



# EC250, EC350 and EC1200 ELECTRICAL CONDUCTIVITY SENSOR

## Description

The Electrical Conductivity Sensors provide highly accurate conductivity measurements in a wide range of hydrological applications.

Exceptional reliability and chemical resistance are guaranteed by the state of the art toroidal measuring system. Advanced microprocessor technology provides highly accurate temperature compensated measurements

## Accuracy

Field conductivity measurements in ionised solutions have traditionally been fraught with inaccuracy due to temperature and electrode effects. The EC Sensor substantially eliminates these conventional sources of error. A larger sized toroidal sensor element uses the free ions in solution as a conductive path between two shielded ferrite transformer cores. This system eliminates errors caused by electrode degradation. An advanced compensation algorithm in the on-board microprocessor substantially reduces system non-linearity and temperature drift errors.

Range Up to 70,000 $\mu$ S

Linearity  $\pm$ 0.2% FS

Accuracy Normalised  $\pm$ 1% FS ( $\text{@}25^{\circ}\text{C}$ )

Non-Normalised +/- 0.7% FS ( $\text{@}25^{\circ}\text{C}$ )

Supply Voltage 10 -14V

Dimensions L= 442mm O.D.= 47mm

## EC250

- Toroidal sensing technology eliminates electrode corrosion effects guaranteeing long life and reduced field service.
- On-board temperature measurement and microprocessor controlled temperature compensation and linearisation ensure highly accurate readings in demanding conditions.
- Separate conductivity and temperature outputs deliver raw conductivity or on-board normalisation of conductivity to 25°C.

## EC350

- A complete, self-contained electrical conductivity measurement and data logging system.
- Storage of measured data within the sensor for long periods.
- Easy configuration of logging parameters and uploading of logged data.
- Automatic transfer of data to a central office simply by connecting the **HYDRODATA-2000 Unit**.
- Improved linearity and accuracy through the use of microprocessor based compensation.
- Facility to set alarm conditions via **Hydrodata-2000C unit**.
- Lithium battery pack option for fully self-contained operation.

## Applications

- STP aeration tanks
- Borehole observations
- Tidal and estuarine studies
- Effluent monitoring
- River and stream measurement





## Specifications

	Model EC250	Model EC350	Model EC1200
Sensor range (factory calibrated)	0-1000 $\mu$ S/cm, 0-2000 $\mu$ S/cm, 0-5000 $\mu$ S/cm, 0-10000 $\mu$ S/cm, 0-20000 $\mu$ S/cm, 0-60000 $\mu$ S/cm & 0-70000 $\mu$ S/cm Other ranges are available to order. A calibration charge applies to non-standard ranges		
Linearity	Temperature 0.2%, EC 0.2%	Same as EC250	Same as EC250
Temperature accuracy	0.2°C	Same as EC250	Same as EC250
EC accuracy, normalised to 25°C	1% FS $\odot$ 25°C	Same as EC250	Same as EC250
EC accuracy, non-normalised	0.7% FS $\odot$ 25°C	Same as EC250	Same as EC250
Outputs	EC: 4-20mA, 0-2.5V, or 0-1V Temperature: 4-20mA, 0-2.5V, or 0-1V	RS232	SDI-12
Supply voltage	10 - 14V Reverse polarity protected Surge protected to 2kV	Same as EC250	Same as EC250
Warm up / reading time	1 sec	Same as EC250	Same as EC250
Dimensions	Length 442mm OD 47mm (Stainless Steel or Delrin)	Same as EC250 Optional battery pack adds extra 260mm to length	Same as EC250
Weight	1.76kg (Stainless Steel) 950g (Delrin)	Same as EC250	Same as EC250
Wetted materials	316 Stainless Steel, Delrin, Acrylic	Same as EC250	Same as EC250
Cable	12 core Polyurethane sheathed	12 core Polyurethane sheathed	Same as EC250

Optional Datalogger and transmitter Model HYDRODATA-2000C.

