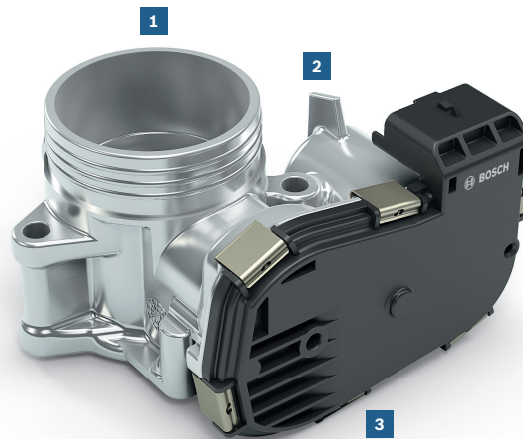


# Air management

## Electronic throttle body



**BOSCH**  
Invented for life



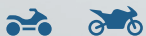
### Product benefits

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- ▶ Modular design
- ▶ Best-in-class Hall IMC (response time, temperature-independent characteristics)
- ▶ Smooth engine shutdown and minimal NVH (noise, vibration, and harshness)

### Vehicle segments

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- 1** Air channel with variable diameter
- 2** Standard DC electric motor (ready for brushless)
- 3** Hall sensor

# optimized for two-wheelers

Design of electronic throttle body **optimized to meet weight and size requirements** for two-wheeler applications

**Task** For the combustion of the air-fuel mixture, the air supply to the engine cylinder is just as important as the fuel supply. The air-to-fuel ratio, air movement, and composition of the intake air contribute to clean, economical, and dynamic engine operation. Electric actuators allow high levels of precision in air intake adjustment. In gasoline engines, the air supply to the cylinder is controlled by means of a throttle body, which reduces or enlarges the intake manifold cross section.

**Function** The electronic throttle body comprises an electrically driven throttle body and a non-contact angular-position sensor for position feedback. The electronic engine management system triggers the throttle body electrically. Trigger input variables are the accelerator grip position and the requirements of systems that can influence engine torque, including adaptive cruise control or active safety systems such as the motorcycle stability control (MSC).

## Technical characteristics

Platform design	modular
Throttle diameter	32–62 mm
Ambient temperature	–40 °C to +120 °C
Actuation time	$t_{90} < 110$ ms
Excess torque (ice breaking)	$\leq 1.8$ Nm
Idle air leakage ( $\varnothing$ 57 mm)	$< 3.5$ kg/h
Target weight	$\leq 600$ g
Interfaces	analog and SENT capable
Options	water-heating pipes, NiRo bearing, EMC package (motor and sensor)