Signet 8850 Conductivity/Resistivity Transmitters

+GF+

Member of the ProcessPro® Family of Transmitters

Panel Mount

Pipe, Tank, Wall and Integral Mount

Features

- Display choices of µS, mS, KΩ, MΩ, PPM (TDS)

- Simulate function

- Programmable temperature compensation

- 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

Description

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.

Full 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, the 8850-2 features current loop plus two dry contact relays, or the 8850-3 with two-wire current loop, one sensor input signal
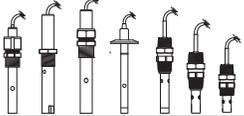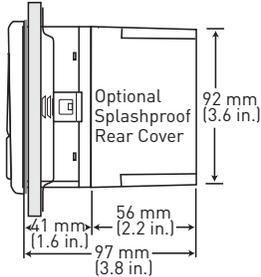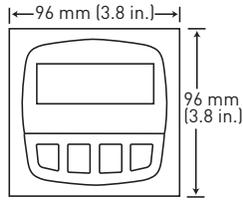
and two current loop outputs. The 8850 is offered with a NEMA 4X/IP65 front panel with a self-healing window in a convenient ¼ DIN package for easy mounting. The 8850 can be configured via a simple menu system.

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

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LISTED
MEASURING EQUIPMENT
77CJ
LEAD FREE RoHS COMPLIANT

System Overview

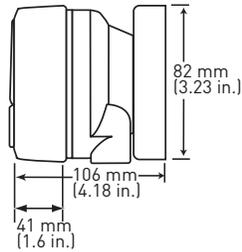| In-line Sensor Installation			Submersible Sensor Installation	
Panel Mount Signet 8850 Conductivity/ Resistivity Instrument	**Pipe, Tank, Wall Mount** Signet 8850 Conductivity/ Resistivity Instrument	**Integral Mount** Signet 8850 Conductivity/ Resistivity Instrument	**Panel, Pipe, Tank, Wall Mount** Signet 8850 Conductivity/ Resistivity Instrument	
	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 (customer supplied)	
Signet Conductivity Electrode (sold separately)			**Note: Submersible installation not applicable for Sanitary Conductivity Electrode.**	
In-Line Installation - 3/4 in. NPT Fittings (Customer supplied)				

Dimensions

3-8850-XP Panel Mount

├── 96 mm (3.8 in.) ──┤

96 mm (3.8 in.)

Optional Splashproof Rear Cover

92 mm (3.6 in.)

41 mm (1.6 in.) ── 56 mm (2.2 in.)
97 mm (3.8 in.)

Field version with universal mounting kit.

82 mm (3.23 in.)

106 mm (4.18 in.)

41 mm (1.6 in.)

Model 8850 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.

Specifications

General

Compatible Electrodes:
   All Signet conductivity/resistivity electrodes

Sensor input range:
- Conductance: 0.055 to 400,000 µS/cm
- Resistivity: 10 KΩ•cm to 18.2 MΩ•cm
- TDS: 0.023 to 200,000 ppm
- Temperature: PT1000, -25 °C to 120 °C (-13 °F to 248 °F)

Accuracy:
- Conductivity/Resistivity: ±2% of reading
- Temperature: ±0.75 °C

Display:
- Alphanumeric 2 x 16 LCD
- Contrast: User selected, 5 levels
- Update Rate: 1.8 seconds

Materials

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

Electrical

Power:
- 12 to 24 VDC ±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

Electrical (continued)

- Max Loop Impedance:
   50 Ω max. @ 12 V,
   325 Ω max. @ 18 V,
   600 Ω max. @ 24 V
- Update Rate: 200 ms
- Accuracy: ±0.03 mA @ 25°C, 24 V

Relay Output:
- Mechanical SPDT contacts: High, Low, Pulse, Off
- Maximum 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

Shipping Weight   0.6 kg   1.32 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			
3-8850	Conductivity/Resistivity Transmitter		
	Select the Model Suited to the Application		
	-1	One input with 4 to 20 mA output and one open collector; uses 4-wire power	
	-2	One input with 4 to 20 mA output and two relays; uses 4-wire power	
	-3	One input with two 4 to 20 mA outputs and 2 open collectors; uses 4-wire power	
		Field or Panel Mount- Choose One	
		-	Integral mount package
		P	Panel mount package
3-8850	**-2**	**P**	**Example Part Number**

Mfr. Part No.	Code	Mfr. Part No.	Code
3-8850-1	**159 000 228**	3-8850-2P	**159 000 231**
3-8850-1P	**159 000 229**	3-8850-3	**159 000 232**
3-8850-2	**159 000 230**	3-8850-3P	**159 000 233**

Accessories and Replacement Parts

Mfr. Part No.	Code	Description
Mounting		
3-8050	**159 000 184**	Universal mounting kit
3-8050.395	**159 000 186**	Splashproof rear cover (panel mount only)
3-8052	**159 000 188**	¾ in. integral mounting kit
3-8052-1	**159 000 755**	¾ in. NPT mount junction box
3-0000.596	**159 000 641**	Heavy duty wall mount bracket (panel mount only)
3-5000.598	**198 840 225**	Surface mount bracket (panel mount only)
3-8050.392	**159 000 640**	¼ DIN retrofit adapter
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 connector)
3-9000.392-2	**159 000 841**	Liquid tight connector kit, PG 13.5 (1 connector)
Other		
3-8050.396	**159 000 617**	RC filter kit (for relay use), 2 per kit