

Engine Speed (RPM) Sensor G28

The Engine Speed (RPM) Sensor G28 is an inductive sensor which records the engine speed and the exact angular position of the crankshaft (single-sensor system).

Attached to the flywheel is a separate toothed wheel for the G28.

The toothed wheel is subdivided into 60 segments.

If the toothed wheel moves past G28, this produces an alternating voltage whose frequency changes as a factor of engine speed.

To enable it to recognize the crankshaft position, there is a gap of two segments in the toothed wheel.

The G28 recognizes the engine speed. Together with Camshaft Position (CMP) Sensor G40, the G28 recognizes the exact position of the engine mechanics, i.e. ignition TDC of cylinder 1. The injection and ignition timing are determined using this information.

Substitute function and self-diagnosis

The signal which G28 generates is checked together with the signal supplied by the G40 for plausibility.

If the Motronic Engine Control Module (ECM) J220 does not detect any segment gaps during eight "phases" of the G40, an entry is made in the fault memory.

If the Engine Speed (RPM) Sensor G28 fails, it is not possible to start or run the engine.



Since the G28 is an inductive sensor, the self-diagnostics are unable to perform electrical tests (short circuit to positive or negative or open circuit).

