required per sensor)
1228-0021	198 820 007	O-ring, FFPM (2 required per sensor)
Miscellaneous		
P31536	198 840 201	Sensor plug, Polypropylene
3-2536.321	198 820 054	PVDF Natural, Rotor kit
3-8050.390-1	159 001 702	Retaining nut replacement kit, Valox K4530
3-8050.391	159 001 703	Retaining nut replacement kit, Stainless Steel
3-8050.396	159 000 617	RC Filter kit (for relay use)
3-9000.392-1	159 000 839	Liquid tight connector kit, NPT (1 piece)
3-9000.392-2	159 000 841	Liquid tight connector kit, PG13.5 (1 piece)
7300-7524	159 000 687	24 VDC power supply 7.5W, 300 mA
7300-1524	159 000 688	24 VDC power supply 15W, 600 mA
7300-3024	159 000 689	24 VDC power supply 30W, 1.3 A
7300-5024	159 000 690	24 VDC power supply 50W, 2.1 A
7300-1024	159 000 691	24 VDC power supply 100W, 4.2 A

3-2537.099 Rev D (10/11)

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