► Hall sensor IC

E910.44

FEATURES

- Supply voltage range 2.0V to 6.0V
- Hall Sensor with two magnetic switching thresholds
- Provides three field strength ranges: negative, near zero and positive
- Two binary coded outputs for the recognised field strength
- Extremely low integral current consumption of < 26µA in standard mode.
- High measuring rate of typically 10k samples per second in standard mode.
- Slow measuring mode and/ or increased sensitivity can be statically adjusted.
- –40°C to +125°C operating temperature
- SO8 package

DESCRIPTION

The IC contains a Hall sensor and the appropriate measurement system. It detects three levels of upright magnetic field: positive, near zero and negative. These information are provided at two binary coded outputs for any logic or uC. The sampling rate is about 10kHz (typ.) allowing fast movement detection.

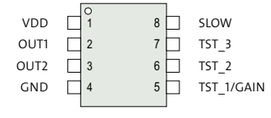
In order to attain a very low average current consumption, the IC does short measurements and holds the result at the output until the next cycle. During the hold-phase, the IC switches to stand-by mode with very low power consumption.

With two mode pins it is possible to bring th IC (statically) into a slow mode, reducing the current consumption furthermore. The second pin switches into a mode of increased sensitivity, where lower magnetic fields can be detected.

PINNING

Pin	Name	Description
1	VDD	Supply voltage
2	OUT1	Output: '0' -Field very positive or Low Bat '1'- Field not positive (-> near nil or negative)
3	OUT2	Output: '0' -Field very negative '1'- Field not positive (-> near nil or negative)
4	GND	Ground
5	TST _ 1/GAIN	Sensitivity switching: connect to GND: normal sensitivity; connect to VDD: increased sensitivity; pin not to be left open in the application
6	TST _ 2	Connect to ground
7	TST _ 3	Connect to ground
8	SLOW	Switching the trigger rate: connect to GND: normal trigger rate; connect to VDD: ½ triggerrate; pin not to be left open in the application

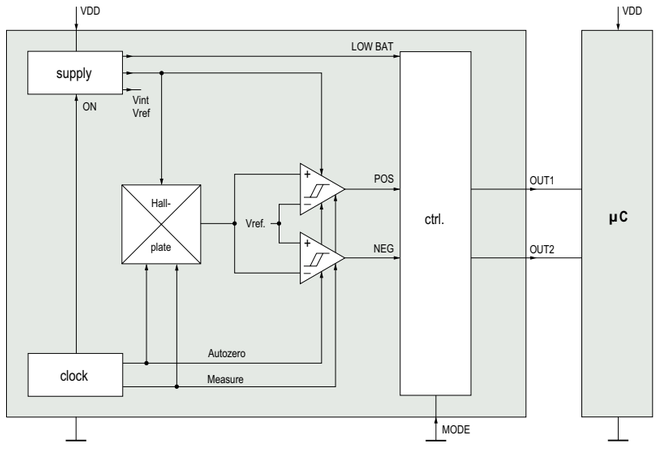
PACKAGE



APPLICATION

- Motor speed and postition control
- Magnetic field detection
- Proximity switch

BLOCK DIAGRAM



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