



OneTemp^o pty Ltd
MEASURE | CONTROL | RECORD
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EC1500 Electrical Conductivity Sensor



APPLICATIONS

- River/ stream water quality
- Irrigation runoff water quality
- Salinity studies
- Estuary monitoring
- Waste water quality monitoring
- Aquaculture

FEATURES

- Long term stability
- Non-contact measurement means no corrosion
- Outputs raw EC and temperature
- Easy to install
- 3 Year warranty



TECHNICAL SPECIFICATIONS

RANGE	0-500, 1000, 2000, 5000, 10000, 20000, 40000, 75000 $\mu\text{S}/\text{cm}$. Temperature compensated & uncompensated units available.
TEMPERATURE	0 to 50°C output 0 to 30°C compensation
ACCURACY	EC $\pm 2\%$ of full scale over range Temperature $\pm 0.2^\circ\text{C}$
RESPONSE TIME	1 second to full accuracy after temp equalisation
TYPE	Toroidal
OUTPUT	Analogue 4-20mA current loop (3 wire current loop, 600ohms max).
POWER SUPPLY	9-30 volts unregulated 50mA plus loop current during reading
SURGE PROTECTION	On power supply and 4-20mA signal lines
CASE	Delrin, epoxy plastic

OPERATION PRINCIPLE

The measurement of the ability of water to carry an electrical current is an indication of the amount of mineral salts in solution. This ability is derived from the presence of charged ion particles, and to a lesser extent, ionization of water itself. Electrical conductivity is nonspecific for a particular salt and all salts present in the solution contribute. The model EC1500 sensor measures conductivity using a pair of magnetically coupled toroid transformers while the solution being measured forms the 'core' of the transformer pair. The more conductive the water is, the better the magnetic coupling. This is a non-contact measurement method and is immune to the effects of electrode deterioration. "Unlike contact-type conductivity sensors, toroidal measurement results in very good long term stability."

The EC1500 Electrical Conductivity sensor is designed for measuring electrical conductivity of liquids at remote locations. It is specifically suited for low power water quality applications where access and site visits are limited. Unlike conventional electrode based cells, the encapsulated toroid design requires very little maintenance, ensuring many years of accurate data collection without recalibration and without deterioration of metals. With all wetted parts made from non metallic materials, the sensor can be employed to measure in difficult and often corrosive liquids such as seawater and sewerage. An integrated temperature sensor, used for temperature compensation, is configured to provide a separate temperature output.

DIMENSIONS (mm)

