



Product brief

TLx4966xG Family

XENSIV™ Hall switches – High precision Hall latches with direction detection

Infineon's TLE4966xG family are double Hall latches with two output pins for applications with a rotating pole wheel. Depending on product variant, the sensor provides either a speed and direction signal or two speed signals related to the switching of the two Hall elements. This information can be directly used to develop a robust index counting system for anti-pinch prevention.

The two Hall plates realized on-chip ensure the optimal solution to cancel out mounting uncertainties and reduce overall system tolerances. Additional development of algorithms for direction detection becomes obsolete. The built in direction detection is reliable and provides with each index step a valid direction signal.

The speed and direction signals or the speed and speed signals of the TLx4966xG family can be fed directly into the capture/compare unit of a standard microcontroller. This ensures a fast and easy system set up. These signals come directly from the two integrated Hall elements. The monolithic solution ensures minimal tolerances and a highly reliable system.



A lot of index counting sensors operate at remote locations. The TLx4966xG family is equipped with robust supply and I/O pins that allows system designers to realized remote sensor modules with a minimum of additional hardware components.

The family comes in the new “gullwing” package TSOP6-6-9. The wide shape of the gullwing pins increases the robustness at customer's production side.

For mounting flexibility sensors with horizontally or vertically aligned Hall plates are available. The family is completed by different magnetic thresholds, a leaded package and dedicated products for automotive and industrial applications.

Applications

- > Rotational speed and direction detection
- > Power closure systems
 - Window lift
 - Sun roof
 - Tail gate
 - Electric shutters
 - Sun blinds
 - Automated doors
- > Seat belt pretensioner

Features

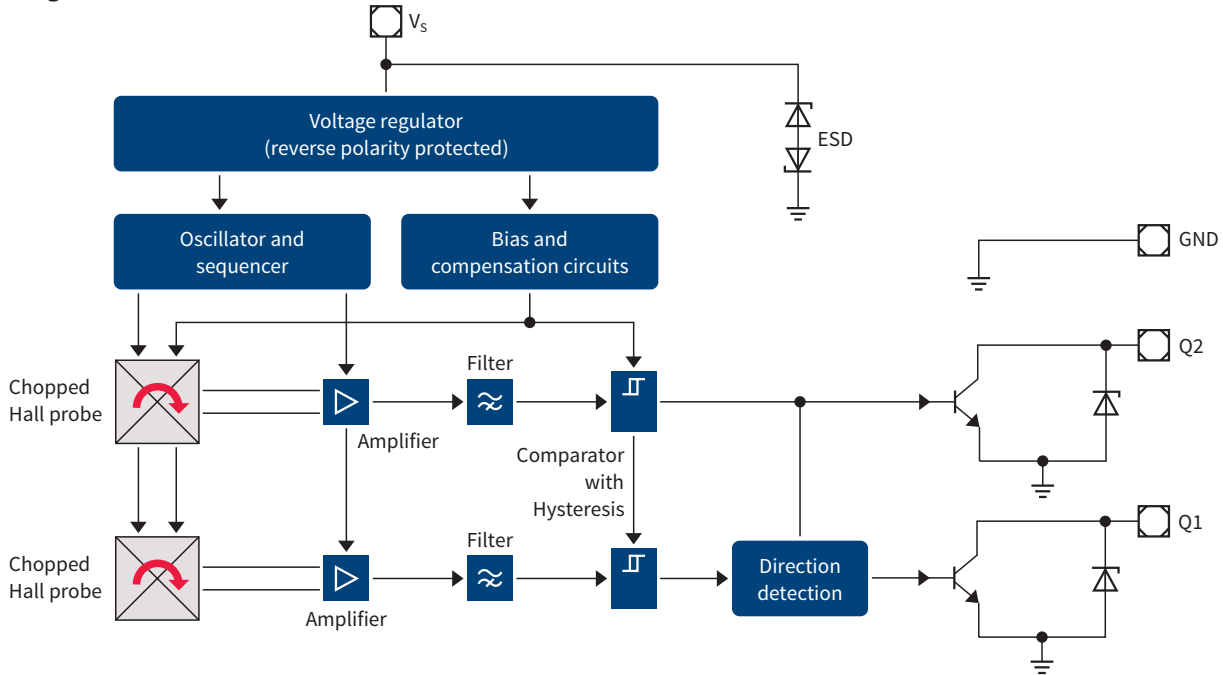
- > High sensitivity and high stability of the magnetic switching points
- > Reverse battery protection (-18 V)
- > High resistance to mechanical stress by Active Error Compensation
- > Peak temperatures up to 195°C without damage
- > Low jitter (typ. 1 μs)
- > Direction & speed or speed & speed information
- > Available packages
 - SMD package TSOP6-6-9
 - Leaded package SSO-4-1



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Block diagram TLE4966G



Product table

Product type	Interface	Temperature range [°C]	Supply voltage [V]	Thresholds [mT]	Application	Package	Ordering code
TLE4966G	Open collector	-40 to 150	2.7 – 24.0	± 7.5	ATV	TSOP6-6	SP002983176
TLE4966-2G	Open collector	-40 to 150	2.7 – 24.0	±7.5	ATV	TSOP6-6	SP002983188
TLE4966-3G	Open collector	-40 to 150	2.7 – 24.0	± 2.5	ATV	TSOP6-6	SP002983192
TLE4966V-1G	Open collector	-40 to 150	3.5 – 32.0	±2.5	ATV	TSOP6-6	SP002983184
TLE4966L	Open collector	-40 to 150	2.7 – 24.0	± 7.5	ATV	SSO-4-1	SP000014135
TLI4966G	Open collector	-40 to 125	2.7 – 24.0	± 7.5	IND	TSOP6-6	SP003330332

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