



MG Series Magnets



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The MG Series magnets offered by Honeywell Sensing and Control includes several bar magnets in various sizes and strengths for actuating Hall-effect and magnetoresistive sensor ICs. These bar magnets are for use in sensors with unipolar or omnipolar magnetic characteristics.

Made from different magnetic materials and available in a variety of sizes and shapes, the MG Series magnets can be used for evaluation and design of magnetic systems, and in numerous potential applications across a variety of different industries. Some of these magnets are offered with threaded bushings for easy installation and have a good resistance to demagnetization which could be caused by magnetic shock. These magnets are designed to provide minimum magnetic fields at a specified distance to help system designers match the appropriate magnet to their requirements.

Value to the Customer

- Variety of sizes, shapes, and packaging options to choose from

The MG Series consists of a range of magnets based on varying dimensions and packaging types to help customers identify the most appropriate magnet that can be used to evaluate Honeywell's Hall-effect and magnetoresistive sensor ICs in their applications.



DID YOU KNOW?

Magnetic sensing characteristics of Hall-effect sensor ICs are specified within particular ranges.

For example, assume an application with a temperature range of $-40\text{ }^{\circ}\text{C}$ to $125\text{ }^{\circ}\text{C}$ [$-40\text{ }^{\circ}\text{F}$ to $257\text{ }^{\circ}\text{F}$] using an SS443A. The operate point may be up to 215 Gauss [21.5 mT] and the release point may be 60 Gauss to 190 Gauss [6.0 mT to 19.0 mT]. To ensure reliable operation, at least 215 Gauss [21.5 mT] must be presented to the sensor. For a robust activation, the flux from the magnet at the maximum operating gap should be 20 % to 100 % higher than the sensor's maximum operating point over temperature. The Gauss level must then be reduced below 60 Gauss [6.0 mT] to ensure that the sensor will release.

Therefore, it is necessary to know the flux density (Gauss) measured at the chip to be able to:

- Select a device with the best magnetic characteristics for the application
- Select the best magnet
- Verify the desired mechanical characteristics

COMPACT SIZE • WIDE RANGE • VARIETY OF SHAPES