

Toroidal Loop powered transmitters



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

Toroidal submersible probe



ST 315.21

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.

Technical 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