+GF+ SIGNET 8850 ProcessPro™ Conductivity/Resistivity Transmitter

3-8850-X (FIELD)

3-8850-XP (PANEL)

Features

- **Display in µS, mS, KΩ, MΩ, PPM (TDS)**
- **Simulate function**
- **Programmable Temperature compensation**
- **Relay options**
- **Dual output option allows temperature and process signal transmission**
- **2 x 16 character dot matrix LCD**
- **Chemical resistant enclosure and self-healing window**
- **Large pushbuttons**
- **Clearly marked terminal labels**

Application

- **RO/DI system control**
- **Rinse tank control**
- **Cooling tower, scrubber or blowdown control**
- **Environmental study (TDS)**
- **Desalinization monitor**
- **Water quality monitoring**
- **Leak detection**
- **Chemical concentration**

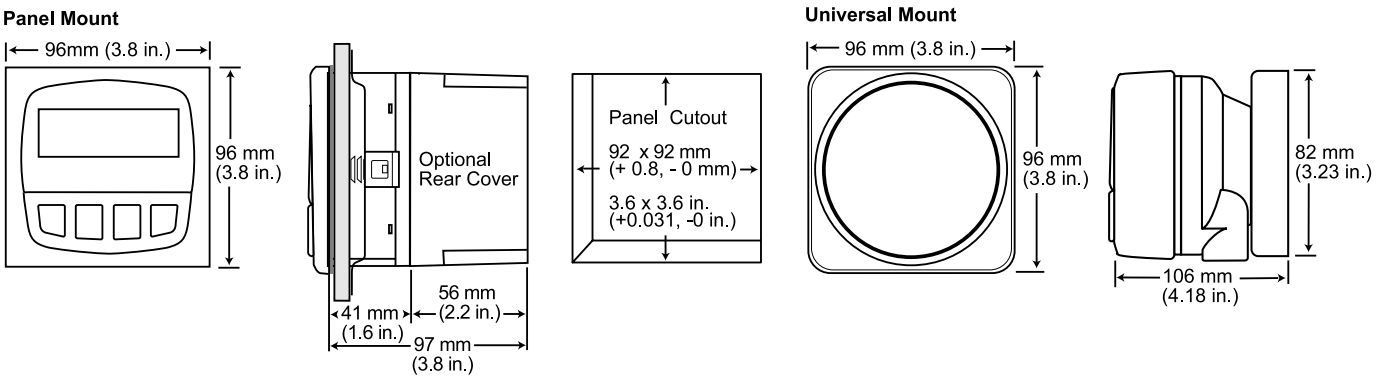
Description

The +GF+ SIGNET 8850 Conductivity/Resistivity Transmitter is designed for broad application and ease of setup and use. The unit can be used for conductance, resistance, or TDS signal transmission and display. Mounting can be accomplished in several options best tailored to your application requirements. Full-microprocessor based electronics allow wide operating range, and long term signal stability due to the elimination of potentiometers, jumpers and dip switches.

Technical Features

Mounting Version	Part No.	Wire Power	Sensor Input	4 to 20 mA Output	Open Collector/ Relay
Field 	3-8850-1	4	1	1	1 O.C. Hi, Lo, Pulse or Off
	3-8850-2	4	1	1	2 Relays Hi, Lo, Pulse or Off
	3-8850-3	4	1	2 Cond/Res or Temp	2 O.C.'s Hi, Lo, Pulse or Off
Panel 	3-8850-1P	4	1	1	1 O.C. Hi, Lo, Pulse or Off
	3-8850-2P	4	1	1	2 Relays Hi, Lo, Pulse or Off
	3-8850-3P	4	1	2 Cond/Res or Temp	2 O.C.'s Hi, Lo, Pulse or Off

Dimensions

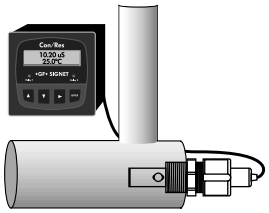


Installation

The transmitter is available in a panel mount or a field version. Select the universal mount kit (3-8050) to mount the transmitter on a surface near the sensor.

1. Panel Mount

3-8850-XP

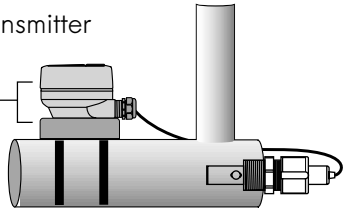


All panel mount transmitters (3-8850-XP) include a mounting bracket and gasket for a NEMA 4X watertight panel installation. Panel mount transmitters fit into a standard 1/4 DIN panel cutout.

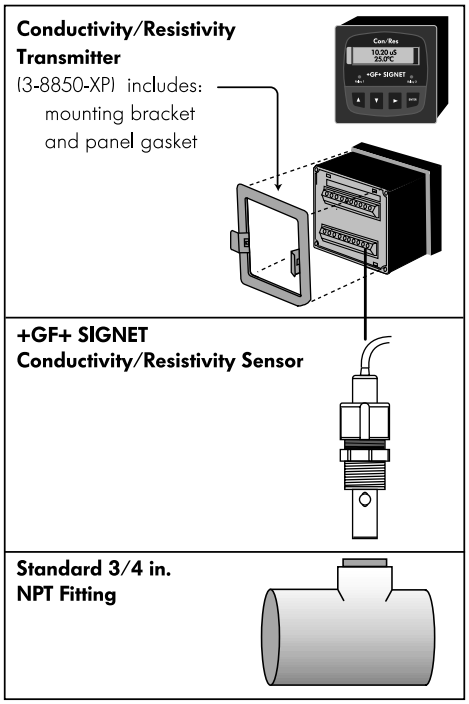
2. Universal Mount

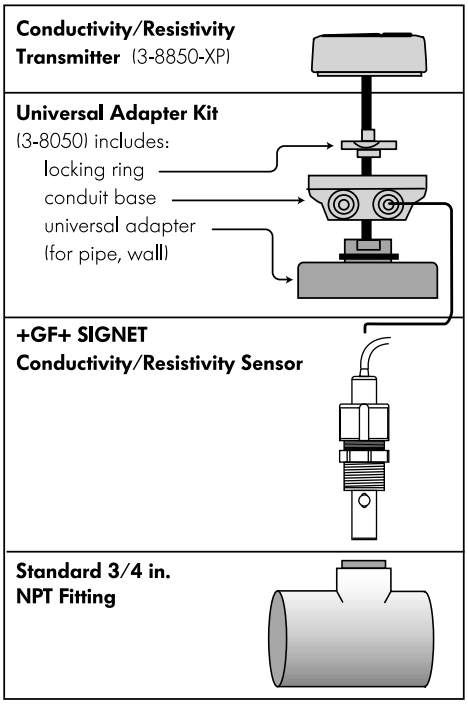
3-8850-X Transmitter

3-8050 Kit

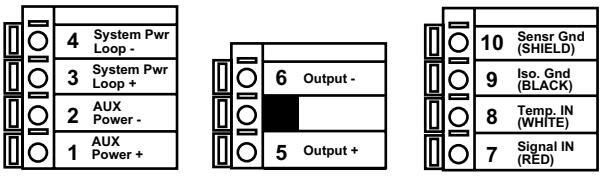


The Universal Mount Kit (3-8050) can be ordered separately and includes a conduit base, locking ring, and universal adapter for mounting the transmitter on a pipe, wall, or other stationary surface.

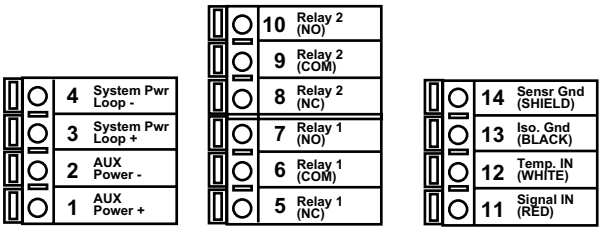




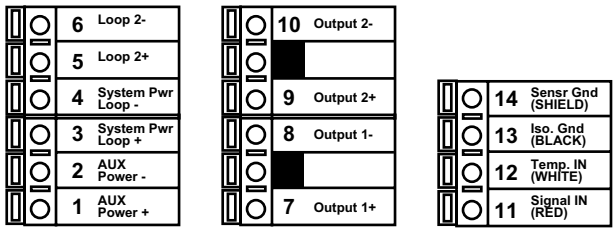
Rear Terminal View



3. terminal 8850-1



3. terminal 8850-2



3. terminal 8850-3

Technical Data

General

Compatible electrodes: +GF+ SIGNET 3-28XX-X Standard and Certified (NIST) Series Conductivity/Resistivity Electrodes

Accuracy: ±2% of reading

Enclosure:

- Rating: NEMA 4X/IP65 front
- Case: PBT
- Panel case gasket: Neoprene
- Window: Polyurethane coated polycarbonate
- Keypad: Sealed 4-key silicone rubber
- Weight: Approx. 325g (12 oz.)

Display:

- Alphanumeric 2 x 16 LCD
- Contrast: User selected, 5 levels

Environmental

Operating temperature: -10 to 70°C (14 to 158°F)

Storage temperature: -15 to 80°C (5 to 176°F)

Relative humidity: 0 to 95%, non-condensing

Standards and Approvals

- CSA, CE, UL listed
- Manufactured under ISO 9001

Electrical

Power:

- 12 to 24 VDC ±10% regulated (-1) 21 mA max.: (-2) 220 mA max.: (-3) 60mA max.

Sensor input range:

- Conductance: 0.055 to 400,000 µS
- Resistivity: 10 KΩ to 18.2 MΩ
- TDS: 0.023 to 200,000 ppm
- Temperature: PT 1000, -25 to 120°C (-13 to 248°F)

Current output:

- 4 to 20 mA, isolated, fully adjustable and reversible
- Max loop impedance: 50Ω max. @ 12 V, 325Ω max. @ 18 V, 600Ω max. @ 24 V
- Update rate: 0.5 seconds
- Accuracy: ±0.03 mA @ 25°C, 24 V

Relay output:

- Mechanical SPDT contacts: Hi, Lo, Pulse, Off
- Maximum voltage rating: 5 A @ 30 VDC, or 5 A @ 250 VAC resistive load
- Hysteresis: User Adjustable
- Max 400 pulses/min.

Open-collector output: Hi, Lo, Pulse, Off

- Open-collector, optically isolated, 50 mA max, sink, 30 VDC max. pull-up voltage.
- Max 400 pulses/min.

Ordering Information

Mfr. Part No	Code	Description
3-8850-1	159 000 228	Conductivity/Resistivity transmitter, Field mount
3-8850-1P	159 000 229	Conductivity/Resistivity transmitter, Panel mount
3-8850-2	159 000 230	Conductivity/Resistivity transmitter, Field mount with relays
3-8850-2P	159 000 231	Conductivity/Resistivity transmitter, Panel mount with relays
3-8850-3	159 000 232	Conductivity/Resistivity, Field mount with single input/dual output
3-8850-3P	159 000 233	Conductivity/Resistivity, Panel mount with single input/dual output

Accessories

Mfr. Part No	Code	Description
3-8050	159 000 184	Universal mounting kit
3-8050.395	159 000 186	Transmitter NEMA 4X cover
3-8052	159 000 188	3/4" Integral mounting kit
3-8050.396	159 000 617	RC Filter kit (for relay use)
3-0000.596	159 000 641	Heavy duty wall mount bracket
3-8050.392	159 000 640	Model 200 retrofit adapter

Engineering Specifications

- The transmitter shall be CSA, UL and CE listed.
- The transmitter shall be manufactured under ISO 9001 certified processes.
- The transmitter shall be field or panel mountable.
- The transmitter shall display µS, mS, KΩ, MΩ, ppm (TDS).
- The display units shall be fully scaleable without jumpers, pots or switches.
- The transmitter allows for certified cell entry.
- The device shall meet NEMA 4X and IP65 standards.
- The transmitter shall have a 4 to 20 mA output with an open collector output, 5 to 30 VDC or a 4 to 20 mA output with 2 relays, or dual 4 to 20 mA outputs with dual open collector with source selection (conductivity, resistivity or temperature) capability.
- The transmitter shall be programmable for temperature compensation, cell constants and TDS factors.
- The transmitter shall have simulate capability.
- The transmitter shall be +GF+SIGNET, Model 8850 Conductivity/Resistivity Transmitter.