

### PRINCIPLE

The sensor is composed by three submerged electrodes. These electrodes represent the two resistors of a Wheatstone bridge. The passage of a fish near the electrodes changes the conductivity of the environment and causes an imbalance of the bridge. The unbalance signal is amplified and analyzed before being converted into counting information.

The unbalance signal is amplified with a gain depending on the conductivity of the environment. This conductivity is measured by causing a short imbalance of the bridge to regular time intervals.

A level sensor circuit stops the counter as soon as the water level on the sensor is inadequate.

The signal analysis begins as soon as the imbalance of the bridge is greater than a minimum value chosen by the user. The sequence of imbalance is analyzed by the program and it determines the direction of passage of fish and sorts them into three size classes.

All information on fish movement or non-operation of the sensor are displayed and stored. They can also be printed (optional) or sent over a polling call.