



## Description

The AquaMetrix ES5 series toroidal conductivity sensors are used in processes where conventional contacting sensors may become fouled or corroded. These probes are unique in the marketplace. They are loop-powered and provide direct 4-20 mA output.

Each sensor comes standard with a Pt100 RTD temperature device, which provides automatic temperature compensation to 25°C (77°F).

The AquaMetrix ES-5 sensors are equipped with 1.5" MNPT threads on both ends so that they can be mounted for in-flow applications or submersion mounted in tanks or open vessels.

## **Operating Principle**

Toroidal conductivity sensors are made up of two-wire wound toroids encapsulated in a potting compound and encased in a plastic body. One toroid acts as a transmitter and the other as a receiver. An electric current is induced between the toroids through the process solution. This current is directly proportional to the conductivity of the process solution.

*(The terms electrodeless and toroidal are interchangeable in regards to this type of conductivity sensor.)*

## Features

- Loop powered 4-20 mA output
- Low Maintenance - Reduced cleaning requirements
- No electrode corrosion - Toroid is fully encapsulated
- One Wetted Material - Easier chemical compatibility
- Choice of three Measuring range
- Automatic temperature compensation

## Applications

- Plating
- High purity water applications
- Pharmaceutical Applications
- Reverse Osmosis systems
- Fume Scrubbers
- Boilers
- Cooling Towers
- Textile Manufacturing
- Food and Beverage

## Model ES5 Series Electrodeless Conductivity Sensors

### Technical Data

#### Wetted Materials

CPVC, PVC cable jacket

#### Measuring Range

ES5C1: 0.3 - 10 mS/cm

ES5C2: 3 - 100 mS/cm

ES5C3: 30 - 1000 mS/cm

#### Temperature Compensation

Automatic

#### Operating Temperature Range

-10 to 60°C

#### Pressure/Temperature Limits

50 psi at 40°C

#### Power

11-30 VDC

#### Load

600 Ω max at 24 VDC

#### Maximum Flow Rate

10 ft (3 m)/sec

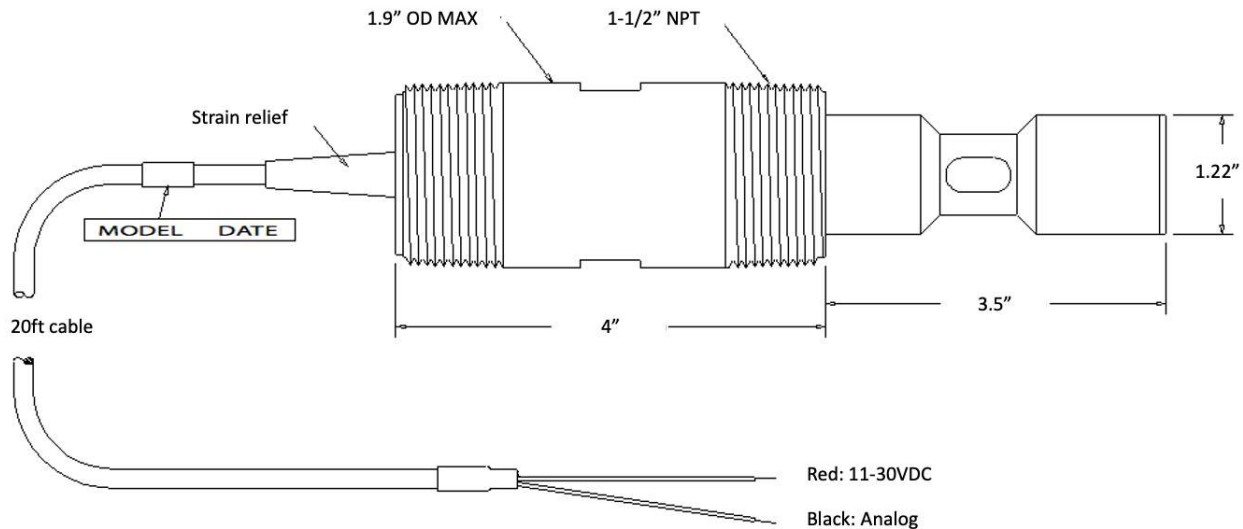
#### Sensor Cable

20 ft (6 m)

#### Process Connection

1.5" MNPT at both ends of sensor for submersion or in-line.

### Dimensions



4-20 mA output, CPVC body with 1.5" MNPT thread fitting

### Order Information

	Conductivity Range
ES5C1	0.2 to 10 mS/cm
ES5C2	2 to 100 mS/cm
ES5C3	20 to 1000 mS/cm

### Related Products

- AM-ES-1** 6-wire toroidal probe
- AM-ESTX** Smart toroidal probe with configurable 4-20ma output