1. Wiring

- Use three conductor shielded cable for cable extensions up to 30 m (100 ft) max.
- Shield must be maintained through cable splice.

2. Recommended Position

3. 2819/2820/2821 In-line Installation

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.
Failure to follow safety instructions may result in severe personal injury!
4. 2822 In-line Installation

Customer supplied pipe tee/reducer
Sealant

Mark hole position
Hole up
Sealant

Install behind hole ONLY!
1-1/4 turns past finger tight

5. 2823 In-Line Installation

Customer supplied pipe tee/reducer

6. 2819/2820/2821 Submersible Installation

Customer supplied pipe
Sealant

Sealant

Customer supplied coupling
Sealant

Optional submersion fitting kit
#3-2820.390

7. 2822 Submersible Installation

Customer supplied pipe
Customer supplied coupling
Sealant

Sealant

Optional fitting kit
Standard fitting kit

Customer supplied pipe
Sealant

Hand tighten only!

Customer supplied coupling

8. 2823 Submersible Installation

Customer supplied pipe
Sealant

Customer supplied coupling

Fill with 3 to 4 in. of sealant

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

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### 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

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### 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
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:

1. Clean electrode/CR
2. Clean metal body
3. Remove sensor tip

11. Accessories

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<th>Description</th>
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