Insertion Sensors
Stainless steel or Titanium 2-electrode sensors with cell constants of 0.02 cm⁻¹, 0.10 cm⁻¹, and fixed cables 3 to 20 meters in length.

Intended for the low conductivity applications found in the semi-conductor, power, water and pharmaceutical industries, these sensors are designed in a convenient compact style. There are several mounting possibilities, including a compression gland, giving a simple effective method of direct insertion in process pipework. The sensors are made from a combination of wetted materials approved by FDA. This makes them ideally suited for the monitoring of pure water systems used in the preparation of injectable solutions. For this kind of application, sanitary clamp mountings are most often used. As with all Yokogawa conductivity sensors, the cell constants are individually calibrated in our laboratories using an ASTM method traceable to NIST international standards.

Features
- Precise individually calibrated cell constant.
- Fast temperature response.
- Built-in Pt1000 temperature sensor.
- Fixed cable length 3, 5, 10, 15 or 20 mtr.
- Direct process insertion.
- Wide range of mountings.
- Compatible with PR4A retractably assembly.
- The sensor is polished to meet pharmaceutical requirements.
Specifications SC4A-AD

General Specifications - Materials - Wetted Parts
Body & electrodes : Stainless steel AISI 316
or Titanium grade 2 or 3
O-ring : EPDM FDA
Mounting adapter : PVDF or Stainless steel AISI 316
Insulation : PEEK (Poly Ether Ether Ketone)
Surface Roughness : 0.8µm (R432)

Operating Specifications (Sensor)
Measuring system : 2-electrode (4-wire)
Maximum pressure : 10 bar (142 PSIG)
Maximum temperature : 110ºC (230 °F)
Temperature response : < 1 minute for 90% of a
step change
Sterilize : At 135°C (275 °F)

Shipping details
Package size : wxhxd 220 x 220 x 90 cm
wxhxd 215 x 150 x 55 cm
Package weight : Approx. 1.6 kg, 3.5 lb

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<th>Model</th>
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<th>Option</th>
<th>Description</th>
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<td>-S</td>
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<tr>
<td></td>
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<td>-10</td>
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<td>-20</td>
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<td>/PF</td>
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<td>Certificates</td>
<td>/Q</td>
<td>/Q</td>
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* 3.1 Material certificate according to EN 10024 is standard delivered with this sensor.

Figure 1. Mounted sensor with the option /PS and /PF

Figure 2. SC4A-AD-15

Figure 3. Flow fitting (SS) option /FF K1598 AC (incl. 3.1 B certificate)

Figure 4. Adapter K1598JB (noryl) or K1598JD (SS) to fit sensors with PG13,5 process connection in K1598AC flow fitting

Process/temperature relationship
Specifications SC4A-SA/SB/SC

General Specifications
The SC4A-E is a FDA approved conductivity sensor with full traceability and supporting documents.
• EPDM O-ring (21 CFR 177.2600)
• SS is 1.4435
• Double O-ring construction (EPDM 21 CFR 177.2450)
• Virgin PEEK isolator (21 CFR 177.2415)
• Surface roughness Ra < 0.4µm (R416)
• Meets EHEDGE/AAA specifications
• 2% accuracy for the Cell constant
• Batch certificate downloadable from Yokogawa website

Materials
Wetted Parts
Body & electrodes : Stainless steel AISI 316l (1.4435)
O-ring : EPDM, FDA migration tested 21 CFR 177.2600
Mounting adapter : Stainless steel AISI 316l Tri-clamp according to ISO 2852-1993
Insulation : PEEK (Poly Ether Ether Ketone) FDA migration tested 21 CFR 177.2415
Surface Roughness : 0.5µm

Operating Specifications (Sensor)
Measuring system : 2-electrode, 4-wire
Maximum pressure : 10 bar (142 PSIG)
Maximum temperature : 110ºC (230 °F)
Temperature response : < 1 minute for 90% of a step change
Sterilize : At 135°C (275 °F)

Operating Specifications options /SB1, /SB2, /SA1, /SA2, /SC1
Stainless Steel
Maximum pressure : 10 bar (142 gpsi)
Maximum temperature : 135°C (275 °F)
Specifications SC4A-PR

General Specifications

Materials
Wetted Parts
- Body & electrodes: Stainless steel AISI 316 or Titanium grade 2 or 3
- O-ring: Viton
- Mounting adapter: Retractable fitting
- Insulations: PEEK (Poly Ether Ether Ketone)

Operating Specifications (Sensor)
- Measuring system: 2-electrode
- Maximum pressure: 10 bar (142 PSIg)
- Maximum temperature: 110ºC (230 °F)
- Temperature response: < 1 minute for 90% of a step change
- Sterile: At 135°C (275 °F)
- Surface Roughness: 0.8µm (R432)

Shipping details
- Package size: 220 x 220 x 90 cm
- Package weight: Approx. 1.6 kg, 3.5 lb

Model Code Suffix code Option Description
SC4A* -T 19 mm conductivity sensor
- S Titanium
Fitting-type -PR Stainless steel
Always -NN For retractable mounting
Cellconstant -002 0.02/cm
-010 0.1/cm
Cable length -03 3 meter
-06 5 meter
-10 10 meter
-15 15 meter
-20 20 meter
-11 30 meter
Certificates /Q* Quality Inspection Certificate

* 3.1 Material certificate according to EN 10024 is standard delivered with this sensor.

Spare Parts SC4A

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<td>Ferrule set for K1542DF</td>
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<td>K1542W</td>
<td>3/4&quot; npt adapter PVDF</td>
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<td>K1598AC</td>
<td>Flowfitting with 3.1 material certificate</td>
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Figure 13. SC4A-PR