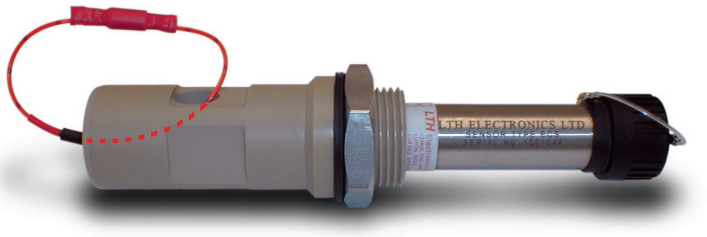
## Calibration

The ECS40 sensors need to be calibrated to the instrument they are connected to. This only needs to be done during commissioning or if the sensor or the cable is changed.

The procedure will vary dependant upon the instrument being used. These instructions should be used in conjunction with the relevant instrument manual.

In all cases the loop resistor(s) must be inserted through the sensor in the way shown below.




### BC9 SERIES
**Display Calibration**

- Unscrew and remove the instrument housing cover.
- Set the temperature compensation to OFF.
- Select the measurement range required or factory default for % NaOH version.
- Ensure the sensor is in air.
- Adjust the display set zero to 000.
- Pass the correct loop resistor for the selected range through the sensor as shown above.
- Adjust the set span control so that the display reads the correct value.
- Remove the loop resistor and check the display reverts to 000.
- Repeat until zero and span are correct.
- Set the temperature compensation to IN
- For operation on another range you will need to re-adjust the zero on that range, after the loop calibration using the correct loop resistor.

### HET63 INSTRUMENTATION
**Calibration**

With the sensor removed from solution and no loop fitted in the sensor.

- Select the Calibration menu option and press the down arrow repeatedly until Sensor Calibration appears.
- Press the Enter key, Are You Sure? appears, press Enter to confirm.
- Set Loop O/C (Open circuit) appears, press Enter to start (OC) calibration, the display shows sampling.
- On completion of the zero calibration, the display shows Attach Pink Loop.
- Attach a pink (5 Ohm) loop resistor to the sensor through the base and out through one of the side holes.
- Press Enter to start sampling, the instrument will sample the sensor input and the display will show Sampling. On comple tion of the sampling, the display shows Attach <Green, Blue or Black> Loop.

Once complete the HET63 will display Calibration Pass.

### MXD70 INSTRUMENTATION
**Calibration**

With the sensor removed from the solution.

- Select the Calibration menu option and then the channel to be calibrated.
- Select Calibrate Sensor from the menu.
- Following the on screen instructions attach each loop resistor individually to the sensor through the base and out through one of the side holes and press ↵
- Finally remove all loops and proceed with the zero calibration.

Once complete the MXD70 will display Calibration Successful.

LTH instrument manuals can be accessed on our web site www.lth.co.uk

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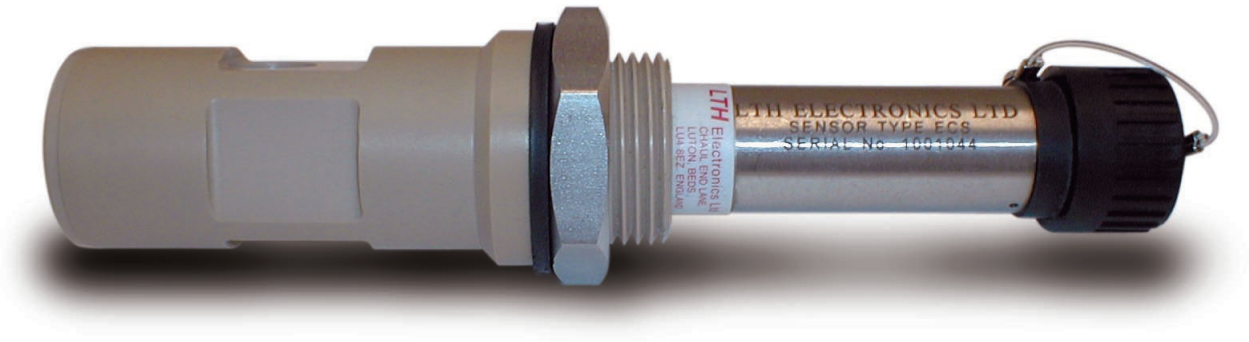
# ECS40 SERIES
## Electrodeless Conductivity Sensors

Installation and Calibration




## Installation

### General

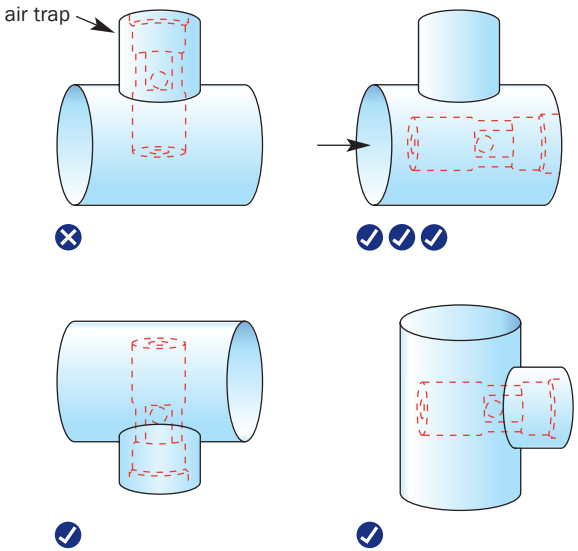
- Always use the LTH recommended cable for connecting to the instrument.
- Do not exceed the maximum cable length.
- Avoid running the connection cable with power cables, check the instrument manual for best practices.
- All connections must be waterproof.
- Ensure the wetted materials are compatible with the process.
- Temperature, pressure and solution composition will influence the life expectancy of the measurement sensor.

### ECS42T Dip Sensor

- Do not submerge the cable or connector.
- Do not suspend by the cable.
- Do not rest on the bottom of the tank or channel.
- Ensure the sensor "sees" a representative sample of the solution to be measured.
- Remove the protective black boot prior to use.

### ECS43T, ECS45T, ECS47T & ECS49T Flowline/Insertion/ Hygienic Sensors

- Do not fit into a pipe less than 2.5" DN63 inside diameter without checking clearance around the sensor is at least 12 mm.
- For best performance line up the cross hole with the flow.
- Ensure air cannot trap around the sensor.
- Ensure the sensor "sees" a representative sample of the solution to be measured.




## Part Numbers

| | |
|---|---|
| **ECS42T** | **Part No 8515**<br>600 mm dip sensor. |
| **ECS42T** | **Part No 8516**<br>1200 mm dip sensor. |
| **ECS43T** | **Part No 8523**<br>2" PVC flowline sensor. |
| **ECS44T** | **Part No 8529**<br>1.5" BSP short insertion sensor. |
| **ECS44T PK/PP** | **Part No 8518**<br>1.5" BSP short insertion sensor,<br>Polypropylene adaptor,<br>PEEK temperature pocket. |
| **ECS45T** | **Part No 8525**<br>2" stainless steel flowline sensor. |
| **ECS46T** | **Part No 8524**<br>1.25" BSP insertion sensor. |
| **ECS47T** | **Part No 8526**<br>1.5" BSP insertion sensor. |
| **ECS47T V** | **Part No 8514**<br>1.5" BSP insertion sensor,<br>Viton o-ring. |
| **ECS47T PK/PP** | **Part No 8519**<br>1.5" BSP insertion sensor,<br>Polypropylene adaptor,<br>PEEK temperature pocket. |
| **ECS48T** | **Part No 8528**<br>Hygienic mounting sensor,<br>short insertion length. |
| **ECS49T** | **Part No 8527**<br>Hygienic mounting sensor. |
| **ECS49T PK** | **Part No 8534**<br>Hygienic mounting sensor,<br>PEEK temperature pocket. |

LTH are able to offer a wide variety of flanges including; RJT, DIN, IDF/ISS, SMS, Triclamp and Tuchenhagen.