



1/2 in. union mount

Blind transmitter or digital (S³L) 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 (S³L) 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 (S³L) 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

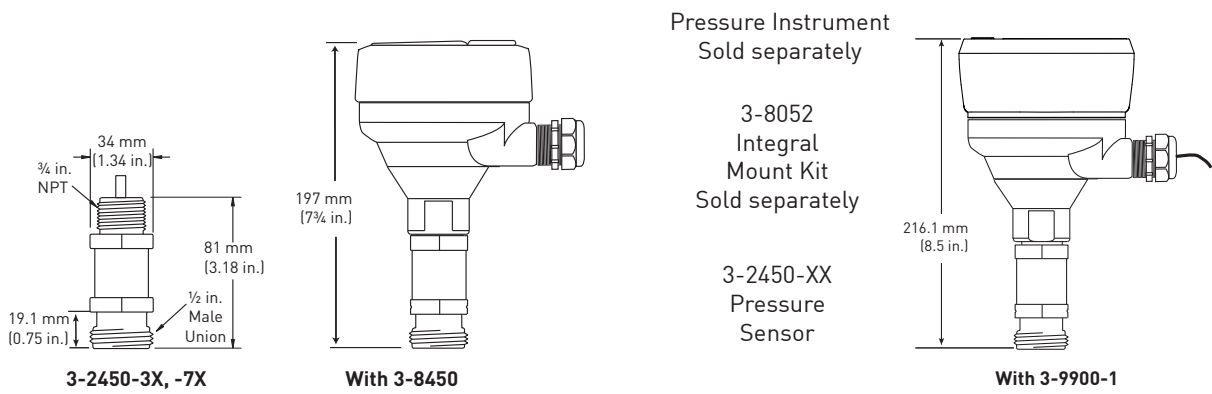
- Level or Depth Sensing
- HVAC
- Scrubber Systems
- Pump Protection
- Water Management
- Irrigation Systems
- Wastewater
- Chemical Processing
- Pressure Regulation/Monitoring

Specifications

General		
Output		Digital (S ³ 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 ³ L)	5 to 6.5 VDC < 1.5 mA
	4 to 20 mA	12 to 24 VDC ±10%, regulated
Cable Length		4.6 m15 ft
Cable Type		3 cond. + shield, 22 AWG, PVC jacketed, 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 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 °C5 °F to 185 °F
Storage Temperature		-20 °C to 100 °C-4 °F to 212 °F
Operating Pressure		
	-XU	0 to 0.7 bar0 to 10 psig
	-XL	0 to 3.4 bar0 to 50 psig
	-XH	0 to 17 bar0 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 bar20 psig
	-XL	5.2 bar75 psig
	-XH	20.7 bar300 psig
Burst Pressure		82 bar1,200 psig
Shipping Weight		
	0.150kg	0.33 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	Field Mount - Pipe, Tank, Wall	4 to 20 mA input	Integral Mount
	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.

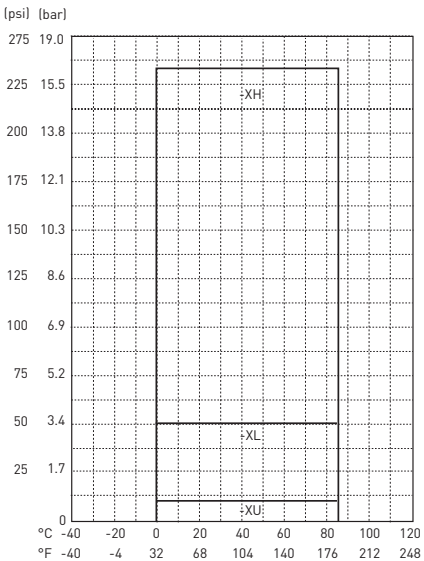
Application Tips

- 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.

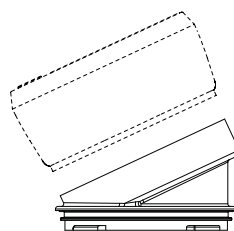


Ordering Notes

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

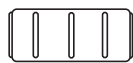
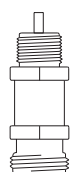
1. Order Integral adapter kit PN 3-8052 or 3-8052-1 (sold separately) to connect the instrument (sold separately) directly on to the sensor.
2. Order an instrument (sold separately). The following instrument part numbers are compatible with the 2450 for integral mounting: 3-8450-3, 3-9900-1.

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	159 000 683	Digital (S³L)	½ in. male union
3-2450-7U	159 000 906	Current (4 to 20 mA)	½ in. male union
Operating Pressure Range 0 to 50 psi			
3-2450-3L	159 000 682	Digital (S³L)	½ in. male union
3-2450-7L	159 000 908	Current (4 to 20 mA)	½ in. male union
Operating Pressure Range 0 to 250 psi			
3-2450-3H	159 000 681	Digital (S³L)	½ in. male union
3-2450-7H	159 000 910	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	721 600 106	Union end metric socket	
PVC	721 602 006	Union end IPS socket	
PVC	721 602 656	Union end NPT thread	
PP-B	727 608 506	Union end butt	
PP-B	727 600 106	Union end threaded NPT	
PP-B	198 203 603	Union end threaded NPT	
PP-N	728 608 506	Union end butt	
PVDF	735 608 606	Union end butt	
PVDF	735 600 106	Union end socket	
PVDF	198 203 611	Union end threaded	
Nuts			
PVC	721 690 006		
PVDF	735 690 406		
PP	727 690 406		

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)
3-9900.396	159 001 701	Angle Adjustment Adapter Kit (for Field Mounting)
3-0250	159 001 538	USB to digital (S ³ L) configuration/diagnostic tool

3-2450.099 Rev K (4/13)

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