



3-2820.090-1 Rev. K 11/04 English

## Warning!

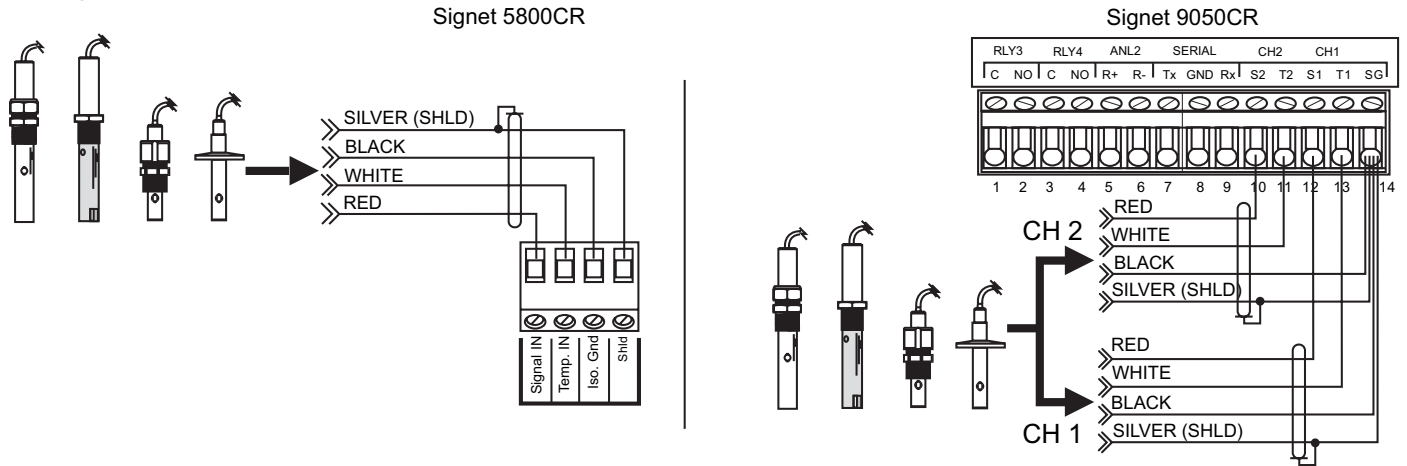


### SAFETY INSTRUCTIONS FOR IN-LINE ELECTRODE INSTALLATION

1. Do not remove from pressurized lines.
  2. Do not exceed maximum temperature/pressure specifications.
  3. Wear safety goggles or face shield during installation/service.
  4. Do not alter product construction.
  5. Disconnect instrument power before wiring this sensor.
- Failure to follow safety instructions may result in severe personal injury!

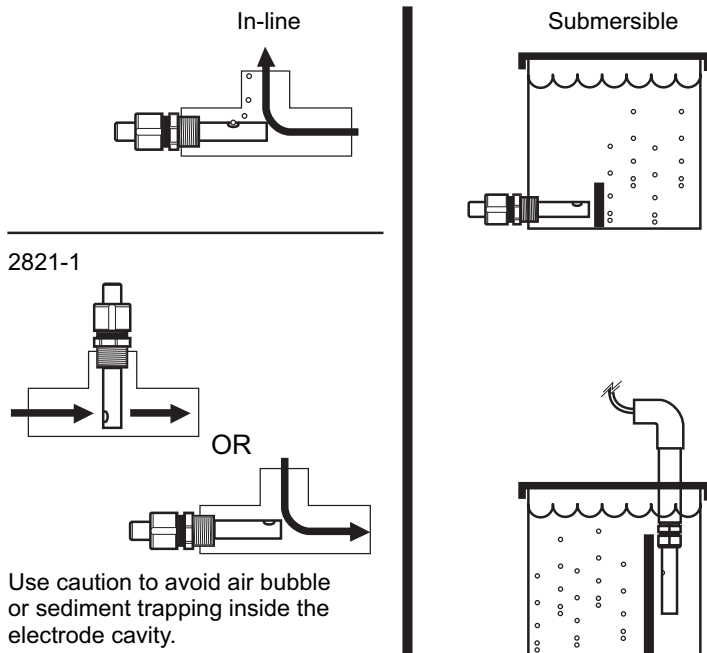


## 1. Wiring

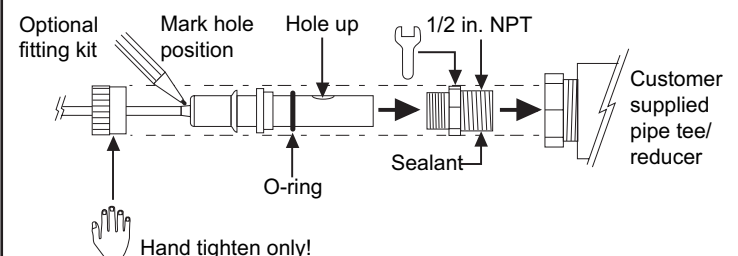
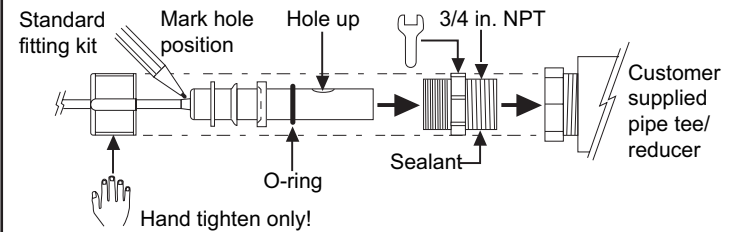


- Use three conductor shielded cable for cable extensions up to 30 m (100 ft) max.
- Shield must be maintained through cable splice.
- Disable power to instrument before connecting this sensor.

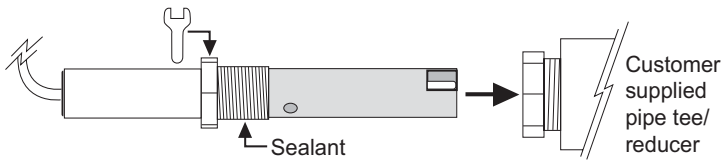
## 2. Recommended Position



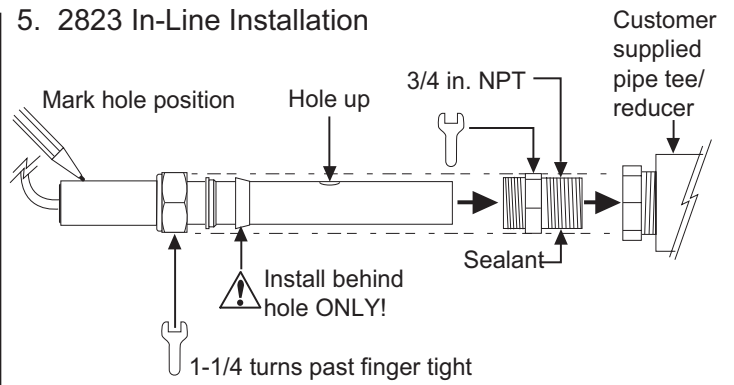
## 3. 2819/2820/2821 In-line Installation



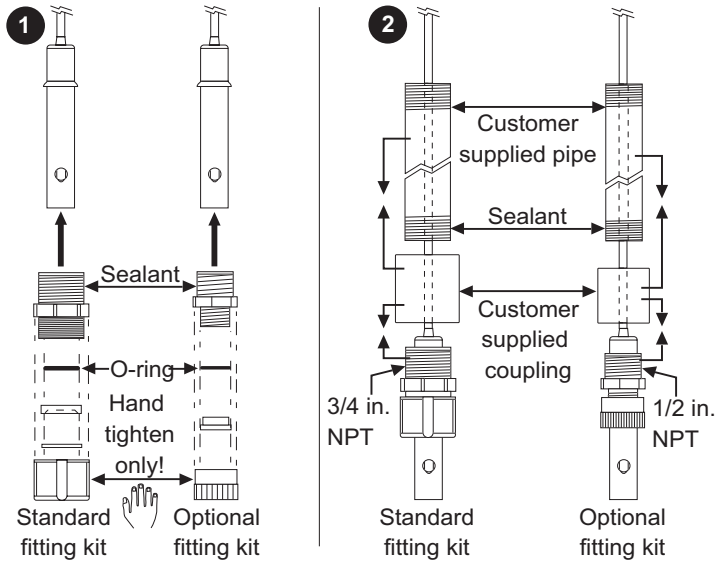
#### 4. 2822 In-line Installation



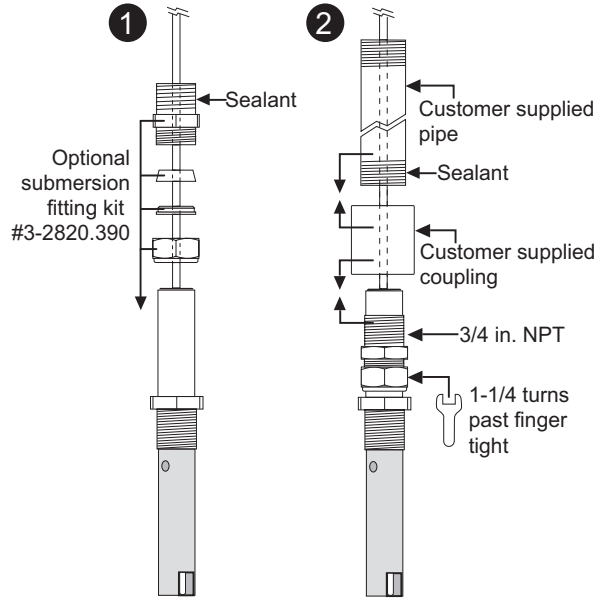
#### 5. 2823 In-Line Installation



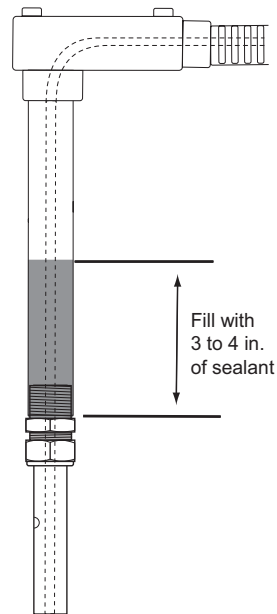
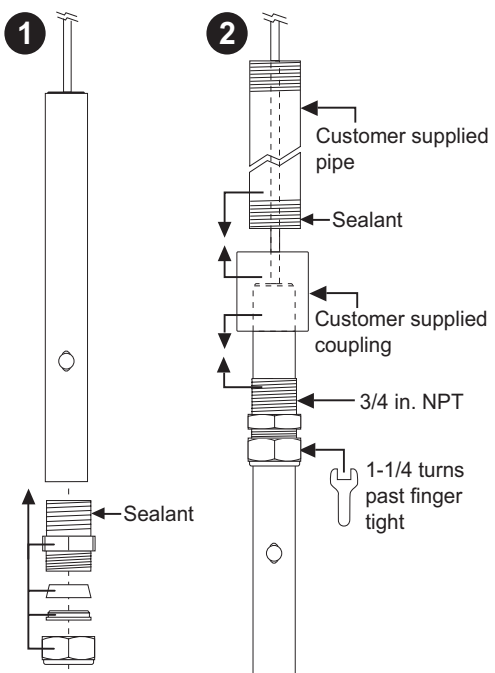
#### 6. 2819/2820/2821 Submersible Installation



#### 7. 2822 Submersible Installation



#### 8. 2823 Submersible Installation



Attach 3/4 in. watertight pipe to the top of the sensor. Secure the threaded connection to prevent any leakage. For additional defense against possible accumulation of condensation at the back seal area of the sensor, fill the lower 3-4 inches (75-100 mm) of conduit or extension pipe with a flexible sealant such as silicone.

## 9. Specifications

Alternate wetted materials and overall lengths are available through special order. Cable length extensions to 100 ft. (30 m) are available through special order. For resistivity measurements above 10 MΩ and/or below 20°C, maximum cable length is 25 ft. (7.6 m).

### 2819-1/2820-1/2821-1

- 2819-1 cell: 0.01
- 2819-1 range: 0.010 to 100 μS (10 kΩ to 100 MΩ)
- 2820-1 cell: 0.1
- 2820-1 range: 1 to 1000 μS
- 2821-1 cell: 1.0
- 2821-1 range: 10 to 10,000 μS

Temperature compensation: PT1000

Wetted materials:

- O-rings: EPR
- Insulator material: PTFE
- Electrodes: 316 stainless steel

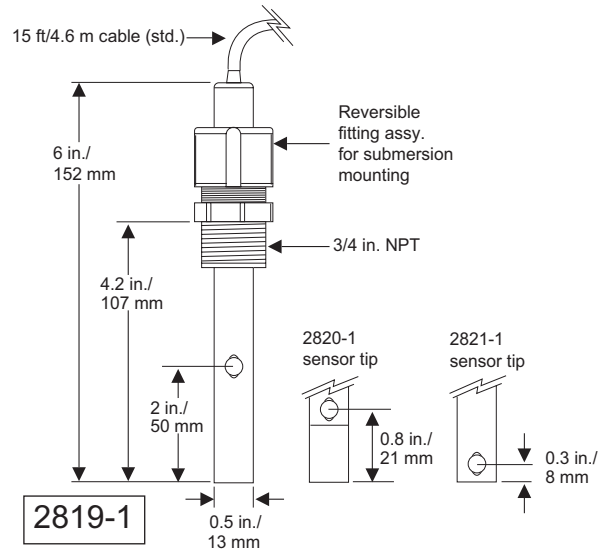
Standard fitting: Polypropylene

- Max. pressure: 6.9 bar (100 psi)
- Max. temperature: 100°C (212°F)

Optional fitting: 316 stainless steel (1/2 in. NPT)

- Max. pressure: 13.8 bar (200 psi)
- Max. temperature: 120°C (248°F)

Quality Standard: CE



### 2819-S1/2820-S1/2821-S1/2819-T1/2820-T1/2821-T1

- 2819-X1 cell: 0.01
- 2819-X1 range: 0.010 to 100 μS (10 kΩ to 100 MΩ)
- 2820-X1 cell: 0.1
- 2820-X1 range: 1 to 1000 μS
- 2821-X1 cell: 1.0
- 2821-X1 range: 10 to 10,000 μS

Sanitary fitting size: 1 and 1½ in.

Temperature compensation: PT1000

Wetted materials:

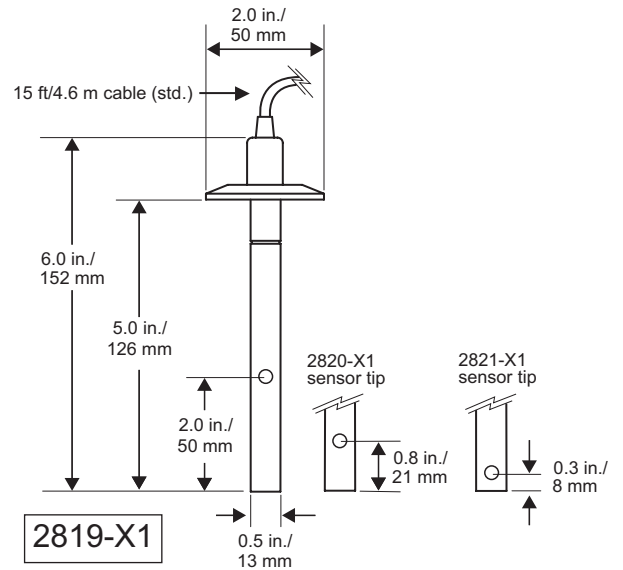
- O-rings: EPR
- Insulator material: PTFE
- Electrodes: 316 stainless steel or titanium

Sanitary fitting: 316 stainless steel or titanium

Max. pressure: 6.9 bar (100 psi)

Max. temperature: 120°C (248°F)

Quality Standard: CE



### 2819-S2/2820-S2/2821-S2/2819-T2/2820-T2/2821-T2

- 2819-X2 cell: 0.01
- 2819-X2 range: 0.010 to 100 μS (10 kΩ to 100 MΩ)
- 2820-X2 cell: 0.1
- 2820-X2 range: 1 to 1000 μS
- 2821-X2 cell: 1.0
- 2821-X2 range: 10 to 10,000 μS

Sanitary fitting size: 2 in.

Temperature compensation: PT1000

Wetted materials:

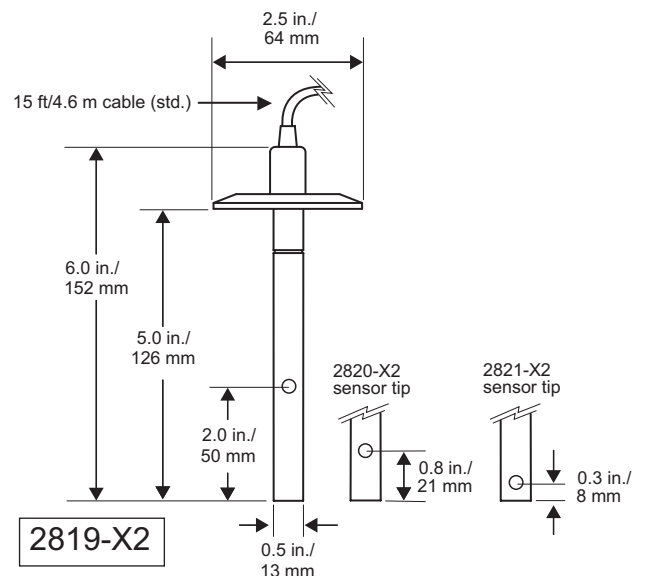
- O-rings: EPR
- Insulator material: PTFE
- Electrodes: 316 stainless steel or titanium

Sanitary fitting: 316 stainless steel or titanium

Max. pressure: 6.9 bar (100 psi)

Max. temperature: 120°C (248°F)

Quality Standard: CE

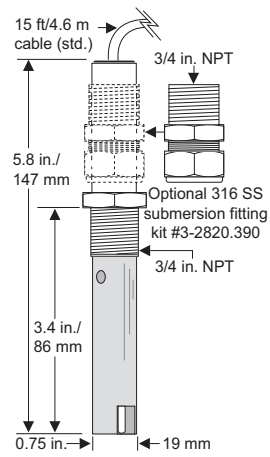


2822-1  
 Cell: 10.0  
 Range: 100 to 200,000  $\mu$ S

Temperature compensation: PT1000

Wetted materials:

- O-rings: EPR
  - Insulator material: CPVC
  - Electrodes: 316 stainless steel
- Standard fitting: 316 stainless steel  
 Max. pressure: 6.9 bar (100 psi)  
 Max. temperature: 95°C (203°F)  
 Quality Standard: CE

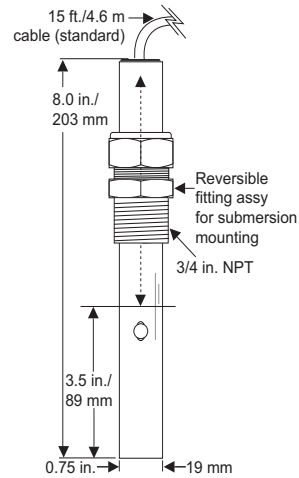


2823-1  
 Cell: 20.0  
 Range: 200 to 400,000  $\mu$ S

Temperature compensation: PT1000

Wetted materials:

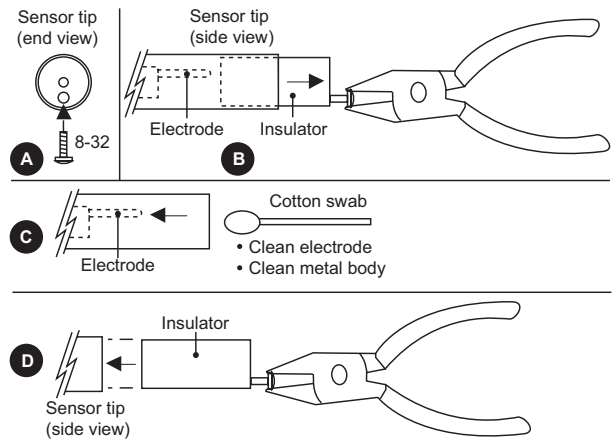
- O-rings: EPR
  - Insulator material: PTFE
  - Electrodes: 316 stainless steel
- Fitting: 316 stainless steel  
 Max. pressure: 6.9 bar (100 psi)  
 Max. temperature: 150°C (302°F)  
 Quality Standard: CE



## 10. Maintenance

Any coatings on electrodes will cause readings to drift or show poor response. Clean metallic surfaces with a mild detergent and a non-abrasive brush or cotton swab.

### 2823-1 Sensor Tip Removal Procedure:



## 11. Accessories

Part No.	Description
3-2820.392	Optional 1/2" 316 SS Fitting
3-2820.390	Optional 3/4" 316 SS Fitting



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