

Signet 2350 Temperature Sensor



Blind Transmitter or Digital (S³L) Sensor

The Signet 2350 Temperature Sensor has a one piece injection molded PVDF body that is ideal for use in high purity applications. It also outlasts metal sensors in aggressive liquids and eliminates the need for costly custom thermowells. These sensors are available with a proprietary digital (S³L) output or field-scaleable 4 to 20 mA output.

Dual threaded ends (3/4 in. NPT) allow submersion in process vessels, or in-line installation with conduit connection. An integral adapter kit (sold separately) may be used to create a compact assembly with field mount versions of the Signet 9900 Transmitter.

Features

- 4 to 20 mA or digital (S³L) output
- Standard 3/4 in. NPT process connection
- One-piece injection molded PVDF body
- Pt1000 platinum RTD in extended tip for quick response
- Easy installation
- Threaded for in-line or submersible installation



Applications

- Plating Bath Temperature Control
- Heat Exchange Monitor
- R.O. and D.I. System Monitor
- Hot/Cold Mixing System Monitor
- Data Acquisition
- Cooling Loops
- Effluent Monitoring
- HVAC
- Chemical Processing

Specifications

General

Output	Digital (S ³ L) output or 4 to 20 mA
Accuracy	±0.5 °C (±0.9 °F)
Response Time, τ	10 seconds
Repeatability	±0.1 °C (±0.2 °F)
Resolution	0.01 °C (0.02 °F)
Sensing End Connection	¾ in. NPT male thread
Cable End Connection	¾ in. NPT male thread

Wetted Materials

Sensor Housing	PVDF
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Electrical

Power Requirements		
	Digital (S ³ L)	5 to 6.5 VDC ±10%, < 1 .5 mA
	4 to 20 mA	12 to 24 VDC ±10%, regulated
Cable Length	4.6 m (15 ft) cable length can also be extended up to 121 m (400 ft)	
Cable Type	PVC jacketed, 3-conductor with shield 22 AWG, Blk/Red/White/Shld	
Digital (S ³ L) Output	Serial ASCII, TTL Level 9600 bps. Reverse polarity and short circuit protected.	
4 to 20 mA Output		
Accuracy	±32 µA	
Resolution	< 5 µA	
Span	4 to 20 mA factory calibrated 0 °C to 100 °C (32 °F to 212 °F)	
Maximum Loop Impedance	50 Ω @ 12 V 325 Ω @ 18 V 600 Ω @ 24 V	
Update Rate	< 100 ms	

Maximum Temperature/Pressure Rating

Operating Temperature		
In-line Mounting	-10 °C @ 16 bar to 100 °C @ 7.5 bar	14 °F @ 232 psi to 212 °F @ 108 psi
Submersible Mounting	-10 °C @ 16 bar to 85 °C @ 7.5 bar	14 °F @ 232 psi to 185 °F @ 108 psi
Storage Temperature	-55 °C to 100 °C	-67 °F to 212 °F
Relative Humidity	0 to 95% non-condensing	

Shipping Weight

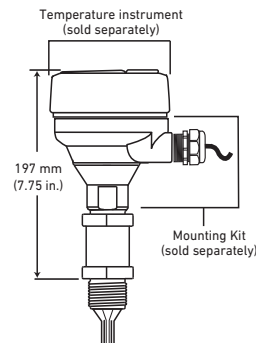
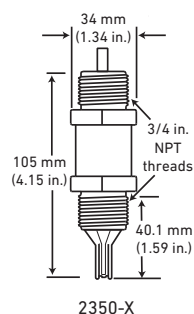
	0.22 kg	0.5 lb
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Standards and Approvals

	CE, FCC
	RoHS compliant, China RoHS
	Manufactured under ISO 9001, ISO 14001, and ISO 45001

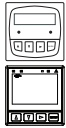
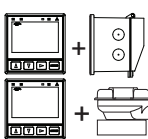
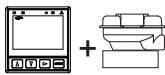

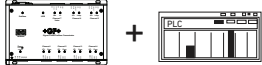
See Temperature and Pressure graphs for more information.

Dimensions



System Overview

In-Line Installation

Panel Mount	Pipe, Tank, Wall Mount	Field Mount	4 to 20 mA Output	Automation System
Signet Instruments - 8900 - 9900 - 9950 	Signet Instruments* - 9900-1P with Rear Enclosure - 9900-1 with 3-8050 Universal Mount Kit* 	Signet Instruments with 3-8052 Integral Mount Kit - 9900 	- Customer Supplied Chart Recorder, Programmable Logic Controller or - Programmable Automation Controller 	- 0486 Profibus Concentrator and Customer Supplied Programmable Logic Controller or - Programmable Automation Controller 

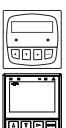
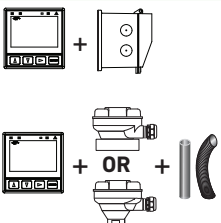


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In-Line Installation - Fittings Customer Supplied

All sold separately

Submersible Installation

Panel Mount	Pipe, Tank, Wall Mount	4 to 20 mA Output	Automation System
Signet Instruments - 8900 - 9900 - 9950 	Signet Instruments* - 9900-1P with Rear Enclosure - 9900-1 with 3-8050 Universal Mount Kit or 3-8052 Integral Mount Kit and Pipe Extension or Conduit with 3/4 in. FNPT Threads** 	- Customer Supplied Chart Recorder Programmable Logic Controller or - Programmable Automation Controller 	- 0486 Profibus Concentrator and Customer Supplied Programmable Logic Controller or - Programmable Automation Controller 

Signet 2350 Temperature Sensor



All sold separately

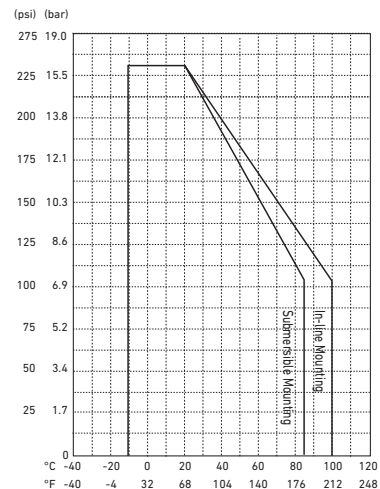
*For tank or wall mount installations, user must use the Universal Adapter Kit (3-8050)

**Refer to the Signet Submersion Kit brochure (3-0000.707) located on our website for installation suggestions and options.

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.



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

Ordering Notes

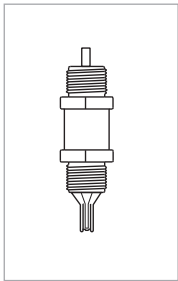
3-2350-X sensor can be mounted with an instrument in an integral configuration by doing the following:

- 1) Order Integral adapter kit 3-8052 (sold separately) to connect the instrument (sold separately) directly onto the sensor.
- 2) Order an instrument (sold separately). The following instrument part number is compatible with the 2350 for integral mounting: 3-9900-1.
- 3) Refer to the Signet Submersion Kit brochure (3-0000.707) located on our website for installation suggestions and options.

Application Tips

- For submersible sensor mounting, always use a water tight conduit and a cable gland to prevent moisture intrusion.
- To extend the cable, use a 3-conductor shielded cable and junction box.
- Sensors with extended cables available, contact Special Order products.

Ordering Information



Mfr. Part No.	Code	Output and Cable Length
Temperature Sensor		
3-2350-1	159 000 021	Digital (S ³ L) and 4.6 m (15 ft) cable
3-2350-3	159 000 920	Current (4 to 20 mA) and 4.6 m (15 ft) cable

Accessories and Replacement Parts

Mfr. Part No.	Code	Description
5523-0322	159 000 761	Sensor Cable (per ft), 3 cond. plus shield, 22 AWG
3-8052	159 000 188	¾ in. Integral Mounting Kit
3-8052-1	159 000 755	¾ in. NPT Mount Junction Box with one liquid tight connector and cap with junction terminals
3-9000.392-1	159 000 839	Liquid Tight Connector Kit, NPT (1 connector)
3-9000.392-2	159 000 841	Liquid Tight Connector Kit, PG 13.5 (1 connector)
3-0252	159 001 808	Configuration Tool
	Contact Factory	Custom Cable Length Available

3-2350.099 Rev H (05/20)

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