

E. Conductivity probes

Two electrodes



SI 301

In-line E. Conductivity probe

Applications: from 0 to 2 mS

Cell constant: K=1 cm⁻¹

Body: PVC

2 Electrodes: 316 S.Steel

Thread: 1" BSP

Operating temperature: 40 °C max.

Operating pressure: 3 bar max. at 25 °C

Option: non standard materials and cell constant.

SI 3013

In-line E. Conductivity probe

Applications: from 0 to 2 mS

Cell constant: K=1 cm⁻¹

Body: Polypropilene

2 Electrodes: 316 S.Steel

Thread: 1" BSP

Operating temperature: 50 °C max.

Operating pressure: 3 bar max. at 25 °C

Option: non standard materials and cell constant.



SI 308T

In-line E. Conductivity probe + Pt100

Applications: for high purity water.

Cell constant: K=0.01 cm⁻¹

Body: PVC

Electrodes: 316 S.Steel

Temperature sensor: Pt100

Thread: 1" BSP

Operating temperature: 50 °C max.

Operating pressure: 3 bar max. at 25 °C

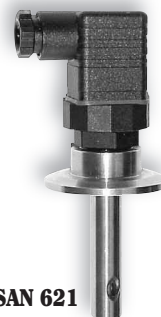
Cable: 3 mt

Special E. Conductivity probes

Two electrodes



SZ 3320.1
SZ 3330.1



SAN 621



SZ 3300.1

SZ 3320.1 - SZ 3330.1

For high Temperature/Pressure.

Applications: High purity water.

Cell constant SZ 3320.1: K = 0.1 cm⁻¹

Cell constant SZ 3330.1: K = 1 cm⁻¹

Thermocompensator: Pt100

Material in contact with liquids: S. Steel, PEEK L=55 mm

Temperature: 205 °C max.

Pressure: 16 bar max. at 25 °C

Connector: 4-pin

Thread: 3/4" NPT

SAN 621-3-1-5S

Pressurizable/Sterilizabile.

Applications: High purity water, pharmaceutical industry.

Cell constant: K = 0.1 cm⁻¹

Thermocompensator: Pt100

Material in contact with liquids: S. Steel, PEEK L=55 mm

Temperature: 121 °C max.

Pressure: 6 bar (10 bar at 20 °C).

Connector: 4-pin

Fixing: Tri-Clamp 2"

SZ 3300.1

Graphite Electrodes.

Applications: From 200 µS to 200 mS.

Cell constant: K = 1 cm⁻¹

Thermocompensator: Pt100

Material in contact with liquids: PES-graphite L=55 mm

Temperature: 150 °C max. at 10 bar

Pressure: 16 bar at 20 °C.

Connector: 4-pin

Thread: 3/4" NPT

E. Conductivity probes

Four electrodes



SI 311

4-Electrode E. Conductivity probe + Pt100

Applications: for immersion and in-line applications.
Suitable for microtransmitter type 080310.

Cell constant: $K=1 \text{ cm}^{-1}$

Body: Polypropylene

Electrodes: 316 S.Steel

Temperature sensor: Pt100

Thread: 1" BSP

Operating temperature: 80 °C max.

Operating pressure: 3 bar max. at 25 °C

Cable: 3 m



SZ 312.4

4-Electrode E. Conductivity probe + NTC 10K

Applications: for immersion and in-line applications.
Suitable for C 3645.

Cell constant: $K=0.7 \text{ cm}^{-1}$

Body: PVDF

Electrodes: 316 S.Steel

Temperature sensor: NTC 10K

Thread: 1/2" BSP on the top of the sensor

Operating temperature: 80 °C max.

Operating pressure: 3 bar max. at 25 °C

Cable: 3 m

E. Conductivity probes

Four electrodes with microtransmitter



ST 311

4-Electrode Conductivity probe with microtransmitter 080310.

For in-line and immersion applications.

This probe is an assembling of SI 311 + 080310 microtransmitter, suitable for C 7685 or C 565.2 controllers.

Connection by cables + connector type SZ 9481 (10 m) or SZ 9483 (30 m).

Measuring range: 0/2000 mS

Operating temperature: 80 °C max. (body)

40 °C max. (microtransmitter)

Length: 210 mm (other as requested)



ST 31011

4-Electrode Conductivity probe with microtransmitter 080310.

For in-line and immersion applications.

Suitable for C 7685 or C 565.2 controllers connected by SZ 9481 (10 m) or SZ 9483 (30 m) cables + connector.

Measuring range: 0/2000 mS

Body: PVDF

Operating temperature: 100 °C max. (body)

40 °C max. (microtransmitter)

Length: 210 mm (other as requested)

Fixing: DN 25 tapered collar

Accessories

SZ 9481 10 m cable with connector 2231520

SZ 9483 30 m cable with connector 2231520

Toroidal E. Conductivity Probes



SI 315

Electrodeless Conductivity probe + Pt100

In-line and immersion applications.

Suitable for microtransmitter 080315 and C 3655 controller.

Applications: from 2000 μS to 20 S, food, chemical, galvanic industry

Body: PVDF in contact with the liquid

Temperature sensor: Pt100 built-in

Operating temperature: 80 °C max

Operating pressure: 3 bar max. at 25 °C

Length: 200 mm

Diameter: 34 mm

Cable: 3 m

Fixing: by fitting SZ 724

Option: non standard length



SI 315.1

Electrodeless Conductivity probe + Pt100

In-line and immersion applications.

Suitable for microtransmitter 080315 and C 3655 controller.

Applications: from 2000 μS to 20 S, food, chemical, galvanic industry

Body: PVDF in contact with the liquid

Temperature sensor: Pt100 built-in

Operating temperature: 80 °C max

Operating pressure: 3 bar max. at 25 °C

Length: 200 mm

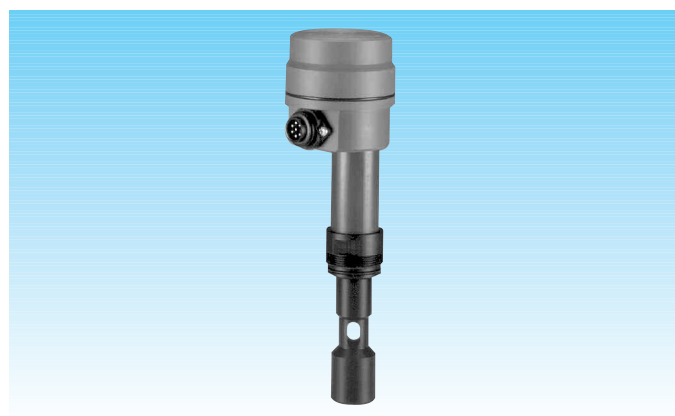
Diameter: 34 mm

Cable: 3 m

Fixing: DIN 32 tapered collar for DIN 11851-52

Option: non standard length

Toroidal E. Conductivity Probes with microtransmitter



ST 315

Electrodeless Conductivity probe with microtransmitter 080315.

For in-line and immersion applications.

This probe is an assembling of SI 315 + 080315 microtransmitter, suitable for C 7685 or C 565.2 controllers.

Connection by cables + connector type SZ 9481 (10 m) or SZ 9483 (30 m).

Applications: from 2000 μS to 20 S, food, chemical, galvanic industry

Cell constant: $K = 1 \text{ cm}^{-1}$

Body: PVDF in contact with the liquid

Temperature sensor: Pt100 built-in

Operating temperature: 80 °C max at 1 bar

Operating pressure: 3.5 bar max. at 25 °C

Length: 255 mm

Diameter: 34 mm

Fixing ST315: by fitting SZ 724

Option: non standard length

Accessories

SZ 9481 10 m cable with connector 2231520

SZ 9483 30 m cable with connector 2231520

2231520 IP 67 connector for cable

2423407 7 wires cable



SZ 724 Fittings for DN40 fixing.

To be used with SI 315 and ST 315

ST 315.21

Toroidal submersible probe



Principle of operation

When the electrodeless conductivity sensor is immersed in the solution to be measured, a conductive loop is created through the two toroidally wound coils. An alternating current is applied to one of the coils which induces a current in the conductive loop. The second coil is used to measure the conductivity which is proportional to the induced current in the solution. The advantages of the electrodeless method are more apparent in measurement applications in which electrodes contamination and polarization of a conventional conductivity system can lead to erroneous readings.

Probe assembly

The submersible probe is a 5 part assembly:

- a sensing toroidal element with a built-in temperature sensor
- a mounting adapter screwed to the back of the sensing element. The back end is FNPT threaded for 1" pipe mounting.
- a mounting adapter screwed to the bottom of the microtransmitter. The back end is FNPT threaded for 1" pipe mounting.
- a microtransmitter type 080315
- an extension pipe threaded two ends MNPT, not included in the package

This probe is compatible with C 7685 and C 565.2 B&C Electronics controllers.

Specifications

Installation: submersible

Microtransmitter: model 080315 (PVC housing)

Cell: toroidal

Temperature sensor: Pt100

Materials: PVC

Extension: 3 m max

Max. Temperature: 40 °C part in contact with liquid

Temperature coeff.: TC of the liquid + 0.3 %/°C

Max. Pressure: 3 Atm. at 25 °C

Cable length: 3.5 m

Protection: IP68

Accessories

SZ 9481 10 m cable with connector 2231520

SZ 9483 30 m cable with connector 2231520

2231520 IP67 connector for cable

Toroidal E. Conductivity

Loop powered transmitters



ST 3254.1 0/10 mS range

ST 3254.2 0/100 mS range

ST 3254.3 0/1000 mS range

ST 3214.5 0/200 mS range

This E. Conductivity probe consists of a loop powered transmitter and an electrodeless conductivity sensor in a single package. Temperature compensation is accomplished with a built-in sensor. Applications include water treatment, cooling tower and water monitoring. Four models are available for specific measuring range.

Principle of operation

When the electrodeless conductivity sensor is immersed in the sample to be measured, a conductive loop is created through the two toroidally wound coils. An alternating current is applied to one of the coils which induces a current in the conductive loop. The second coil is used to measure the conductivity which is proportional to the induced current in the solution. The advantages of the electrodeless method are more apparent in measurement applications in which electrodes contamination and polarization of a conventional conductivity system can lead to erroneous readings.

Each probe contains:

- two measuring toroidal coils
- temperature sensor
- 4/20 current loop amplifier

Specifications

Measuring method: toroidal

Power supply: 11/30 Vdc

Temperature sensor: built-in

Load: 600 ohm max. at 24 Vdc

Max. temperature: 50 °C part in contact with liquid

Temperature Coefficient: 2.2 %/°C (2.0 for ST 3214.5)

Temperature Reference: 25 °C (20 °C for ST 3214.5)

Max. Pressure: 10 bar at 25 °C

Length: 207 mm

Thread: 1 1/2" MNPT (both sides)

Body: PVC-C

Cable length: 3 m **Installation:** in-line or submersible