



Check out the 9900 Transmitter for your single channel needs

Member of the ProcessPro® Family of Instruments



Panel Mount



Pipe, Tank, Wall and Integral Mount

The Signet 8850 Conductivity/Resistivity Transmitter is designed for multiple installation capabilities, simple set-up and easy operation, thus satisfying a broad range of application requirements.

A single sensor input into the microprocessor based electronics allow for a wide operating range and long term signal stability in three different instrument versions: the 8850-1 for a traditional two-wire current loop and one open collector output, the 8850-2 features current loop plus two dry contact relays, or the 8850-3 with two 4 to 20 mA loop output and two open collector relays.

The 8850 is offered with a NEMA 4X/IP65 front panel with a self-healing window in a convenient ¼ DIN package for easy mounting. The 8850 can be configured via a simple menu system.

In addition to programmable outputs and relays, the unit can also be set up to measure raw conductivity values.

## Features

- Display choices of  $\mu\text{S}$ , mS,  $\text{K}\Omega$ ,  $\text{M}\Omega$ , PPM (TDS)
- Simulate function
- Programmable temperature compensation
- Mechanical relay and open collector options
- Dual output option allows temperature and process signal transmission
- NEMA 4X/IP65 enclosure with self-healing window
- Compatible with ALL Signet conductivity electrodes



## Applications

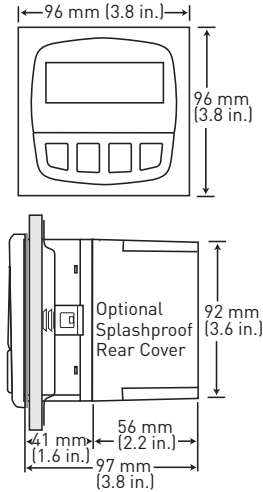
- RO/DI System Control
- Rinse Tank Control
- Cooling Tower, Scrubber or Blowdown Control
- Environmental Study (TDS)
- Desalination Monitor
- Water Quality Monitoring
- Leak Detection
- Chemical Concentration

# Specifications

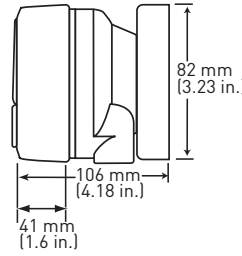
General			
Compatible Electrodes	All Signet conductivity/resistivity electrodes		
Sensor Input Range			
Conductivity	0.055 to 400,000 $\mu\text{S}/\text{cm}$		
Resistivity	10 $\text{K}\Omega\cdot\text{cm}$ to 18.2 $\text{M}\Omega\cdot\text{cm}$		
TDS	0.023 to 200,000 ppm		
Temperature	PT1000	-25 °C to 120 °C	-13 °F to 248 °F
Accuracy			
Conductivity/Resistivity	$\pm 2\%$ of reading		
Temperature	$\pm 0.75$ °C		
Display	Alphanumeric 2 x 16 LCD		
Contrast	User selected, 5 levels		
Update Rate	1.8 seconds		
Materials			
Case	PBT		
Keypad	Sealed 4-key silicone rubber		
Panel and Case Gasket	Neoprene		
Window	Polyurethane coated polycarbonate		
Electrical			
Power	12 to 24 VDC $\pm 10\%$ regulated		
-1	90 mA max.		
-2	290 mA max.		
-3	100 mA max.		
Current Output	4 to 20 mA, isolated, passive, fully adjustable and reversible		
Max Loop Impedance	50 $\Omega$ max. @ 12 V		
	325 $\Omega$ max. @ 18 V		
	600 $\Omega$ max. @ 24 V		
Update Rate	200 ms		
Accuracy	$\pm 0.03$ mA @ 25°C, 24 V		
Open Collector Output	High, Low, Pulse, Off		
Max Voltage Rating	50 mA max sink, 30 VDC max		
Hysteresis	User adjustable		
	Max 400 pulses/min.		
Relay Output	Mechanical SPDT contacts: High, Low, Pulse, Off		
Max Voltage Rating	5A @ 30 VDC, or 5 A @ 250 VAC resistive load		
Hysteresis	User adjustable		
	Max 400 pulses/min.		
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		
Enclosure	NEMA 4X/IP65 (front face only on panel mount); field mount is 100% NEMA 4X/IP65		
Shipping Weight			
	0.6 kg	1.32 lb	
Standards and Approvals			
	CE, UL, CUL		
	RoHS compliant		
	China RoHS		
	Manufactured under ISO 9001 for Quality and ISO 14001 for Environmental Management		

# Dimensions

## 3-8850-XP Panel Mount



## Field Version with Universal Mounting Kit



System Overview	In-Line Installation		Submersible Installation	
	Panel Mount	Field Mount - Pipe, Tank, Wall	Integral Mount	Panel or Field Mount - Pipe, Tank, Wall
	<b>Signet 8850 Conductivity/Resistivity Instrument</b> 	<b>Signet 8850 Conductivity/Resistivity Instrument with 3-8050 Universal Mount Kit</b> 	<b>Signet 8850 Conductivity/Resistivity Instrument with 3-8052 Integral Mount Kit</b> 	<b>Signet 8850 Conductivity/Resistivity Instrument</b> Pipe extension or conduit with 3/4 in. FNPT threads* 
	Signet Electrodes 2818-2823 2839-2842 			
	Note: Submersible installation not applicable for Sanitary Conductivity Electrode.			
	In-Line Installation - Customer supplied 3/4 in. NPT Fittings		All sold separately	

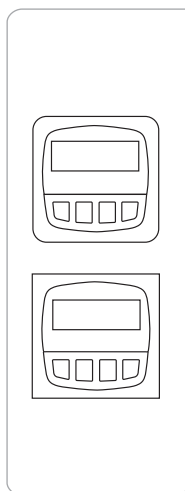
\*Refer to the Signet Submersion brochure located in the K-Factors Fittings and More Kit (3-0000-709) for installation suggestions and options.

## Ordering Notes

- 1) Instruments can be mounted directly to a sensor by choosing the following:
  - Order integral adapter kit 3-8052 (sold separately) to connect the sensor to an instrument.
- 2) Use the universal mount kit (3-8050) with the field mount instrument to mount to a pipe, tank or wall.
- 3) To mount the panel version to a wall, use the heavy duty wall mount bracket
- 4) Order 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	Input/Output
Conductivity/Resistivity Transmitter		
Integral mount package		
3-8850-1	<b>159 000 228</b>	One input with 4 to 20 mA output and one open collector; uses 4-wire power
3-8850-2	<b>159 000 230</b>	One input with 4 to 20 mA output and two relays; uses 4-wire power
3-8850-3	<b>159 000 232</b>	One input with two 4 to 20 mA outputs and 2 open collectors; uses 4-wire power
Panel mount package		
3-8850-1P	<b>159 000 229</b>	One input with 4 to 20 mA output and one open collector; uses 4-wire power
3-8850-2P	<b>159 000 231</b>	One input with 4 to 20 mA output and two relays; uses 4-wire power
3-8850-3P	<b>159 000 233</b>	One input with two 4 to 20 mA outputs and 2 open collectors; uses 4-wire power

## 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
3-8052-1	<b>159 000 755</b>	¾ in. NPT mount junction box
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)
3-8050.392	<b>159 000 640</b>	¼ DIN retrofit adapter
3-9900.396	<b>159 001 701</b>	Angle adjustment adapter kit
<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

3-8850.099 Rev C (11/11)

© Georg Fischer Signet LLC

3401 Aerojet Avenue, El Monte, CA 91731-2882 U.S.A. • Tel. (626) 571-2770 • Fax (626) 573-2057 • www.gfsignet.com • e-mail: signet.ps@georgfischer.com

Specifications subject to change without notice. All rights reserved. All corporate names and trademarks stated herein are the property of their respective companies.