

TLE 4924C

High accurate hall based crank sensor

The TLE 4924C detects the motion and position of ferromagnetic and permanent magnet structures by measuring the differential flux density of the magnetic field. A self-calibration mode ensures optimum accuracy. Few transitions after start up the sensor has already finished self-calibration and has reached a high-accuracy running mode. As the TLE 4924C is switching at visible fixed (-1) or visible adaptive (-2) hysteresis, the sensor enables accurate operation even at large pitches known from e.g. VR applications. Therefore the TLE 4924C supports cost effective transitions from passive to active sensing.

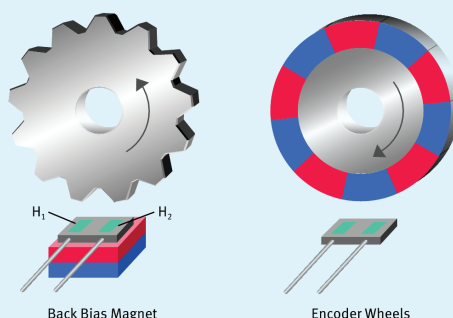
The sensor combines a fast power up time with high accuracy and sensitivity. With a wide temperature range, high ESD robustness and large EMC resistance, the TLE 4924C perfectly meet the requirements of harsh environmental conditions prevalent in automotive applications. The TLE 4924C comes with the well established PG-SSO package with two integrated capacitors and various hysteresis concepts. With all the features, the TLE 4924C is the ideal fitting hall based crankshaft speed sensing solution for today's automotive requirements. TLE 4924C is perfectly suited for applications with:

Features

- High sensitivity
- PG-SSO-3-92(3)
- Single chip solution
- Symmetrical thresholds
- High resistance to Piezo effects
- South and north pole preinduction possible
- Low cut-off frequency
- Digital output signal (voltage interface)
- Advanced performance by dynamic self calibration principle
- Two-wire and three wire configuration possible
- Wide operating temperature range
- Fast start-up time
- Large operating air-gaps
- Reverse voltage protection at V_s -PIN
- Short-circuit and over temperature protection of output
- Module style package with two integrated capacitors:

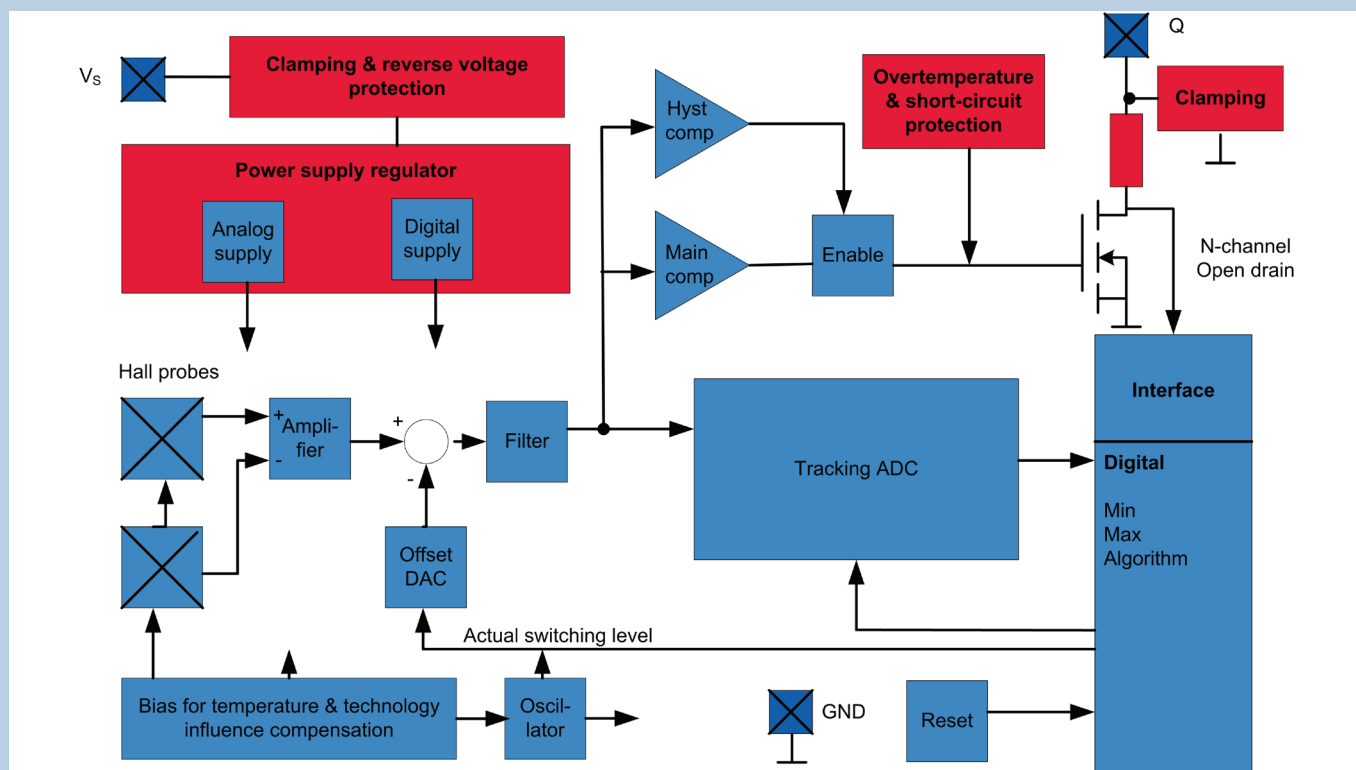
– 4.7nF between Q and GND

– 47nF between V_s and GND: Needed for microcuts in power supply



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Block diagram

| Sales Name | Description | Order Code |
|-------------------|---|-------------|
| TLE4924C-1 E6547 | Visible fixed Hysteresis; Standard Tin Plating | SP000718170 |
| TLE4924C-1N E6547 | Visible fixed Hysteresis; Nickle Plating | SP000718184 |
| TLE4924C-2 E6547 | Visible adaptive Hysteresis; Standard Tin Plating | SP000718250 |
| TLE4924C-2N E6547 | Visible adaptive Hysteresis; Nickle Plating | SP000718254 |

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