

# Signet 8250 Level Transmitters

## Features

- Level units for: ft, in., m, cm, %
- Volume units for: gal., in<sup>3</sup>, lbs., l, m<sup>3</sup>, kg, %
- Available with single or dual input
- Advanced relay control supports up to 4 relays
- Output simulation
- Manual (up to 10 pts.) and automatic level-to-volume conversion
- Display level, volume or both
- Specific gravity entry for use with pressure sensors and mass unit conversion
- User-selectable averaging for display and output
- Accepts other level sensors with 4 to 20 mA output (via 8058 signal converter)
- NEMA 4X/IP65

## Applications

- Continuous Level and/or Volume Monitoring
- Local or remote display
- Fill start/stop control
- Pump Protection
- Inventory Management
- Storage Tank Monitoring
- Pump Station Control
- Waste Sumps
- Clarifiers
- Plating Lines
- Neutralization Tanks
- Overflow Protection
- Leak Detection



Member of the Process Pro® Family of Transmitters



Panel Mount



Pipe, Wall, Tank and Integral Mount

## Description

Signet 8250 Level Transmitters are compatible with the Signet 2250 Level sensor and 2450 Pressure Sensor. The instrument is available in field and panel mount configurations, single or dual-channel input and equipped with one 4 to 20 mA output, fully scaleable and reversible for each input channel. The unit also features two additional externally mounted relays (for a total of four). Relay operation is selectable for High, Low, Window or Off, and includes fully adjustable hysteresis and trigger

time delay. The unit also has the ability to accept other level sensors with 4 to 20 mA output via the Signet 8058 Signal Converter. Automatic level-to-volume conversion allows display and control of tank volume and/or level in units such as gallons, kilograms, feet or meters. Simply enter the dimensions of your tank or vessel, and the instrument will calculate volume from the level measurement.

## System Overview

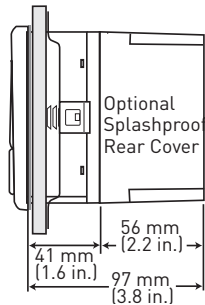
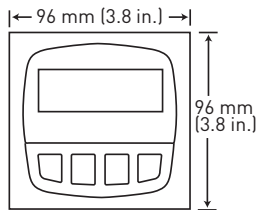
In-Line Installation			Submersible Installation*
<b>Panel Mount Signet 8250 Level Instrument</b> 	<b>Pipe, Tank, Wall Mount Signet 8250 Level Instrument</b> 	<b>Integral Mount Signet 8250 Level Instrument</b> 	<b>Panel, Pipe, Tank, Wall Mount Signet 8250 Level Instrument</b> 
	Signet Universal Adapter Kit (3-8050) (sold separately) 	Signet Integral Adapter Kit (3-8052) (sold separately) 	Pipe extension or conduit with 3/4 in. FNPT threads 
Signet 2250, 2450 Sensor (sold separately) 			Signet 2250, 2450 Sensor (sold separately) 
In-Line Installation - Fittings (Customer supplied)			

8058 signal converter & 8059 external relay module also compatible

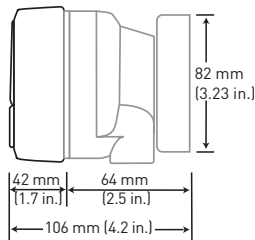
\*For pipe, tank or wall mount installations, user must use the Universal Adapter Kit (3-8050)

## Dimensions

### 3-8250-XP



### Field version with universal mount



### Model 8250

#### Ordering Notes

- Field mount instruments can be mounted with a sensor in an integral configuration by choosing the following:
  - Order integral adapter kit 3-8052 (sold separately) to connect the instrument directly onto the sensor.
- An optional splashproof rear cover can be ordered separately if needed.
- Use the universal mounting kit with the field mount instrument to mount to a pipe, tank or wall.
- Two additional relays can be used with this product. See part numbers 3-8059-2 or 3-8059-2AC
- To mount the panel version on a wall, use heavy duty wall mount bracket.
- Order RC filter kit to protect relays from voltage spikes.
- Panel cutout should be 92 mm X 92 mm [3.62 in X 3.62 in.].

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

#### Rev A (3/09)

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## Specifications

### General

#### Compatible Sensors:

- Signet 2250 level sensor
- Signet 2450 pressure sensor versions with digital (S<sup>3</sup>L) output or other sensors with 4 to 20 mA output (via Model 8058)

Accuracy: ± 1% full scale (based on 2250/2450)

#### Display:

- Alphanumeric 2 x 16 LCD
- Sealed 4-button keypad
- Display update rate: 1 second
- Contrast: User selected, 5 levels

### Materials

- Case: Polybutylene (PBT)
- Panel Case Gasket: Neoprene
- Window: Polyurethane-coated polycarbonate
- Keypad: Silicone rubber

### Electrical

#### Power:

12 to 24 VDC ±10% regulated, 250 mA max. current

#### 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. @ 24 V
- Update Rate: 300 ms
- Output Accuracy: ± 0.03 mA

### Electrical (continued)

#### Relay Outputs:

- 2 mechanical SPDT contacts standard with all units
- Software supports 2 additional relays via optional external relay module (3-8059)
- Maximum Voltage Rating:
  - 5 A @ 30 VDC
  - 5 A @ 250 VAC, resistive load
- Programmable: High, Low, Window
- Hysteresis: User adjustable
- Open-collector output: High, Low, Off
- Time delay: programmable from 0 to 6400 sec

### Environmental

#### 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

#### Maximum Altitude: 2,000 m (6,562 ft)

#### Enclosure: NEMA 4X/IP65 front

**Shipping Weight** 0.325 kg 0.8 lb

### Standards and Approvals

- CE, UL listed, CUL
- RoHS compliant
- Manufactured under ISO 9001 for Quality and ISO 14001 for Environmental Management

## Ordering Information

Instrument Part Number	
<b>3-8250</b>	Level Transmitter
	Input(s), Outputs, and Power - Choose One
<b>2</b>	One input with 4 to 20 mA output and two relays; uses 4 wire power
<b>3</b>	Two inputs with two 4 to 20 mA outputs and two relays; uses 4 wire power
	Field or Panel Mount - Choose One
<b>-</b>	Field mount for pipe, wall, tank, or integral mounting
<b>P</b>	Panel mount with mounting bracket and panel gasket
<b>3-8250 -2 P</b>	<b>Example Part Number</b>

Mfr. Part No	Code	Mfr. Part No	Code
3-8250-2	<b>159 000 766</b>	3-8250-3	<b>159 000 768</b>
3-8250-2P	<b>159 000 767</b>	3-8250-3P	<b>159 000 769</b>

## Accessories and Replacement Parts

Mfr. Part No.	Code	Description
<b>Mounting</b>		
3-8050	<b>159 000 184</b>	Universal mounting kit
3-8050.395	<b>159 000 186</b>	Splashproof rear cover (panel mount only)
3-8052	<b>159 000 188</b>	¾ in. integral mounting kit
3-0000.596	<b>159 000 641</b>	Heavy duty wall mount bracket (panel mount only)
3-5000.598	<b>198 840 225</b>	Surface mount bracket (panel mount only)
<b>Liquid Tight Connectors</b>		
3-9000.392	<b>159 000 368</b>	Liquid tight connector kit for rear cover (3 connectors)
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)
<b>Other</b>		
3-8050.396	<b>159 000 617</b>	RC filter kit (for relay use), 2 per kit
3-8058-1S	<b>special order</b>	4 to 20 mA to digital signal converter, single input, loop powered
3-8058-2S	<b>special order</b>	4 to 20 mA to digital signal converter, dual input, loop powered
3-8059-2	<b>159 000 770</b>	External relay module, 2 relays; requires 12 to 24 VDC
3-8059-2AC	<b>159 000 771</b>	External relay module, 2 relays; w/power supply, 100 to 240 VAC