

# Signet 2507 Mini Flow Rotor Sensor



The Signet 2507 Mini Flow Rotor Sensor contains a free-running rotor that is driven by the fluid flow. Within the given measurement range, the rotational speed of the rotor is proportional to the fluid flow rate.

Magnets built into the rotor trigger an electronic switch in the top of the sensor creating a square-wave output. Both opaque and transparent fluids can be measured with kinematic viscosities between 0.2 to 20.0 centistokes.

## Features

- Operating range 400 to 12,000 ml/m (0.1 to 3.2 U.S. gpm)
- Detachable signal connector for easy servicing
- Simple installation with a G 1/4 in. (1/4 in. NPT) threaded connection
- Standard 7.6 m (25 ft) cable
- PVDF construction
- Compact assembly



## Applications

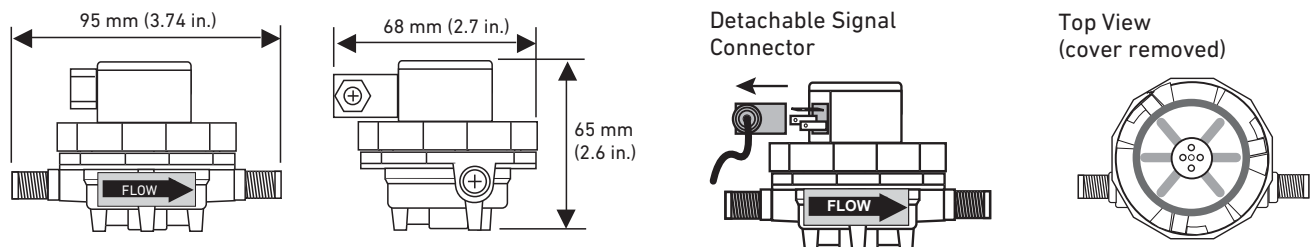
- Fluid Dispensing
- Laboratory and Clinical Wet Benches
- Chemical Dosing
- Batch Processes


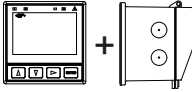
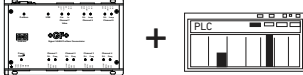


# Specifications

| General                          |   |                    |                         |
|----------------------------------|---|--------------------|-------------------------|
| Operating Range                  | -2V sensor  | 400 to 2800 mL/m   | 0.105 to 0.740 U.S. gpm |
|                                  | -3V sensor  | 700 to 4200 mL/m   | 0.185 to 1.123 U.S. gpm |
|                                  | -4V sensor  | 1300 to 6000 mL/m  | 0.343 to 1.585 U.S. gpm |
|                                  | -6V sensor  | 3200 to 12000 mL/m | 0.845 to 3.170 U.S. gpm |
| Accuracy                         | ±2% of reading  |                    |                         |
| Repeatability                    | ±0.25% of full range  |                    |                         |
| Viscosity Range                  | 0.2 to 20.0 centistokes   |                    |                         |
| Connections                      | G ¼ in. ports, ¼ in. NPT pipe adapters (2 included)   |                    |                         |
| Wetted Materials                 |   |                    |                         |
| Housing                          | PVDF  |                    |                         |
| Flow Insert                      | PTFE  |                    |                         |
| Quad Ring Seal                   | FKM   |                    |                         |
| Rotor                            | PVDF  |                    |                         |
| Pipe Thread Adapters             | PVDF  |                    |                         |
| Electrical                       |   |                    |                         |
| Power                            | 5 to 24 VDC ±10%, regulated, 10 mA max.   |                    |                         |
| Output Type                      | Open-collector, sinking, 10 mA max.   |                    |                         |
| Cable Length                     | 7.6 m (25 ft), can be extended up to 300 m (1000 ft)  |                    |                         |
| Cable Type                       | 2-conductor shielded twisted-pair, 22 AWG   |                    |                         |
| Max. Temperature/Pressure Rating |   |                    |                         |
|                                  | 5.5 bar @ -18 °C  | 80 psi @ 0 °F      |                         |
|                                  | 5.5 bar @ 24 °C   | 80 psi @ 75 °F     |                         |
|                                  | 3 bar @ 120 °C  | 45 psi @ 248 °F    |                         |
| Shipping Weight                  |   |                    |                         |
|                                  | 0.115 kg  | 0.25 lb            |                         |
| Standards and Approvals          |   |                    |                         |
|                                  | CE, FCC   |                    |                         |
|                                  | RoHS compliant, China RoHS  |                    |                         |
|                                  | 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



|  |  |   |   |
|--|--|---|---|
| System Overview  | Panel Mount  | Pipe, Tank, Wall Mount  | Automation System   |
|  | Signet Instruments<br>8900    9900<br>9900-1BC    9950                               | Signet Instruments<br>9900-1P    9900-1BC    with Rear Enclosure<br>9950          | 0486 Profibus Concentrator<br>and Customer Supplied<br>Programmable Logic Controller or<br>Programmable Automation Controller |
|  |  OR |  |    |
| <b>Signet 2507 Mini Flow Sensor</b><br>       |  |   |   |
| Signet Pipe Fitting Adapters (two included)<br>Used to convert the sensor's G1/4 in. straight threads into 1/4 in. NPT threads |  |  |   |
| All sold separately  |  |   |   |

### Application Tips

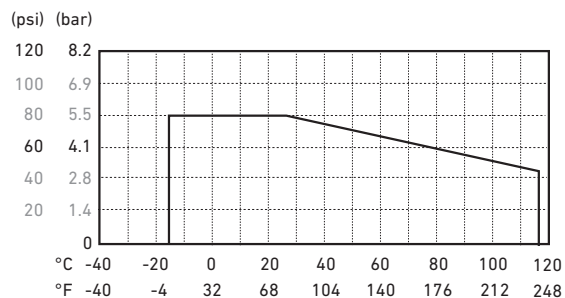
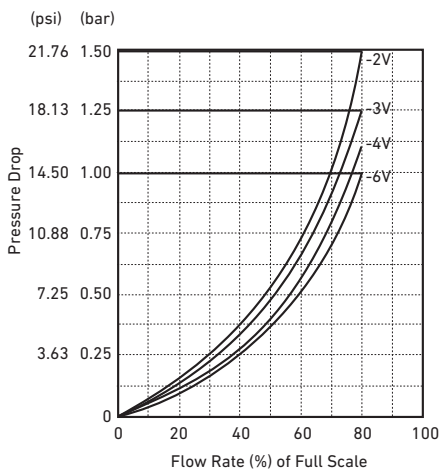
- Use the threaded ports on bottom of sensor to secure the sensor to any flat surface.
- The range of any sensor can be changed by replacing the flow insert.
- Suitable only for clean fluids without particles.

## Temperature/Pressure Graphs

### Note:

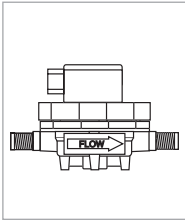
The pressure/temperature graphs are specifically for the Signet sensor. During system design the specifications of all components must be considered. In the case of a metal piping system, a plastic sensor will reduce the system specification. When using a PVDF sensor in a PVC piping system, the fitting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

### High Flow



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

## Ordering Information



| Mfr. Part No.                                     | Code               | Insert Option   |
|---|--------------------|---|
| Mini Flow low flow sensor with free-running rotor |                    |   |
| 3-2507.100-2V                                     | <b>198 801 732</b> | With 2 mm insert; for 0.15 to 0.740 gpm (400 to 2800 mL/m)              |
| 3-2507.100-3V                                     | <b>198 801 733</b> | With 3 mm insert, for 0.185 to 1.123 gpm (700 to 4200 mL/m)             |
| 3-2507.100-4V                                     | <b>198 801 734</b> | With 4 mm insert, for 0.343 to 1.585 gpm (1300 to 6000 mL/m)            |
| 3-2507.100-6V                                     | <b>198 801 736</b> | With 6 mm inlet, no insert, for 0.845 to 3.170 gpm (3200 to 12000 mL/m) |

## Accessories and Replacement Parts

| Mfr. Part No. | Code               | Description                                |
|---------------|--------------------|--|
| 3-2507.080-2  | <b>198 801 550</b> | Rotor, 2507                                |
| 3-2507.080-3  | <b>198 801 547</b> | Quad ring, 2507                            |
| 3-2507.080-5  | <b>198 801 508</b> | DIN connector, 2507                        |
| 3-2507.081-2  | <b>198 801 502</b> | 2 mm insert                                |
| 3-2507.081-3  | <b>198 801 503</b> | 3 mm insert                                |
| 3-2507.081-4  | <b>198 801 558</b> | 4 mm insert                                |
| 5523-0222     | <b>159 000 392</b> | Cable (per foot), 2 cond. w/shield, 22 AWG |