



The AquaMetrix AM-ES-TX 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-ES-TX consists of an ES1 sensor and an ES-BT. The ES-BT is the blind transmitter box portion of the ES-TX.

The AM-ES-BT is the smart blind transmitter that provides accurate conductivity readings across the sensor's wide range, 4-400,000 $\mu\text{S}/\text{cm}$!

The AM-ES-BT outputs analog (4-20mA) in a customizable range or an optimized digital output.

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 AM-ES1 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 $\mu\text{S}/\text{cm}$. However, the AM-ES-TX can measure levels as low as 4 $\mu\text{S}/\text{cm}$. No other probe-analyzer combination comes close.

Features

- Industrial-grade quality
- Wide measuring range
- Analog 4-20mA or Digital (RS485) output
- Sensitivity down to 4 $\mu\text{S}/\text{cm}$
- Low maintenance
- Automatic temperature compensation

Applications

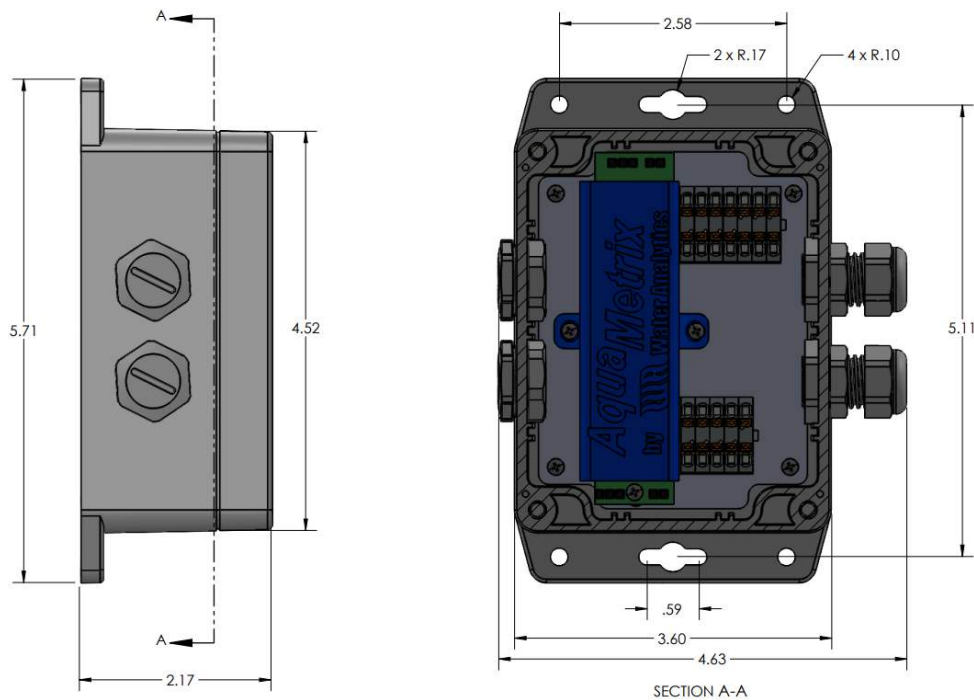
- Plating
- High purity water
- Pharmaceutical applications
- Reverse Osmosis systems
- Fume Scrubbers
- Boilers
- Cooling Towers
- Textile Manufacturing
- Food and Beverage

Model AM-ES-TX, Smart Wide Range Toroidal

Technical Data

Measuring Range	4 to 400,000 $\mu\text{S}/\text{cm}$	Resolution	Digital 0.01 $\mu\text{S}/\text{cm}$ Analog 0.04mA
Wetted Materials	Glass filled Polypropylene, *304 SS, *PVC (cable jacket), epoxy. * When fully submerged.	Accuracy	+/- 5% of scale 4-200 $\mu\text{S}/\text{cm}$ @ 25°C +/- 5% of indication 200-400,000 $\mu\text{S}/\text{cm}$ @ 25°C
Temperature Limits	-20 to 100 °C* at atmospheric pressure *Cable jacket is rated to 75 °C	Temperature Compensation	Standard Pt1000 Ω RTD (Temperature compensation can be turned off by Digital Protocol)
Maximum Pressure	100 psig at 65°C (150°F)	Sensor Cable	Default length 15 ft (4.5 m)

Dimensions



Ordering Information

AM-ES-TX Paired AM-ES1 with AM-ES-BT
15 ft cable, wired, from
AM-ES1 to AM-ES-BT
2ft Cable from AM-ES-BT to
connect to Controller or PLC
AM-ES-TX comes factory
calibrated with QA cert

AM-CBL Extension cable