



BRIEF INFORMATION

Steering torque and angle sensor

Steering torque only sensor

- Modular sensor design for all types of electromechanical power steering (EPS)
- High measuring accuracy thanks to Hella CIPOS® technology
- Freely programmable torque range up to $\pm 8^\circ$
- Multi-turn function allows measurement of multiple steering wheel rotations
- Intelligent software concept for increased safety

PRODUCT FEATURES

Application

The steering torque and angle sensor is integrated in the electromechanical power steering system. It provides up to two feedback signals simultaneously. The information on steering torque and steering angle is processed in various assistance systems. On the basis of the determined steering torque, for example, the required steering assistance is determined via the control unit.

Information about the steering angle is also processed in the electronic stability program, for example.

The sensor is available both as a combined steering torque and angle sensor and as a sensor for the steering torque.

DESIGN AND FUNCTION

The steering torque and angle sensor provides two types of feedback. The steering torque sensor records the torsion bar angle required for the steering movement.

The steering angle sensor measures the angle and speed of change in the position of the steering wheel. Both functions benefit from the CIPOS® technology developed in-house at HELLA.

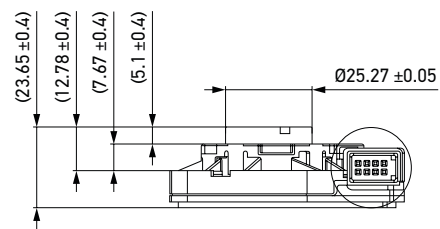
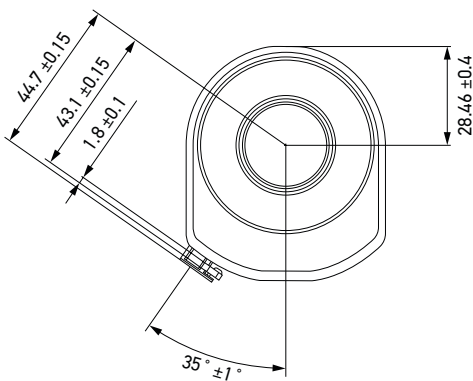
The steering torque range is freely programmable for up to +/- 8°. In addition, the steering angle sensor can detect multiple steering wheel rotations (multi-turn sensor). Thanks to two output signals each for steering torque and for steering angle and an intelligent software concept, the sensor supports a high level of system safety.



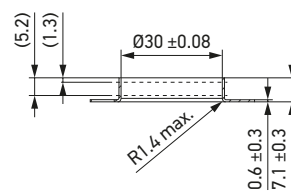
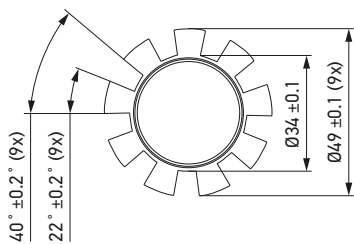
TECHNICAL DETAILS

Dimensional sketch

Sensor



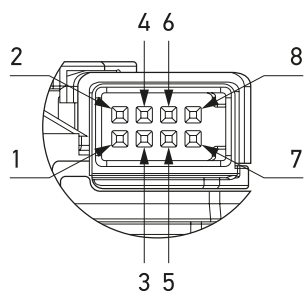
Rotor



TECHNICAL DETAILS

Technical data	
Operating voltage	5 V
Dimensions	Typ. Ø 60 mm, R 40 mm (with connector)
Installation location	Integration in electric power steering
Operating temperature	From -40° C to +125°C
Measuring range	Max. ±8° (steering torque) / max. ±738° (steering angle)
Current consumption	< 36 mA per channel
Output signal	Torque: PWM Angle: PWM
Measurement accuracy	< 0.1° (steering torque) and < 1.0° (steering angle) over service life and temperature
Resolution	< 0.005° (torque) / < 0.01° (angle)
EMC	CISPR 25, Class 3

PIN ASSIGNMENT



Pin assignment

1	VCC1
2	VCC2
3	PWM-P
4	PWM-T1
5	PWM-T2
6	PWM-S
7	GND2
8	GND1

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Subject to technical and price modifications.

PROGRAM OVERVIEW

Description	Part number
Steering torque and angle sensor	On request
Steering torque only sensor	On request