

# Signet 5900 Salinity Monitor



Member of the ProPoint® Family of Monitors



## Features

- Direct reading and calibration in PPT
- Dual proportional control capability
- Scaleable 4 to 20 mA output (active) internally powered
- Two programmable relays
- Tamper-proof security code
- Analog and digital display
- Non-volatile memory
- Compatible with ALL Signet conductivity electrodes
- Versatile low voltage power requirement
- NEMA 4X/IP65

## Applications

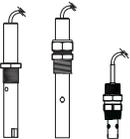
- Desalination
- Saltwater Production
- Aquatic Animal Life Support Systems
- Aquaculture
- Environmental Studies

## Description

The Signet 5900 Salinity Monitor utilizes conductivity sensors to provide direct reading, including calibration, of salinity in parts per thousand (PPT). Equipped with a scaleable 4 to 20 mA output and two programmable relays, the monitor requires 12 to 24 volts,  $\pm 10\%$ , regulated, AC or DC, and is compatible with Signet  $10\text{ cm}^{-1}$  or  $20\text{ cm}^{-1}$  conductivity cells. Temperature is selectable for display in either  $^{\circ}\text{C}$  or  $^{\circ}\text{F}$ , and compensation is automatic.

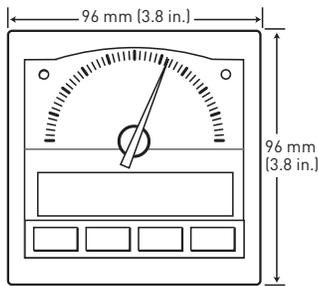
Calibration is simplified with single-point salinity and temperature entry via the wet-cal menu sequence. The four-button keypad arrangement with intuitive software design is user-friendly, and is offered with a hard-coated, high impact, and UV resistant polycarbonate front face. The front panel is rated NEMA 4X/IP65 and an optional splashproof cover is available to protect the back of the instrument.

## System Overview

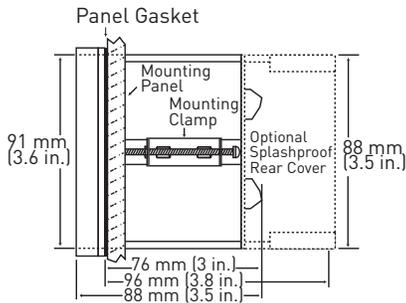
In-Line Sensor Installation	Submersible Sensor Installation
<p>Panel Mount Signet 5900 Instrument</p> 	<p>Panel Mount Signet 5900 Instrument</p> 
	<p>Pipe extension or conduit with 3/4 in. NPT or ISO 7/1-R 3/4 threads</p> 
<p>Signet Conductivity Electrode (sold separately)</p> 	
<p>In-Line Installation - Fittings (Customer supplied)</p>	



## Dimensions



Front View



Side View

## Specifications

### General

Operating Range:

- Salinity: 1 to 80 ppt (parts per thousand)
- Temp.: -5 °C to 100 °C (23 °F to 212 °F)

Accuracy: ± 2% of reading

Display:

- Analog: Reversible dials: 0 to 2, 4, 6, 8, 10 and 100
- Digital: Backlit LCD, 2x16 alphanumeric characters

### Materials

- Enclosure: ABS Plastic
- Keypad: Silicone Rubber
- Panel and case gasket: Neoprene
- Window: Hard-coated polycarbonate

### Electrical

Power Requirements:

12 to 24 VAC or VDC ±10%, regulated recommended, 50 to 60 Hz, 10W max.

Current Output:

- 4 to 20 mA, non-isolated, active, internally powered
- Loop Impedance:  
350 Ω max. @ 12 V  
950 Ω max. @ 24 V
- Accuracy: ± 0.1%

### Electrical (continued)

Alarm Contacts:

- Two SPDT relays:  
5 A @ 30 VDC  
5 A @ 125 VAC  
3 A @ 250 VAC max.
- High/low/pulse programmable with adjustable hysteresis
- Dual proportional control capability, up to 300 pulses per minute

### Environmental

Operating Temperature:

-10 °C to 55 °C (14 °F to 131 °F)

Relative Humidity:

0 to 95%, non-condensing

Enclosure: NEMA 4X/IP65 front

Shipping Weight 0.8 kg 1.76 lb

### Standards and Approvals

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

### Model 5900

#### Ordering Notes

- 1) Panel cutout should be 92 x 92 mm (3.62 x 3.62 in.)
- 2) Reversible dials are included and are scaled from 0 to 2, 0 to 4, 0 to 6, 0 to 8, 0 to 10, 0 to 100.
- 3) An optional splash proof rear cover can be ordered separately if needed for outdoor environments.
- 4) Use RC filter kits to protect relays from voltage spikes.

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

## Ordering Information

Mfr. Part No.	Code	Description
3-5900	<b>198 825 008</b>	Salinity Monitor with 4 to 20 mA output and two relays

## Accessories and Replacement Parts

Mfr. Part No.	Code	Description
<b>Mounting</b>		
3-5000.395	<b>198 840 227</b>	Splashproof rear cover kit
3-5000.598	<b>198 840 225</b>	Surface mount bracket (panel mount only)
3-5000.399	<b>198 840 224</b>	5 x 5 inch adapter plate to retrofit older Signet installation
3-8050.392	<b>159 000 640</b>	¼ DIN retrofit adapter
3-0000.596	<b>159 000 641</b>	Heavy duty wall 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>Miscellaneous</b>		
3-5000.390	<b>159 000 323</b>	Installation kit
3-5000.397	<b>159 000 326</b>	5000 series window kit (window, keypad, and screws)
3-5000.525-1	<b>198 840 226</b>	Bezel, 5000 series
3-5500.390	<b>159 000 347</b>	Dial kit
3-5500.612	<b>198 840 230</b>	Unit tags
3-5000.398	<b>159 000 646</b>	Protective overlay kit (10 pcs)
3-8050.396	<b>159 000 617</b>	RC filter kit (for relay use), 2 per kit

3-5900.099 Rev A (01/10)

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