Inductive position sensing principle of operation.

SENSOR

Uses Gill patented induction technology, with a series of coils measuring the position of the metallic 'activator'

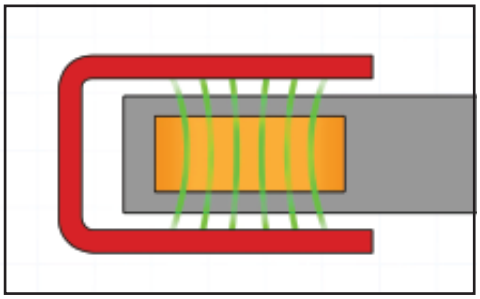
ACTIVATOR

Metallic target 'activator', typically made from mild steel is mounted to, or machined into, the moving part of the application.

Inductive position sensing is a three step process...

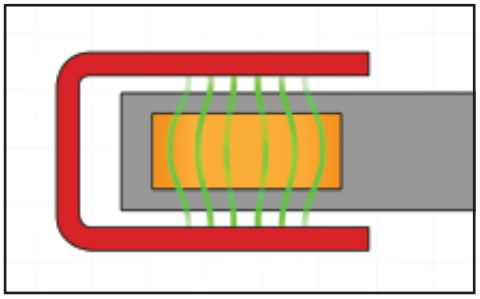
Step 1 - Generate

The coil generates a magnetic field which penetrates the activator, causing it to produce its own opposite field



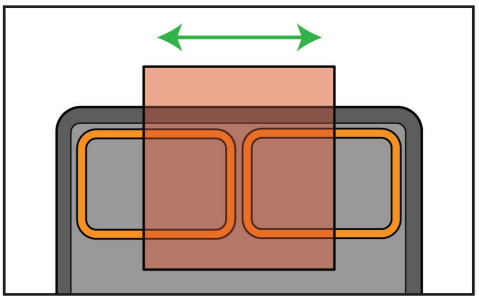
Step 2 - Respond

The coil stops generating its magnetic field and measures the activator's induced field



Step 3 - Compare

This measurement is compared across the series of coils to calculate absolute measurement of the activators position.



Advantages of induction technology

- Non-contact. Excellent long-term reliability in harsh environments
- Fully sealed and submesible sensor designs
- No output drift with temperature change
- Suitable for linear, angular and non-uniform measurement
- Unaffected by the presence of permanent magnets
- Wide temperature operating range
- No requirement for mechanical linkages