

Sensor Transmitter



MORTALITY

The Thelma Biotel mortality sensor can measure mortality events in tagged animals using orientation Technology. The sensor reliably triggers as the fish encounters a mortality event where it loses the ability to maintain proper orientation. The sensor is shown to work with 100% reliability in pelagic fish like salmon smolts. This sensor option reshapes the ability to distinguish predators and prey in scientific studies and offers much more reliable data for the tagged species.

FEATURES

- Tilt accuracy and resolution of 1 °
- Available in transmitter sizes 6, 13 and 16
- Length down to 17 mm
- Operational lifetime ~ 4 months - 10 years
- Can be combined with either the depth- or the temperature sensor

OPERATION

The mortality sensor is based on orientation technology, using average tilt recorded from data received every minute. A baseline orientation from the average tilt is established, and larger deviations from this baseline orientation over a certain time results in the triggering of the mortality sensor, and a change in status from alive to dead. The sensor also accounts for larger deviations in orientation during surgery with a delayed reset. The reset functionality assures that the tag does not switch during surgery resulting in biased data.

APPLICATIONS

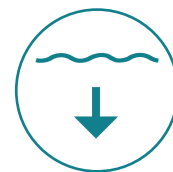
The versatile mortality sensor contributes to largely reducing the uncertainty of whether movement data belongs to the tagged animal or a predator. Therefore, the mortality sensor is highly applicable in the study of migratory animals such as salmon smolts, migrating downriver towards the sea. With the additional temperature and depth sensors, the cause of mortality can be assessed with great detail.

SPECIFICATIONS

Standard sensor

Transmitter state:	ID & ID + 1
Range tilt:	0-180 °
Resolution:	1 °
Accuracy:	1 °
Max survival depth:	500 m

COMBINATIONS



DEPTH



TEMPERATURE

