

Signet 8450 Pressure Transmitters

Member of the Process Pro® family of Transmitters



Panel Mount



Pipe, Wall, Tank and Integral Mount

Description

The Signet 8450 Pressure Transmitter is a unique instrument that offers local or remote display with current and relay outputs. This model offers exceptional repeatability and accuracy over a wide operating pressure range. The instrument is available in field and panel mount configurations, single or dual channel input and is equipped with a 4 to 20mA output, fully scaleable and reversible for each input channel. Configurations include open collector outputs or relays with status indicators for process control or alarming. The unit also has the ability to accept other sensors with 4

to 20mA output, via the Signet 8058 Signal Converter. The chemical resistant NEMA 4X/IP65 front face is found in both the highly visible field mount or black panel mount instrument, both featuring a self healing window, a standard 1/4 DIN cutout and large push buttons for easy navigation. Programming capabilities are available for single point calibration, setting of relays and outputs, and output simulation function for complete system testing. The dual input version allows difference calculation (ΔP) and offers significant cost savings with independent dual outputs.

System Overview

In-Line Installation			Submersible Installation*
Panel Mount Signet 8450 Pressure Instrument 	Pipe, Tank, Wall Mount Signet 8450 Pressure Instrument 	Integral Mount Signet 8450 Pressure Instrument 	Panel, Pipe, Tank, Wall Mount Signet 8450 Pressure Instrument
 Signet 2450 Pressure Sensor (sold separately)	 Signet 2450 Pressure Sensor (sold separately)	 Signet 2450 Pressure Sensor (sold separately)	 Signet 2450 Pressure Sensor (sold separately)
Signet Universal Adapter Kit (3-8050) (sold separately)			Signet Integral Adapter Kit (3-8052) (sold separately)
Pipe extension or conduit with 3/4 in. FNPT threads			Signet 2450 Pressure Sensor (sold separately)
Fittings - Customer supplied			

8058 Signal converter also compatible

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

Features

- Digital (S³L) input for stable and reliable reading
- Available with single or dual sensor input
- Pressure can be displayed in psi, bar or kPa
- Field scaleable 4 to 20mA output
- Choice of relay or open collector output
- NEMA 4X/IP65
- Chemical resistant enclosure and self-healing window

Application

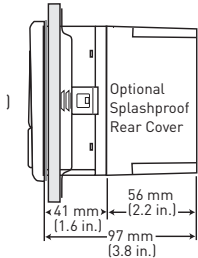
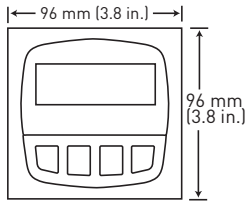
- Pump, filter or pipe protection
- Pressure regulation/monitoring
- Over or under pressure alarm
- Pump servicing
- HVAC systems
- Chemical processing
- Scrubber systems
- Water management
- Irrigation systems
- Waste water



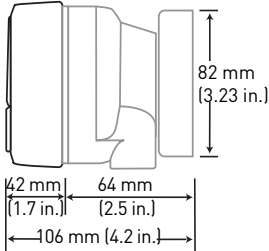


Dimensions

3-8450-XP



Field version with universal mount



Model 8450

Ordering Notes:

- Field mount instruments can be mounted with a sensor in an integral configuration by choosing the following:
 - Order integral adapter kit PN 3-8052 (sold separately) to connect the transmitter directly onto the sensor.
- An optional splashproof rear cover can be ordered separately if needed.
- Use the universal mounting kit with the field mount transmitter to mount to a pipe, tank or wall.
- To mount the panel version on a wall, use the heavy duty wall mount bracket.
- Order RC filter kits to protect relays from voltage spikes.

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

Specifications

General

Compatibility:

Signet 2450 Pressure Sensor versions with digital output or other sensors with 4 to 20mA output (via Model 8058)

Accuracy: $\pm 1\%$ of full scale

Repeatability: $\pm 0.5\%$ of full scale

Display:

Alphanumeric 2 x 16 dot matrix LCD

Update rate: 1 second

Contrast: User selected, 5 levels

Materials

- Case: PBT
- Panel case gasket: Neoprene
- Window: Polyurethane coated polycarbonate
- Keypad: Sealed 4-key silicone rubber

Electrical

Power: 12 to 24 VDC $\pm 10\%$ regulated

- [-1] 21 mA max.
- [-2] 220 mA max.
- [-3] 60mA max.

Sensor Input range:

0 to 250 psig, 0 to 17 bar, 0 to 1700 kPa

Current output:

- 4 to 20 mA, isolated, passive, fully adjustable and reversible
- Max loop impedance:
 - 50 Ω max. @ 12 V
 - 325 Ω max. @ 18 V
 - 600 Ω max. @ 24V
- Update rate: 100 ms
- Accuracy: ± 0.03 mA

Electrical (continued)

Relay output

- Mechanical SPDT contacts: Hi, Lo, Off
- Maximum voltage rating: 5 A @ 30 VDC, 5 A @ 250 VAC resistive load
- Hysteresis: User adjustable
- Open-collector output: Hi, Lo, Off
- Open-collector, optically isolated, 50 mA max, sink, 30 VDC max. with pull-up resistor.
- Hysteresis: User adjustable

Environmental

Enclosure rating: NEMA 4X/IP65 front

Operating temperature:

-10°C to 70°C (14°F to 158°F)

Storage temperature:

-15°C to 80°C (5°F to 176°F)

Relative humidity:

0 to 95%, non-condensing

Shipping Weight: 0.325 kg (0.8 lbs.)

Standards and Approvals

- CE, UL listed
- Manufactured under ISO 9001:2000 for Quality and ISO 14001:2004 for Environmental Management

Ordering Information

Instrument Part Number	
3-8450	Pressure Transmitter
↓	Input(s), Outputs, and Power - Choose one
	-1 One input with 4 to 20 mA output and one open collector; uses 2 wire power
	-2 One input with 4 to 20 mA output and two relays; uses 4 wire power
	-3 Two inputs with two 4 to 20 mA outputs and 2 open collectors; uses 4 wire power
	Field or panel mount - Choose one
	- Field mount for pipe, wall, tank, or integral mounting
P Panel mount with mounting bracket and panel gasket	
↓	
3-8450	-1 P Example Part Number

Mfr. Part No.	Code	Mfr. Part No.	Code
3-8450-1	159 000 041	3-8450-2P	159 000 044
3-8450-1P	159 000 042	3-8450-3	159 000 045
3-8450-2	159 000 043	3-8450-3P	159 000 046

Accessories and Replacement Parts

Mfr. Part No.	Code	Description
Mounting		
3-8050	159 000 184	Universal mounting kit
3-8052	159 000 188	3/4 in. Integral mounting kit
3-8052-1	159 000 755	3/4 in. NPT mount junction box with liquid tight connector and cap w/terminal block
3-8050.395	159 000 186	Splashproof rear cover
3-0000.596	159 000 641	Heavy duty wall mount bracket (for panel mount only)
3-5000.598	198 840 225	Surface Mount Bracket
Liquid Tight Connectors		
3-9000.392	159 000 368	Liquid tight connector kit for rear cover (3 connectors)
3-9000.392-1	159 000 839	Liquid tight connector kit, NPT (1 piece)
3-9000.392-2	159 000 841	Liquid tight connector kit, PG13.5 (1 piece)
Other		
3-8050.396	159 000 617	RC Filter kit (for relay use), 2 per kit
3-8058-1S	special order	4 to 20mA to digital signal converter, single input, loop powered
3-8058-2S	special order	4 to 20mA to digital signal converter, dual input, loop powered