ST 3254.X - ST 3214.X

Toroidal 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 3214.4 0/20 mS range
ST 3214.5 0/200 mS range
ST 3214.6 0/2000 mS range

On request it is available a model with range 0/300 mS

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 tratment, cooling tower and water monitoring.
Six 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 he 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 mA current loop amplifier

Technical 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. X)

Temperature reference: 25 °C (20 °C for ST 3214. X)

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