



1/2 in. union mount

## Blind transmitter or digital (S<sup>3</sup>L) sensor

The 2450 Pressure Sensor has a one-piece injection molded PVDF body and ceramic diaphragm for superior compatibility in corrosive liquids. Three pressure versions allow for optimal resolution matched to your sensing needs. Solid state circuitry eliminates drift (no internal potentiometers).

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 allow in-line installation with conduit connection, or add the integral adapters to create a compact assembly with a field mount version of the Signet 8250 Level, 8450 Pressure Transmitter or the 9900 Transmitter.

## Features

- Test certificate included
- 4 to 20 mA or digital (S<sup>3</sup>L) output
- ½ in. male union process connection
- One-piece injection molded PVDF body
- Flush ceramic diaphragm
- Easy installation
- Choice of three pressure ranges
- Pressure or level measurement



## Applications

- Level or Depth Sensing
- HVAC
- Scrubber Systems
- Pump Protection
- Water Management
- Irrigation Systems
- Wastewater
- Chemical Processing
- Pressure Regulation/Monitoring

# Specifications

## General

Output	Digital (S <sup>3</sup> L) or 4 to 20 mA	
Accuracy	For all pressure ranges ±1% of full scale @ 25 °C	
	Response Time	< 100 ms
	Sensing-End Connection	½ in. union male thread (requires end connector and union nut) [See installation section for end connector and nut recommendation]
Cable-end connection	¾ in. NPT male thread	

## Wetted Materials

Sensor Housing	PVDF
Diaphragm	Ceramic
Diaphragm Seal	FPM

## Electrical

### Power Requirements

Digital (S <sup>3</sup> L)	5 to 6.5 VDC < 1.5 mA	
	4 to 20 mA	12 to 24 VDC ±10%, regulated
Cable Length	4.6 m	15 ft
Cable Type	3 cond. + shield, 22 AWG, PVC jacketed, 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 to operating ranges shown below	
Max. Loop Impedance	100 Ω @ 12 V	
	325 Ω @ 18 V	
	600 Ω @ 24 V	

## Max. Temperature/Pressure Rating

Operating Temperature	-15 °C to 85 °C	5 °F to 185 °F
Storage Temperature	-20 °C to 100 °C	-4 °F to 212 °F

### Operating Pressure

-XU	0 to 0.7 bar	0 to 10 psig
-XL	0 to 3.4 bar	0 to 50 psig
-XH	0 to 17 bar	0 to 250 psig

### Vacuum Range

-XU	-0.1 to 0.7	-1.5 to 10 psi
-XL	-0.41 to 3.4 bar	-6 to 50 psi
-XH	-0.96 to 17.2 bar	-14.6 to 250 psi

### Proof Pressure

-XU:	1.4 bar	20 psig
-XL	5.2 bar	75 psig
-XH	20.7 bar	300 psig

Burst Pressure	82 bar	1,200 psig
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## Shipping Weight

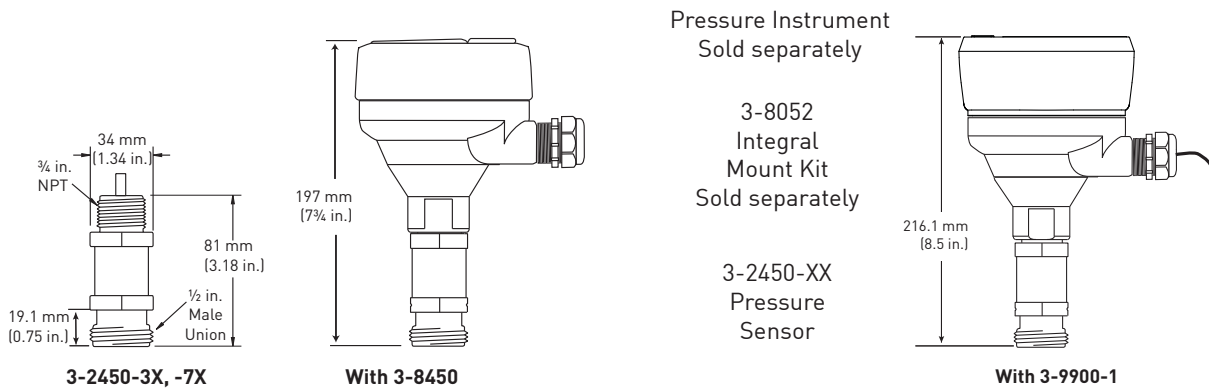
	0.150kg	0.33 lb
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## Standards and Approvals

	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



	Panel Mount	Field Mount - Pipe, Tank, Wall	4 to 20 mA input	Integral Mount
System Overview	Signet Instruments 8900 8450 9900	Signet Instruments 8450 9900 with 3-8050 Universal Mount Kit	Customer Supplied Chart Recorder or Programmable Logic Controller	Signet Instruments 8450 9900 with 3-8052 Integral Mount Kit
	Signet 2450 Pressure Sensor*			
				All sold separately
	In-Line Installation - Fittings customer supplied		Submersible Installation - Customer supplied pipe extension or conduit with 3/4 in. FNPT threads and pipe assembly**	

\* An alternative to the Signet 2450 submersible is to use the Signet 2250 Hydrostatic Pressure Sensor.

\*\*Cable must be exposed to the atmosphere. Refer to the Signet Submersion brochure located in the K-Factors Fittings and More Kit (3-0000-709) for installation suggestions and options.

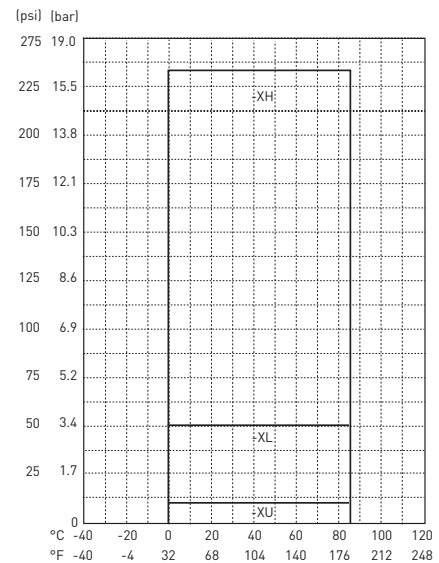
## Application Tips

- These sensors can also be used for tank level measurements.
- Place a ball valve between tank and 2450 sensor for maintenance ease.
- Back end of sensor must be exposed to atmospheric pressure.
- To extend the cable, use a 3-conductor shielded cable & junction box.
- For submersible sensor mounting, always use the 3-2250 Submersible Hydrostatic Pressure Sensor.

## Operating 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.

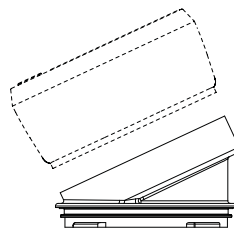


## Ordering Notes

Any sensor can be mounted with an instrument in an integral configuration by doing the following:

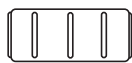
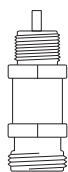
1. Order Integral adapter kit PN 3-8052 or 3-8052-1 (sold separately) to connect the instrument (sold separately) directly on to the sensor.
2. Order an instrument (sold separately). The following instrument part numbers are compatible with the 2450 for integral mounting: 3-8450-3, 3-9900-1.

3. Union mount version installs into pipe w/end connector and union nut. See Installation and Wiring section for more information on parts required.



3-9900-396  
Angle adjustment  
adapter kit  
(optional accessory)

## Ordering Information



Mfr. Part No.	Code	Output	Process Connection
Pressure Sensor with 4.6 m (15 ft) cable			
Operating Pressure Range 0 to 10 psi			
3-2450-3U	<b>159 000 683</b>	Digital (S <sup>3</sup> L)	½ in. male union
3-2450-7U	<b>159 000 906</b>	Current (4 to 20 mA)	½ in. male union
Operating Pressure Range 0 to 50 psi			
3-2450-3L	<b>159 000 682</b>	Digital (S <sup>3</sup> L)	½ in. male union
3-2450-7L	<b>159 000 908</b>	Current (4 to 20 mA)	½ in. male union
Operating Pressure Range 0 to 250 psi			
3-2450-3H	<b>159 000 681</b>	Digital (S <sup>3</sup> L)	½ in. male union
3-2450-7H	<b>159 000 910</b>	Current (4 to 20 mA)	½ in. male union
Material	Code	Description	
Union Matrix for Pressure Sensor 3-2450 ½ in. Union Connection			
End connector			
PVC	<b>721 600 106</b>	Union end metric socket	
PVC	<b>721 602 006</b>	Union end IPS socket	
PVC	<b>721 602 656</b>	Union end NPT thread	
PP-B	<b>727 608 506</b>	Union end butt	
PP-B	<b>727 600 106</b>	Union end threaded NPT	
PP-B	<b>198 203 603</b>	Union end threaded NPT	
PP-N	<b>728 608 506</b>	Union end butt	
PVDF	<b>735 608 606</b>	Union end butt	
PVDF	<b>735 600 106</b>	Union end socket	
PVDF	<b>198 203 611</b>	Union end threaded	
Nuts			
PVC	<b>721 690 006</b>		
PVDF	<b>735 690 406</b>		
PP	<b>727 690 406</b>		

## 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>	¾ in. Integral mounting kit
3-8052-1	<b>159 000 755</b>	¾ 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)
3-9900.396	<b>159 001 701</b>	Angle Adjustment Adapter Kit (for Field Mounting)
3-0250	<b>159 001 538</b>	USB to digital (S <sup>3</sup> L) configuration/diagnostic tool

3-2450.099 Rev K (4/13)

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