

The Signet 2000 Micro Flow Rotor Sensor is constructed of Polyphenylene Sulfide (PPS) which provides high material strength. The 2000 offers two flow ranges starting at 0.11 or 1.13 lpm (0.03 or 0.3 gpm), for clean process liquids, regardless of fluid color or opacity.

This sensor can be connected to flexible tubing or rigid pipe, and uses standard hardware for mounting. Only one moving part and a low pressure drop across the sensor reduces operating costs and maintenance requirements.

Features

- **Operating range 0.11 to 12.11 lpm (0.03 to 3.2 U.S. gpm)**
- **Simple mounting**
- **¼ in. NPT or ISO threads for simple pipe or tubing connection**
- **Measures opaque and transparent liquids**
- **Low pressure drop**
- **Standard cable 7.6 m (25 ft)**

Applications

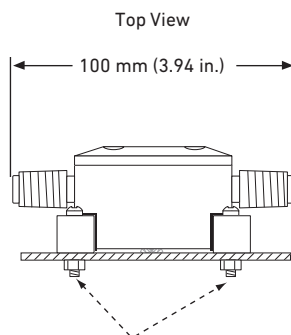
- **Coolant Flow**
- **Dosing**
- **Batch Dispensing**
- **Not recommended for Strong Oxidizers**

Specifications

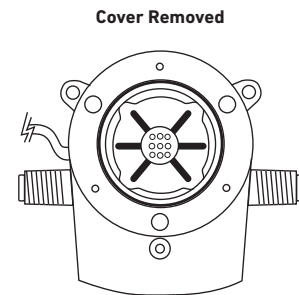
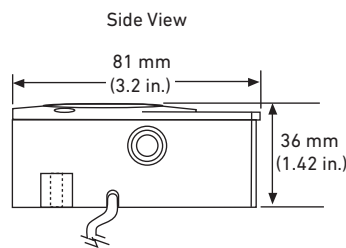
| General | | | |
|---|--|-------------------------------|----------------------|
| Operating Range | -11 & -12 version | 0.11 to 2.6 lpm | 0.03 to 0.7 U.S. gpm |
| | -21 & -22 version | 1.13 to 12.11 lpm | 0.3 to 3.2 U.S. gpm |
| Linearity | ±1.2% of full range | | |
| Repeatability | ±0.5% of full range | | |
| Connections | ¼ in. NPT (male) or ISO 7/1 - R1/4 (male) | | |
| Wetted Materials | | | |
| Sensor Body and Cover | 40% glass filled Polyphenylene Sulfide (PPS) | | |
| Rotor | PEEK®, natural, unfilled | | |
| Cover O-ring | FKM | | |
| Electrical | | | |
| Power | 5 to 24 VDC ±10%, regulated, 10 mA max. | | |
| Output Type | Open-collector, sinking, 20 mA max. | | |
| Cable Length | 7.6 m (25 ft), can be extended up to 305 m (1000 ft) | | |
| Cable Type | 2-conductor twisted pair w/shield, 22 AWG | | |
| Max. Temperature/Pressure Rating | | | |
| | 0 °C to 80 °C @ 5.5 bar max. | 32 °F to 176 °F @ 80 psi max. | |
| Shipping Weight | | | |
| | 0.03 kg | 0.7 lb | |
| Standards and Approvals | | | |
| Manufactured under ISO 9001 for Quality and ISO 14001 for Environmental Management and OHSAS 18001 for Occupational Health and Safety | | | |

See Temperature and Pressure graphs for more information.

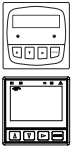
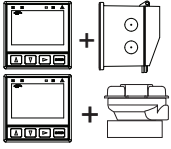



Dimensions



Mounting tabs for metric M3 or standard #6 screws on 68 mm (2.68 in.) bolt circle



System Overview

| Panel Mount | Pipe, Tank, Wall | Automation System |
|---|--|---|
| Signet Instruments - 8900 - 9900-1P - 9900-1BC - 9950 | Signet Instruments - 9900-1P with Rear Enclosure - 9900-1 with 3-8050 Universal Mount Kit | - 0486 Profibus Concentrator and Customer Supplied Programmable Logic Controller or - Programmable Automation Controller |
|  |  |  |
| Signet Model 2000 Sensor  | | |
| Flexible tubing or rigid pipe (customer supplied)  | | |
| All sold separately | | |

Application Tips

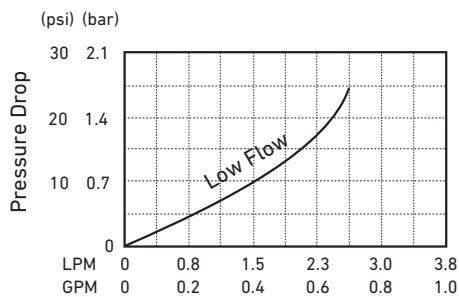
- For use in clean fluids - no suspended solids.
- Use the mounting tabs to secure the sensor to a flat horizontal surface, $\pm 30^\circ$.
- Verify chemical compatibility before installation.

Temperature/Pressure Graphs

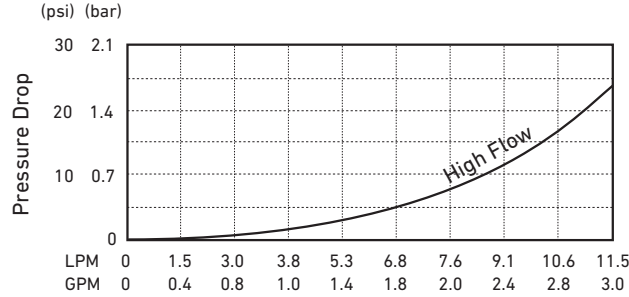
Note:

The pressure/temperature graphs are specifically for the Signet sensor. During system design the specifications of all components must be considered. In the case of a metal piping system, a plastic sensor will reduce the system specification.

Low Flow

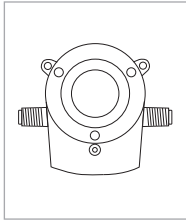


High Flow



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

Ordering Information



| Mfr. Part No. | Code | Flow Range | End Fittings |
|------------------------------|--------------------|---|----------------------|
| Micro Flow Rotor Flow Sensor | | | |
| 3-2000-11 | 198 822 000 | Low flow, 0.11 to 2.61 lpm (0.03 to 0.7 gpm) | ¼ NPT threads |
| 3-2000-12 | 198 822 001 | Low flow, 0.11 to 2.61 lpm (0.03 to 0.7 gpm) | ISO 7/1-R1/4 threads |
| 3-2000-21 | 198 822 002 | High flow, 1.13 to 12.11 lpm (0.3 to 3.2 gpm) | ¼ NPT threads |
| 3-2000-22 | 198 822 003 | High flow, 1.13 to 12.11 lpm (0.3 to 3.2 gpm) | ISO 7/1-R1/4 threads |

Accessories and Replacement Parts

| Mfr. Part No. | Code | Description |
|---------------|--------------------|--|
| 3-2000.390 | 159 000 248 | Replacement Rotor Kit |
| 1220-0029 | 198 820 049 | Cover O-ring |
| 2450-0620 | 198 820 051 | Cover Screw, each |
| 5523-0222 | 159 000 392 | Cable (per foot), 2 cond. w/shield, 22 AWG |
| 3-8050-1 | 159 000 753 | Universal Junction Box |