



## Description

The AquaMetrix ES-5 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 ES-5 Series Electrodeless Conductivity Sensors

### Technical Data

#### Wetted Materials

CPVC (ES5-C) or Kynar (ES5-K)

#### Measuring Range

ES5-C-1: 0 - 10 mS/cm

ES5-C-2: 0 - 100 mS/cm

ES5-C-3: 0 - 1000 mS/cm

#### Temperature Compensation

Pt 100 RTD

#### Operating Temperature Range

-10 to 60°C

Pressure/Temperature Limits

50 psi at 40°C

#### Power

24 VDC

#### Load

600  $\Omega$  max at 24 VDC

#### Maximum Flow Rate

10 ft (3 m)/sec

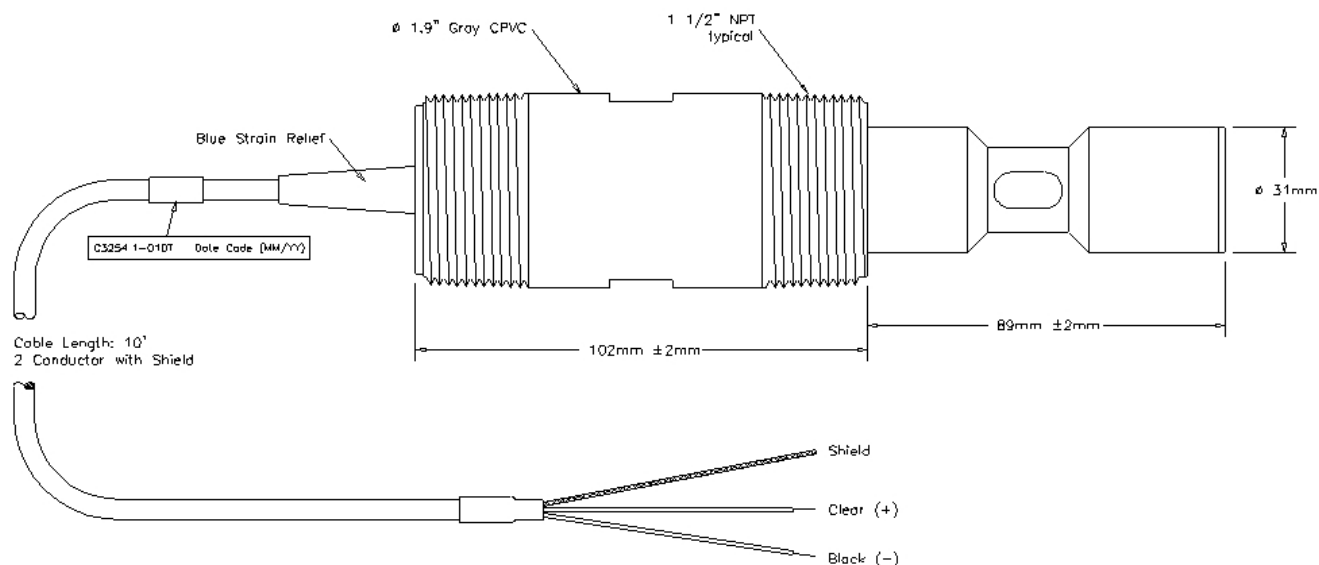
#### Sensor Cable

20 ft (6 m)

#### Process Connection

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

### Dimensions



ES-5-A 4-20 mA output, CPVC body with 1.5" MNPT thread fitting

### Order Information

	Cell Constant Range
ES-5-C1	0.2 to 10 mS/cm
ES-5-C2	2 to 100 mS/cm
ES-5-C3	20 to 1000 mS/cm

### Related Products

ES-1-A 6-wire toroidal probe