



Blind Transmitter or Digital (S<sup>3</sup>L) 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 (S<sup>3</sup>L) 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 8350 Temperature Transmitter or 9900 Transmitter.

## Features

- 4 to 20 mA or digital (S<sup>3</sup>L) 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 <sup>3</sup> L) output or 4 to 20 mA
Accuracy	±0.5 °C (±0.9 °F)
Response Time, τ	10 secs.
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

Electrical	
Power Requirements	
Digital (S <sup>3</sup> 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 <sup>3</sup> 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)
Max. Loop Impedance	50 Ω @ 12 V 325 Ω @ 18 V 600 Ω @ 24 V
Update Rate	< 100 ms

Max. 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





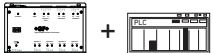

Standards and Approvals	
	CE, FCC
	RoHS compliant, China RoHS
	Manufactured under ISO 9001 for Quality and ISO 14001 for Environmental Management and OHSAS 18001 for Occupational Health and Safety

See Temperature and Pressure graphs for more information.

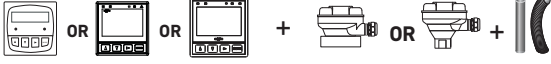

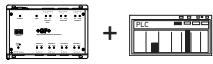

## Dimensions



### In-Line Installation

Panel Mount	Pipe, Tank, Wall Mount	Field (Integral) Mount	4 to 20 mA Output	Automation System
Signet Instruments 8900 9900 9950	Signet Instruments 9900 or 9950 with 3-8050 Universal Mount Kit* 9900 with Rear Enclosure	Signet Instruments 9900 with 3-8052 Integral Mount Kit	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				
				
In-Line Installation - Fittings Customer Supplied			All sold separately	

### Submersible Installation

Panel, Pipe, Tank, Wall Mount	4 to 20 mA Output	Automation System
Signet Instruments* 8900 9900 9950 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.

### 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.

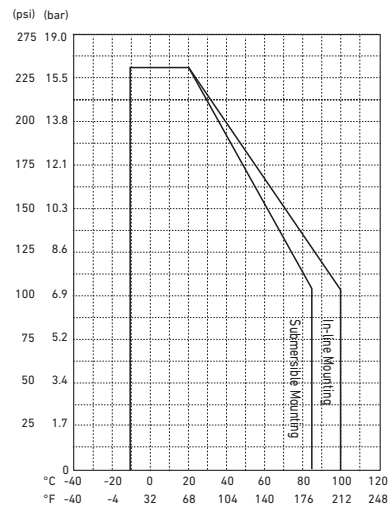
### Application Tips

- 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.

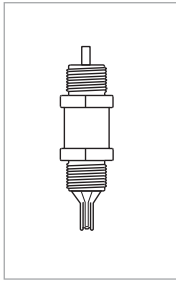
## Temperature/Pressure Graphs

### 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.



## Ordering Information



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

## Accessories and Replacement Parts

Mfr. Part No.	Code	Description
5523-0322	<b>159 000 761</b>	Sensor cable (per ft), 3 cond. plus shield, 22 AWG
3-8052	<b>159 000 188</b>	3/4 in. Integral mounting kit
3-8052-1	<b>159 000 755</b>	3/4 in. NPT mount junction box with one liquid tight connector and cap with junction terminals
3-9000.392-1	<b>159 000 839</b>	Liquid tight connector kit, NPT (1 connector)
3-9000.392-2	<b>159 000 841</b>	Liquid tight connector kit, PG 13.5 (1 connector)
3-0252	<b>159 001 808</b>	Configuration Tool
	<b>Contact Factory</b>	Custom cable length available

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