Differential Hall Effect (DHE) Sensor

O 030 350 000 XXX

DHE sensors give an output when subjected to a changing magnetic field. The field is set up by a magnet inside the sensor body and changes when ferromagnetic teeth are passed beneath the sensor (no magnets are required in the target). To improve noise resistance, the sensor has two Hall effect elements and only responds to changes in magnetic field strength corresponding to tooth passing frequencies above 15 Hz. As each tooth passes the sensor, the digital state of the output changes.

Please request our application note for further details.

EXAMPLE APPLICATIONS

- Wheel speed
- Cam position sensing (application specific)

ELECTRICAL

- Supply voltage: 9 V to 15 V unregulated
- Supply current: 5 mA to 15 mA
- Open collector output
- Output current: 35 mA (Max.)
- Frequency response: 15 Hz to 20 kHz
- Reverse polarity protection
- Output polarity depends on the rotational direction of the target wheel

CABLE AND CONNECTION

- 22 AWG un-screened cable, Typ. 1000 mm*
- Various motorsport connectors are available
- Connection

Wire Colour	Typical connector pin/ID	Function
Red	1 / A	Supply
Green	2 / B	Signal
White	3 / C	Ground

- An internal pull-up resistor can be included on some models

MECHANICAL

- Air gap: 1.5 mm (Max.)
- Body diameter: 9 mm (Min.)
- Weight: less than 30 g (including cable)
- Aluminium alloy body, hard anodised and dyed black
- Integrated cable boss for strain relief to the sensor body

ENVIRONMENTAL

- Resistant to standard motorsport fluids
- Vibration: 50 Hz to 2.5 kHz @ 40 g 8 hrs per axis
- Maximum humidity: 100 %
- Operating temperature: -10 °C to +175 °C†
- Viton jacketed cable

* Other lengths available on request
† Functional life of no less than 1000 hours at 175 °C

Get in touch
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