



## EC1600 Electrical Conductivity Sensor



### APPLICATIONS

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

### FEATURES

- Wide range EC in a single instrument
- Excellent long term stability
- Non-contact measurement means no corrosion
- Outputs
  - Raw EC and temperature
  - Temperature corrected output
  - 4-20mA and SDI-12 as standard
- Easy to install
- 3 Year warranty

ESS EARTH SCIENCES PTY LTD  
ACN 006 058 395  
141 PALMER STREET RICHMOND, VIC 3121  
T +61 3 8420 8999 F + 61 8420 8900  
ESSEARTH.COM



# WATER MONITORING SOLUTIONS

The EC1600 is a new generation instrument for measuring water conductivity, maintaining high accuracy and repeatability over a very wide range. The EC1600 implements internal autoranging to automatically adjust its sensitivity to the surrounding water. Measurements of water locations ranging from pristine mountain springs to salty ocean tributaries can all be measured with one instrument.

It is backward compatible with the widely used EC1500. This means that all cabling, connectors and other installation fittings do not have to be changed. All the advantages of the more advanced unit can be obtained by simply replacing the old EC1500 with the new EC1600.

## TECHNICAL SPECIFICATIONS

<b>RANGE <math>\mu\text{S}</math></b>	100000 $\mu\text{S}/\text{cm}$ +/- 2%
<b>EC TYPE</b>	Toroidal, non-contact
<b>CONNECTION OPTIONS</b>	5-way cable (standard), Tajimi 5-pin connector or 12-pin connector (optional) Note: 5-pin cable and connectors are compatible with EC1500
<b>POWER SUPPLY</b>	10 – 18V , < 80mA
<b>TEMPERATURE OUTPUT</b>	0 - 35°C +/- 0.2°C (full range: 0 – 50°C)
<b>SDI-12 OUTPUT</b>	EC and temperature, Temperature compensated or uncompensated (set via command).
<b>4-20mA OUTPUT</b>	Autoranging EC and temperature, ranges: zero to 5000, 20000, 50000, 100000 $\mu\text{S}/\text{cm}$ , or custom
<b>RS232 OUTPUT</b>	EC and temperature
<b>MEASUREMENT TIME</b>	<1 sec (EC), <20m (temperature)
<b>CASING</b>	Delrin, epoxy plastic

ESS EARTH SCIENCES PTY LTD

ACN 006 058 395

141 PALMER STREET RICHMOND, VIC 3121

T +61 3 8420 8999 F + 61 8420 8900

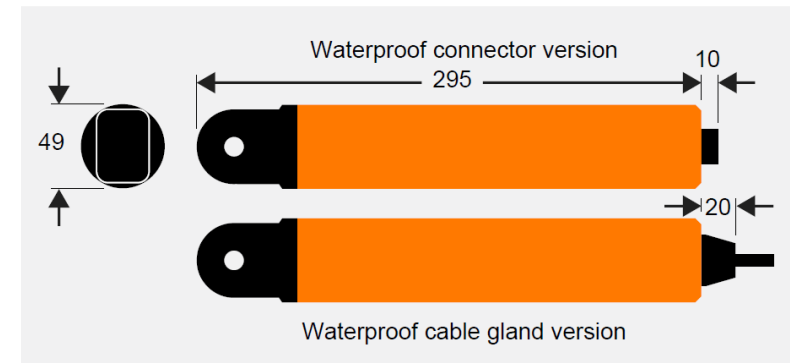
ESSEARTH.COM

The auto ranging is transparent to the user. The EC1600 delivers a smoothly varying output up to 100000  $\mu\text{S}/\text{cm}$ . This means that high resolution and accuracy is maintained across the entire output data range.

An SDI-12 protocol is provided, allowing the EC1600 to be connected to industry standard SDI-12 data loggers. All standard SDI-12 commands are implemented, with support for SDI-12 cables up to 250m in length. For flexibility, a 4-20mA output is also available as standard. Note that the 4-20mA range can be set by the user. This greatly improves the resolution available in applications where only a limited ec range is required.

The EC1600 can also be supplied in a 12-pin version. The extra pins provide additional functions, increasing the range of applications which can be covered. An RS232 protocol is included in the 12-pin unit, permitting the use of less expensive and more widely available data loggers. In addition, 4-20mA range bits are available, automatically adjusting the output range to maintain high accuracy across several output ranges.

## DIMENSIONS (mm)



EC1600 sensors fitted with 5-pin and 12-pin connectors can be supplied with a torque wrench specifically designed to assist field staff to correctly tighten cable plugs to maintain water ingress protection.

An optional calibrated torque wrench is available to prevent overtightening of connectors.

