

Signet 525 Metalex™ Paddlewheel Flow Sensor



Features

- Flow rate range 0.5 to 6m/s (1.6 to 20 ft/s)
- For up to 103 bar (1500 psi) pressure
- For up to 149°C (300°F) temperatures
- DN15 to DN300 (0.5 to 12 in.) pipe range
- Simple Installation
- 316SS body (1.4401)
- Tungsten Carbide or SS shaft
- 7.6m (25 ft.) cable included
- FM & CE approved

Description

The Signet 525 Metalex™ Paddlewheel Flow Sensor combines stainless steel construction with insertion paddlewheel technology. The result is a highly reliable sensor suitable for operation at extreme pressures and temperatures. The Tungsten Carbide shaft and Fluoroloy B®/PTFE bearing provides excellent wear resistance for extended service.

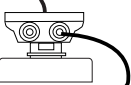
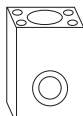
A comprehensive fitting program allows installation in steel lines with the mini-block for small diameters, and either the mini-tap or saddle for pipes up to DN300 (12 in.). The self-generating output signal allows use with any battery operated flow totalizer, including the 8150.

Application

- Boiler Feedwater Monitoring
- HVAC Systems
- Chemical Transport
- Heat Exchangers
- Reverse Osmosis
- Cooling systems
- Not Suitable for Gases

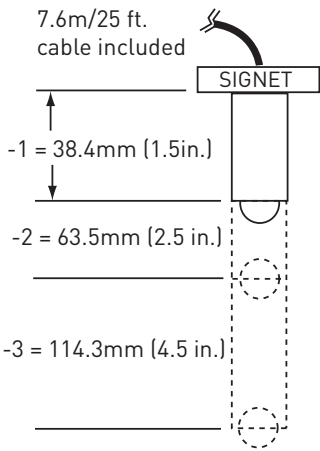


System Overview

Panel Mount Signet Flow Instrument (sold separately) 8150 5075 8550 5500 8900 5600 	Pipe, Tank, Wall Mount Signet Flow Instrument (sold separately) 8150 8550  Signet Universal Adapter Kit (3-8050) (sold separately) 
Signet Model 525 Metalex Flow Sensor 	Signet Model 525 Metalex Flow Sensor 
*Signet Metalex Fitting (sold separately) 	 

* See Fittings section for more information.

Dimensions



Model 525

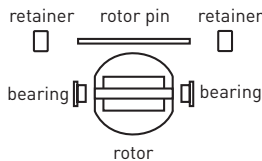
Ordering Notes:

- 1) Each sensor option is used with a different fitting.
- 2) Fittings must be ordered separately.
- 3) See fittings section for more information.

Application Tips:

- Use the Conduit Adapter Kit to protect the cable-to-sensor connection when used in outdoor environments. See Accessories section.
- Use the Socket Weld or Weld-on Mini-Tap fittings for sensor installation in pressures up to 1500 psi (103 bar).
- The 525 can be used in intrinsically safe areas using an approved barrier between the sensor and instrument.

Rotor Kit



Specifications

General

Flow Rate Range: 0.5 to 6 m/s
(1.6 to 20 ft/s)
Pipe size range: DN15 to DN300
(0.5 to 12 in.)

Linearity: $\pm 1\%$ of full range
Repeatability: $\pm 0.5\%$ of full range
Min. Reynolds number required: 4500

Wetted Materials

Sensor body: 316SS (ACI type CF-8M per ASTM A351), DIN 17440
Rotor material: CB7Cu-1 Alloy
Rotor pin: Tungsten Carbide GRP 1 or 316 stainless steel
Retainers (2): 316 stainless steel (1.4401)
Rotor bearings (2): Fluoroloy B®/PTFE
Gasket: KLINGER®sil C-4401

Electrical

Frequency: 12 Hz per ft/s nominal,
5 to 8 mV p-p per Hz
Source Impedance: 11.6 K Ω
Cable length: 7.6 m (25 ft), can be extended to 60m
(200 ft) with no significant degradation of signal strength

Electrical (continued)

Cable type: 22 AWG, 2-conductor w/shield,
150°C maximum

Max. Pressure/Temperature Rating

- Socket Weld or Weld-On Mini-Tap fittings:
103 bar (1500 psi) @ 149°C (300°F)
- Strap-on Saddle fitting:
21 bar (300 psi) @ 66°C (150°F)

See Temperature and Pressure graphs for more information.

Shipping Weight:

P525-1/-1S	0.723 kg	1.6 lbs.
P525-2/-2S	0.774 kg	1.7 lbs.
P525-3/-3S	0.923 kg	2.0 lbs.

Standards and Approvals

- Manufactured under ISO 9001:2000 for Quality and ISO 14001:2004 for Environmental Management
- CE
- FM Class I (Group A, B, C, D), II (Group E,F,G), III, Division 1 (Groups A-G)

Ordering Information

Sensor Part Number		
P525	Metalex Flow sensor for high pressures and temperatures	
	Sensor style	
-1	used with 0.5 to 1 inch socket-weld mini-tap fittings*	
-2	used with 1.25 to 12 inch weld-on mini-tap fittings*	
-3	used with 2 to 12 inch strap-on saddle fittings*	
	Rotor Pin Material	
-	Tungsten Carbide	
S	316 Stainless Steel	
P525	-1	Example Part Number

*See Fittings section.

Mfr. Part No.	Code	Mfr. Part No.	Code
P525-1	198 801 494	P525-1S	159 000 963
P525-2	198 801 495	P525-2S	159 000 964
P525-3	198 801 496	P525-3S	159 000 965

Accessories and Replacements Parts

Mfr. Part No.	Code	Description
P52509	198 801 501	Rotor kit (rotors, stainless steel pin, bearings, retainers)
P52509-2	159 000 480	Rotor kit (rotors, tungsten carbide pin, bearings, retainers)
P52504-1	198 801 500	Rotor Pin, Stainless steel (1.4401)
P52504-2	198 820 023	Rotor Pin, Tungsten Carbide
P52618	159 000 493	Gasket
P52503	198 820 013	Bearing, Fluoroloy B®/PTFE
P52527	159 000 481	Retainers, Stainless steel
P52628	159 000 504	Fitting cap kit (cap and gasket)
P51589	159 000 476	Conduit Adapter Kit
5523-3222	159 000 393	Cable (per foot) 2 cond. w/shield, 22 AWG
6402-9001	159 001 486	Intrinsic Safety Barrier (2 required)