Hall linear/angular position sensor

A Hall position sensor delivers a signal proportional to the linear position (displacement) and/or angular position of a magnet fi xed to a moving part.

The sensor detects either the amplitude or the direction of the magnetic fi eld created by the magnet. The application-specifi c magnetic circuit includes a pole piece that concentrates the field.

Electricfil solution - ready technologies

Characteristics

- Stroke up to 40 mm and angles up to 360°
- Temperatures up to 150°C
- Typical accuracy: ± 2%
- Response time: 15 ms
- Airgap up to 6 mm
- Size: very small (independent of stroke)

- Integrated diagnostics
- Optional redundancy
- Non-contact sensing
- Through-wall detection for non-magnetic materials
- Interface: 3-wire, analog and PWM output

Electricfil knowhow

- Integration in sensor clusters or mechatronic modules
- Wide range of packages and interfaces
- Fully programmable sensors
- Same sensor design for linear or angular measurements
- Combination of several Hall linear and/or angular sensors in a single module

Application domains

Transmission

Clutch Actuation control

Clutch control and driver assistance

Gear-shift control

Gear selection indicaton

Vehicle dynamics

Clutch, brake, accelerator pedal

Engine management

Air circulation

Camshaft and crankshaft