AM-ES1 Wide Range Toroidal
Toroidal Conductivity Sensor

Features

- Industrial-grade quality
- Wide measuring range
- Low cell constant for high sensitivity
- Sensitivity down to 4 µS/cm when used with AM-2251 controller
- Low maintenance
- Wide temperature tolerance
- Automatic temperature compensation

Description

The AquaMetrix ES series electrodeless conductivity sensors are used in processes where conventional contacting sensors may foul or corrode. (The terms "electrodeless" and "toroidal" are used interchangeably for this type of conductivity sensor.)

The AM-ES1 uses a glass-filled polypropylene body engineered to expand and contract at roughly the same rate as the stainless steel insert, thus minimizing cracking from temperature swings that afflict more toroidal sensors. An embedded RTD temperature element enables automatic temperature compensation.

The AquaMetrix ES sensor can be mounted in a flow through configuration or submersion mounted in a tank or open vessel.

Toroidal conductivity sensors are constructed 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 generously sized toroids give the probe an industry-leading cell constant of 1.6 for maximum sensitivity, Toroidal conductivity sensors typically measure conductivity values greater than 100 µS/cm. However, when paired with the new AM-2251, the ES-1 can measure levels as low as 4 µS/cm. No other probe-analyzer combination comes close.

A high temperature version of the probe enables it to be used in applications where the temperature is as high as 100 °C.

Applications

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

100 School Street
Andover, MA 01810
978-749-9949
Toll free 855-pH Probe
(855-747-7623)
www.AquaMetrix.com

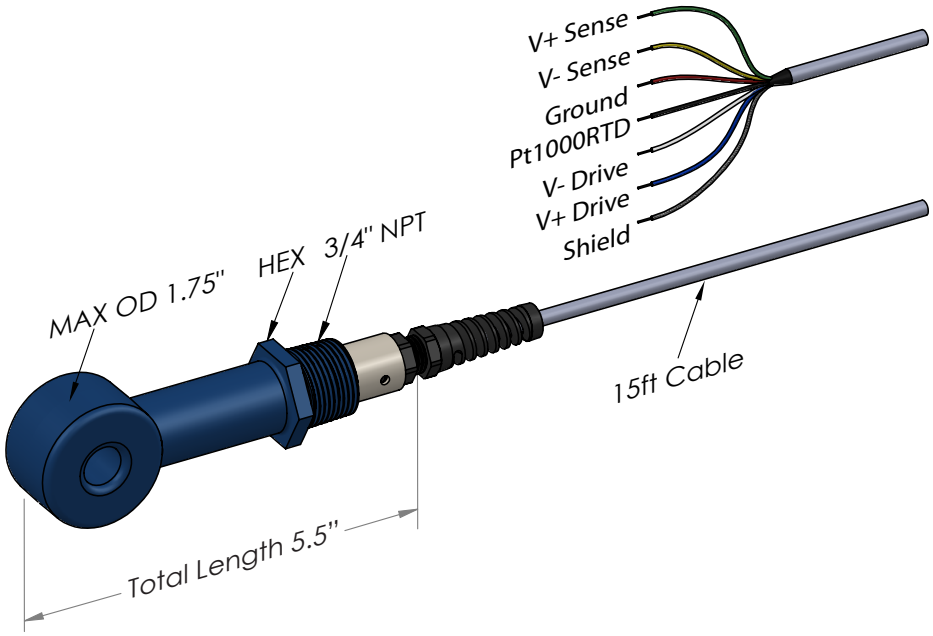
Model AM-ES1 Wide Range Toroidal

Technical Data

Measuring Range	AM-2251 Controller: 4 to 400,000 µS/cm Other Controllers: 100 to 400,000 µS/cm
Wetted Materials	Polypropylene, 304 SS (316 SS for high temp.)
Temperature Limits	-20 to 80 °C at atmospheric pressure High temperatue version: -20 to 100 °C
Maximum Pressure	100 psig at 65°C (150°F)
Maximum Flow Rate	10 ft. (3 meters) per second without turbulence

Cell Constant	1.6 cm^{-1}
Resolution	0.1 µS/cm
Accuracy	Greater than 1% after calibration
Temperature Compensation	Standard Pt1000Ω RTD
Sensor Cable	Default length 15 ft (4.5 m)

Dimensions



Order Information

SENSOR	
AM-ES1	-20 to 80 °C
AM-ES1-HT	-20 to 120 °C
CONTROLLER	
AM-2251	pH, ORP, Conductivity, Flow
ACCESSORIES	
AM-JB1	
AM-TEE-ES	2" CPVC Union TEE
AM-CBL60	Extension cable
AM-ARM-AS	Submersion arm

AM-2251 Controller