C-3254 In-line probe

Toroidal E. Conductivity Loop powered transmitter

This E. Conductivity monitoring system consists of a loop powered transmitter and an electrodeless conductivity sensor in a single package.

Temperature compensation is accomplished with a RDT Pt100 built-in to sensor.

Application includes water treatment, cooling tower and water monitoring.

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 induce 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.

This probe contains:
- 2 measuring toroidal coils
- RTD Pt100 Temperature sensor
- 4/20 Current loop amplifier
- a micro-transmitter

Specifications

PARAMETER	RANGE/UNITS/DESCRIPTION
Range:	0/10 mS (0/100 – 0/1000 mS on request)
Power Supply:	11/24 VDC
Load:	600 Ohm max at 24 VDC
Installation:	in-line or submersible
Cell:	toroidal
Temperature sensor:	Pt100
Length:	207 mm
Thread:	1½" MNPT
Body:	CPVC
Max. Temp.:	40°C part in contact with liquid
Temperature coeff.:	TC of the liquid + 0.3%/°C
Max. Pressure:	10 Bar at 25°C
Cable length:	3 mt.

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