# LTC Levelogger Edge

Model 3001 Data Sheet

## LTC Levelogger Edge Level, Temperature, Conductivity

The LTC Levelogger Edge logs conductivity, water level and temperature. It combines a datalogger, 8-year battery, Hastelloy® pressure sensor, temperature detector, and conductivity sensor within a small waterproof housing, 7/8" x 7.5" (22 mm x 190 mm). A Titanium ceramic PVD coating protects the body against corrosion. The conductivity sensor is a 4-electrode platinum sensor, with autoranging capabilities. The minimal maintenance, sealed LTC Levelogger Edge is simple to clean and calibrate, even in the field. Using Levelogger Series Software, it displays conductivity, temperature, and temperature-compensated water level.

| Level Sensor:            | Piezoresistive Silicon with Hastelloy Sensor  |  |
|--------------------------|---|--|
| Ranges:                  | 5, 10, 20, 30, 100, and 200 m   |  |
| Accuracy:                | ±0.05% FS   |  |
| Units of Measure:        | cm, m, ft, psi, kPa, bar (°C, °F)   |  |
| Normalization:           | Automatic Temperature Compensation  |  |
| Temp Compensation Range: | 0°C to 50°C   |  |
| Temperature Sensor:      | Platinum Resistance Temperature Detector (RTD)  |  |
| Accuracy:                | ±0.05°C   |  |
| Resolution:              | 0.003°C   |  |
| Conductivity Sensor:     | 4-Electrode Platinum  |  |
| Full Range:              | 0 to 100,000 μS/cm  |  |
| Calibrated Range:        | 50 to 80,000 μS/cm  |  |
| Accuracy:                | $\pm$ 1% 5,000 $\mu$ S/cm - 80,000 $\mu$ S/cm; greater of $\pm$ 2% or 10 $\mu$ S/cm from 50 $\mu$ S/cm - 5,000 $\mu$ S/cm |  |
| Resolution:              | ±0.1 µS/cm± 10 cm (0.328 ft.)   |  |
| Temp Compensation Range: | 0°C to 50°C   |  |
| Normalization:           | Specific Conductance @ 25°C   |  |
| Battery Life:            | 8 Years (1 reading every 5 minutes)   |  |
| Clock Accuracy:          | ±1 minute/year (-20°C to 80°C)  |  |
| Operating Temperature:   | -20°C to 80°C   |  |
| Maximum Readings:        | 27,000 sets of readings in FRAM memory  |  |
| Memory:                  | Slate or Continuous   |  |
| Communication:           | Optical Infra-red: USB, RS-232, SDI-12  |  |
| Size:                    | 7/8" x 7.5" (22 mm x 190 mm)  |  |
| Weight:                  | 7.05 oz. (200 grams)  |  |
| Corrosion Resistance:    | Titanium ceramic PVD coating  |  |
| Wetted Materials:        | Hastelloy, 316L Stainless Steel, Delrin®, Viton®, Titanium ceramic PVD coating  |  |
| Sampling Mode:           | Linear, Event & User-Selectable with Repeat<br>Mode, Future Start, Future Stop, Real-Time View                            |  |
| Measurement Rates:       | 2 seconds to 99 hours   |  |
| Barometric Compensation: | Software Wizard and Barologger Edge   |  |

| LTC Models | Full Scale (FS)   | Accuracy             |
|------------|-------------------|----------------------|
| M5, C80    | 5 m (16.4 ft.)    | ± 0.3 cm (0.010 ft.) |
| M10, C80   | 10 m (32.8 ft.)   | ± 0.5 cm (0.016 ft.) |
| M20, C80   | 20 m (65.6 ft.)   | ± 1 cm (0.032 ft.)   |
| M30, C80   | 30 m (98.4 ft.)   | ± 1.5 cm (0.064 ft.) |
| M100, C80  | 100 m (328.1 ft.) | ± 5 cm (0.164 ft.)   |
| M200, C80  | 200 m (656.2 ft.) | ± 10 cm (0.328 ft.)  |



#### **Features**

- Corrosion resistant Hastelloy pressure sensor
- Titanium ceramic PVD coating
- 4-electrode platinum conductivity sensor
- Single or multi-point conductivity calibration
- Basic and advanced data compensation options

# **User-Friendly Operation**

Calibration and Data Wizards guide you through the calibration process and barometric compensation, to provide corrected data.

Levelogger Software allows you to easily program your preferences, download data, and display data in a graph or table format or export to other programs. The Real Time View option allows immediate viewing of live conductivity, water level and temperature readings.

Leveloggers are easy to deploy; installation can be with direct read cables or wireline/cord suspension. The LTC Levelogger Edge is SDI-12 compatible using the Solinst SDI-12 Interface Cable.

Data can be downloaded in the field using the DataGrabber USB data transfer device, or through Bluetooth using the Levelogger App Interface device. The LTC Levelogger Edge is also compatible with the 9500 LevelSender telemetry system, designed to send your data wirelessly by email or SMS.

# **Applications**

- Salt water intrusion and soil salination monitoring
- Plume remediation monitoring and studies
- Leachate monitoring at landfills, mine tailings, waste disposal storage sites, and more
- Agricultural and stormwater runoff monitoring
- Tracer tests



#### **Biofoul Screen**

When an LTC Levelogger Edge is deployed for an extended period, there is the risk of biofouling on the pressure sensor and/or conductivity cell, which can compromise their readings.

The Biofoul Screen is designed to reduce the unwanted buildup of microorganisms, plants, algae, or organisms such as barnacles and mussels, on the instrument sensors. The Biofoul Screen consists of a Delrin sleeve wrapped with copper wire. It simply slips onto the sensor end of an LTC Levelogger Edge, where it is held in place by compression fit.



An optional Biofoul Screen provides extra protection for the LTC Levelogger Edge pressure and conductivity sensors in harsh environments.

Using the natural anti-fouling characteristics of copper, the Biofoul Screen is an affordable option to lengthen the time an LTC Levelogger Edge can be deployed. It reduces site visits and time spent cleaning Leveloggers, and improves long-term performance by ensuring accurate sensor measurements.

### Levelogger App & Interface

The Solinst Levelogger App is designed to communicate to Solinst dataloggers via your smart device. Programming options include start/stop, data downloading, linear and real-time sampling, future start/stop, and GPS coordinates.

The Levelogger App Interface uses *Bluetooth*® wireless technology to connect with your smart device running the Solinst Levelogger App. Use our Levelogger App Interface and a Solinst Direct Read Cable, to communicate to a downhole Levelogger and e-mail data files right from the field (see Model 3001 Solinst Levelogger App & Interface data sheets).

#### Convenient and Intuitive

- App is available for free
- Download data in the field
- ullet Linear & real-time sampling options

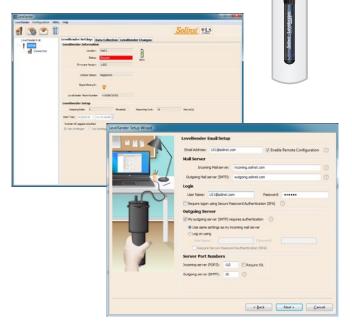






# LevelSender Telemetry System

Instantly add cellular telemetry to your LTC Levelogger Edge by connecting to a Model 9500 LevelSender. Send data by email or SMS from your remote stations to your desired location. The LevelSender simplifies your telemetry setup, by working with Solinst direct read cables and is compatible with the full Levelogger Series product line.



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