

Multi-turn Steering Angle Sensor for Automotive Applications

Features & Functional Description

Methode's absolute multi-turn angle sensor measures the steering angle using a three gears system. The sensing principle is Capacitive, which uses relative phase shifts to determine angular displacements between the fixed PCB (emitter and receiver) and the rotating reflectors. It offers high degree of flexibility in geometrical configurations (packaging size) and operating frequencies (15 kHz – 2 MHz). Velocity can also be used as an optional output.

Product Highlights

- Contact less technology
- High Resolution and Accuracy
- Absolute multi-turn angle measurement
- Angle info. upon "wakeup"
- Compact Package
- Single chip sensing solution
- Inbuilt redundancy and diagnostic features

Typical Applications

- Electrical Power Steering
- Electronic Stability Program
- Active Front Steering
- Force feedback Systems

Performance Specification

Sensor Ratings

Storage Temperature Range	-40 to 125 °C
Operating Temperature Range ...	-40 to 85 °C
Response time	< 4 ms
Rotational Speed (333 RPM)	2000 °/s *
Inner diameter	44 mm *
Length	107.6 mm *
Width	99.4 mm *
Thickness	8.4 mm *

Angle Sensor Fidelity

Resolution	0.1 ° *
Accuracy	± 1.0 ° *
Range (6.28 turns)	2260 ° *

Standard Signal Outputs

CAN, LIN or PWM

* Example only. Please discuss your application and required specifications with Methode personnel.