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## Active speed/position sensor and direction sensor



lower starting load.

Electricfil solution - ready technologies

Hall effect and GMR sensors are of the active type, requiring a supply of electrical power.

They detect the magnetic field created by the passage of gear teeth or the alternating poles of a ring magnet, delivering an electrical signal that the electronic control system can use to determine the speed and at the same time the direction of rotation of the shaft.

This is particularly useful for the Stop & Start function, making it possible to detect the direction of rotation and exact stop position of the crankshaft for quicker restart and

## Characteristics

- Temperatures -40°C to +160°C
- Zero-speed sensing (e.g. crankshaft), TPO function (e.g. camshaft)
- High withstand capacity to severe environments
- Low signal-processing requirements
- Large airgaps up to 2 mm
- Accuracy: +/-0.5°
- Jitter +/-0.02°
- No tooth lost at direction change
- Interface: 3-wire, PWM output

## Electricfil knowhow

- Wide range of packages and interfaces
- Wide range of ASICs available

## Application domains

Engine management

[Camshaft and crankshaft](#)