



## Description

AquaMetrix conductivity sensors have earned a reputation for over four decades of being field proven in some of the most hostile and mission-critical applications. Our three lines of sensors cover every conceivable environment from ultra-pure water to wastewater.

Now our most popular conductivity sensor line, the AS series, is available in a direct, 4-20 mA version. The AS-TX line encloses the working circuitry of the AM-2250TX transmitter into a package small enough to fit into a 1" CPVC body.

The AS-TX retains the programmability of the AM-2250TX so that you can program into the probe the cell constant, temperature compensation, calibration and 4-20 mA output.

Each sensor is individually factory calibrated so there is no programming required. You can expect accurate readings right out of the box.

Three cell constants from 0.1 to 10 are available to cover large range of water sample. Integral automatic temperature compensation Pt1000Ω RTD is

standard on all types and provides compensation to 25 °C. The temperature element is in close thermal contact with the liquid being measured to ensure fast response to changing temperature.

Flow-through mounting incorporates a special compression fitting (AM-CFT-R5) which allows adjustable insertion length in 1.5-inch NPT fitting or in the side of a tank. This design avoids the nuisance of disconnecting the cell cable when installing or removing the cell for cleaning.

Submersion mounting is achieved via the AM-ARM-5 mounting hardware. Mounting hardware is available which includes a 4 foot length of CPVC pipe and a simple but versatile adjustable bracket for hanging on the rim of the tank.

A hot tap ball valve mounting assembly permits removal of the cell from process piping or from tanks without shutting down the system.

The AS-TX is just one of many TX series (4-20 mA output) sensors that work with the AM-2300 web-enabled controller or virtually any PLC.

## Features

- Integral 4-20mA transmitter can be fed directly to a PLC
- Configurable through RS-485.
- Three Cell Constants: 0.1, 1, and 10
- Electrodes: 316 SS (ASM1TX and ASM01TX) or Graphite (ASG10TX)
- Pt1000RTD for automatic temperature compensation
- Factory calibrated conductivity, temperature and 4-20 mA output.

## Applications

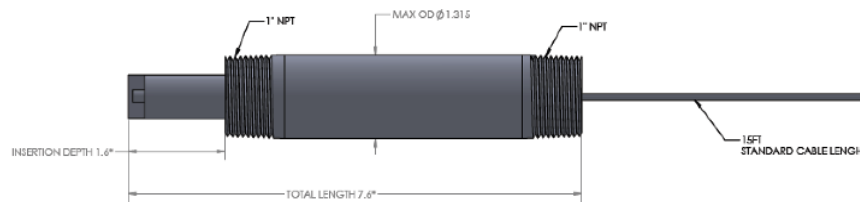
- Cooling towers
- High purity water applications
- Pharmaceutical Applications
- Reverse osmosis systems
- Food and Beverage
- Aquaculture
- Agriculture

# AquaMetrix AS-TX 4-20mA Conductivity Sensor

## Technical Data

Cell Constant	Choice of 0.1, 1, and 10	Analog Output	4-20 mA loop powered
Wetted Materials	CPVC, 316 SS (ASM1TX and ASM01TX) or Graphite (ASG10TX), *PVC (cable jacket), *Santoprene® 101-55 (strain relief) *when fully submerged	Digital Output	RS 485
Resistance Range	100 - 5000 Ω	Temperature Compensation	Default 2%/°C. Adjustable from 0 to 10%/°C
Temperature Element	Pt1000RTD	Factory Calibration	Conductivity, Temperature, 4-20 mA output
Temperature Range	-20 to 75°C (-4 to 167°F)	Accuracy	Conductivity: ±5% or better Temperature: ± 1°C
Maximum Pressure	200 psig non-shock at 25°C	Stability	Conductivity: ±1% Temperature: ±0.1°C
Power Input	16-32 VDC (loop powered)	Cable	5 Conductor (2 analog, 3 digital). Default length 4.6 m (15 ft)
		Transmission Distance	Nominally 650 m (2000 ft)

## Dimensions



Dimensions for ASM-TX-1 (cell constant 1). Insertion depth and total length different for other cell constants.

Sensor	Least Detectable	4 mA	20 mA
ASM01TX	10 μS/cm	0 μS/cm	200 μS/cm
ASM1TX	100 μS/cm	0 μS/cm	2,000 μS/cm
ASG10TX	1,000 μS/cm	0 μS/cm	25,000 μS/cm

Approximate conductivity range for different cell constants. Actual ranges depend on degree of uncertainty that can be tolerated.

## Related Products

### ANALYZERS

AM-2300 Web-enabled, multi-input controller

### ACCESSORIES

AM-JB2 NEMA 4X junction box  
 AM-HTA-R5 Ball Valve assembly for Hot-Tap insertion  
 AM-ARM-5 Submersion mounting kit  
 AM-SFL-5 1-1/2" Sanitary flange for AS sensor  
 AM-TEE-5 1" Union Tee with 3/4" adapter  
 AM-CBL Extension cable

## Ordering Information

ASM01TX-015 4-20 mA Output Conductivity Probe; CPVC, 316 SS electrodes 1" MNPT both ends  
 Cell constant 0.1  
 ASM1TX-015 4-20 mA Output Conductivity Probe; CPVC, 316 SS electrodes 1" MNPT both ends  
 Cell constant 1  
 ASG10TX-015 4-20 mA Output Conductivity Probe; CPVC, Graphite electrodes 1" MNPT both ends  
 Cell constant 10