

Hall Effect Sensors : Angle Detection

TI Precision Labs – Magnetic Sensors

Presented and Prepared by Scott Bryson

Angle Detection

- 1) Which of the following does not impact absolute angle measurement accuracy?
 - a) Sensitivity Matching
 - b) Magnet Wobble
 - c) Sensor Alignment
 - d) Magnet angle at power on

- 2) What is the maximum angle sense range for a single Hall effect sensor
 - 1) 90
 - 2) 180
 - 3) 270
 - 4) 360

Angle Detection

- 3) What Sensor alignments are suitable for 1D Sensors?
- a) In-Plane
 - b) On-Axis
 - c) Out-of-Plane
 - d) Coincidental
- 4) What force causes an unequal charge distribution in the Hall Element
- a) In-Plane
 - b) On-Axis
 - c) Out-of-Plane
 - d) Coincidental

Angle Detection

- 5) T/F: A 3D sensor with perfectly matched inputs does not need to worry about output matching
- a) True
 - b) False

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Angle Detection

- 5) T/F: A 3D sensor with perfectly matched inputs does not need to worry about output matching for precision measurements
- a) True
 - b) **False** Sensitivity mismatch can result with angle error that would otherwise be reduced by normalizing the outputs.

To find more magnetic position sensing technical resources and search products, visit ti.com/halleffect