

Interactive Catalog Replaces Catalog Pages

Honeywell Sensing and Control has replaced the PDF product catalog with the new **Interactive Catalog**. The **Interactive Catalog** is a power search tool that makes it easier to find product information. It includes more installation, application, and technical information than ever before.



**Click this icon to try the new
Interactive Catalog.**

Sensing and Control

Honeywell Inc.

11 West Spring Street

Freeport, Illinois 61032

Solid State Sensors Magnets

MG Series

GENERAL INFORMATION

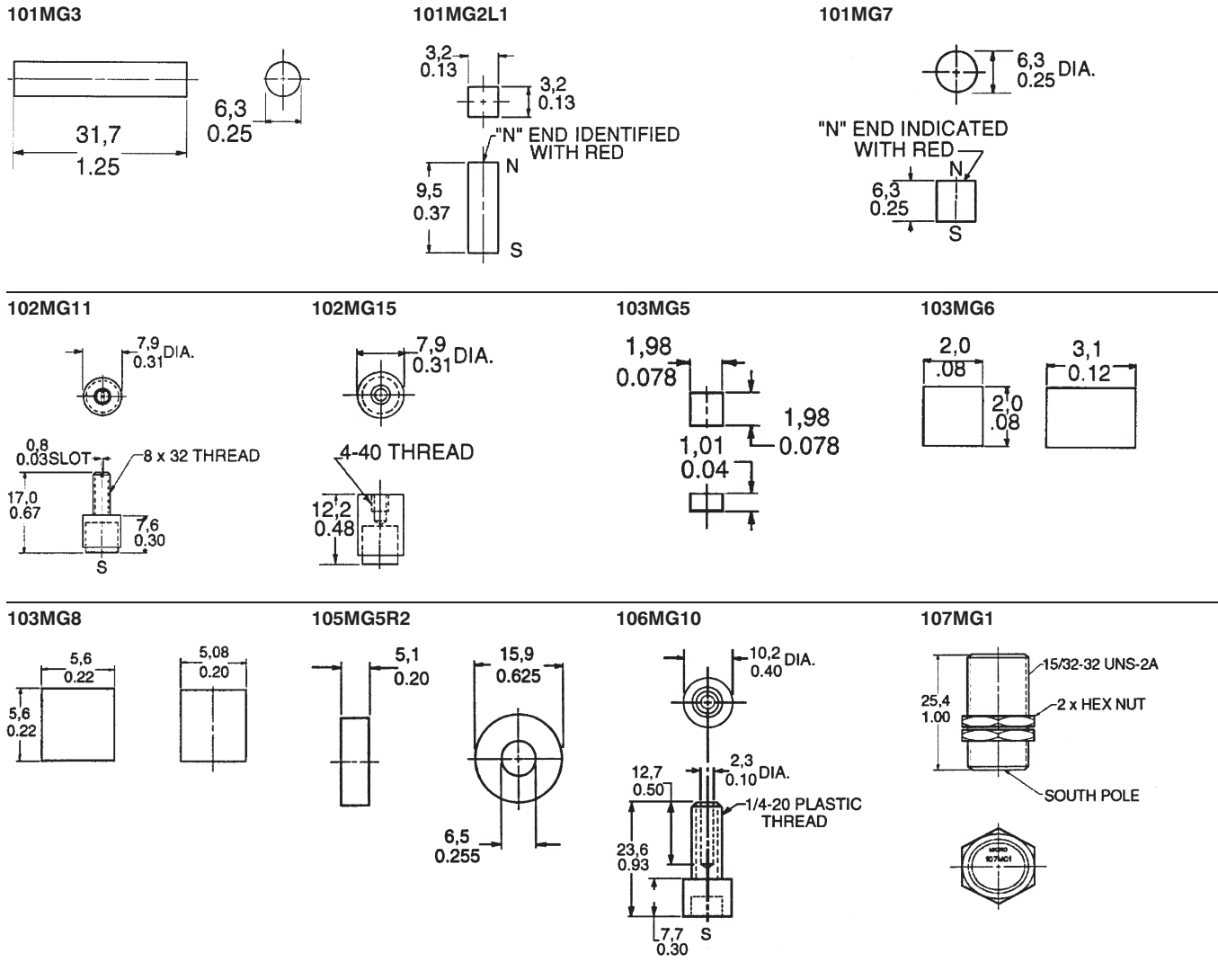
Several bar and ring magnets for actuating Hall effect sensors are available from MICRO SWITCH. Bar magnets, in various sizes and strengths, are ideal for sensors with unipolar magnetic characteristics. The ring magnets, with alternate South and North poles on the outside diameter, are especially useful for sensors with bipolar magnetic characteristics. (For more information on magnets and methods of magnet actuation, see Application Data.)



FEATURES

- Wide variety of sizes and shapes
- Wide variety of magnetic materials
- Threaded bushings available on some listings for easy installation

MOUNTING DIMENSIONS (for reference only)



Analog

MG ORDER GUIDE — BAR MAGNETS

| Catalog Listings | 101MG3 | 101MG7* | 101MG2L1* | 102MG11* | 102MG15* | 103MG5** | 103MG6*** | 103MG8 | 106MG10* | 107MG1 |
|------------------|--------------|-------------|--------------|--------------|-------------|-------------|-------------|-------------|--------------|-------------------|
| Outside Diameter | 6,3 0.25 | 6,3 0.25 | 3,2 0.125 | 7,9 0.31 | 7,9 0.31 | 2,0 .078 | 2,0 .080 | 5,6 .220 | 10,2 0.40 | 15/32-32 UNS21 |
| Length | 31,7 1.25 | 6,3 0.25 | 9,5 0.375 | 17,0 0.67 | 12,2 .48 | 2,0 .078 | 3,1 .120 | 5,6 .220 | 23,6 0.93 | 25,4 1.00 |

* Bulk packaging in 100 unit lots. Add **-BP** to catalog listing.

** 125 pieces per tube. Poles not marked.

*** 75 pieces per tube. Poles not marked.

MG ORDER GUIDE — RING MAGNETS

| Catalog Listings | 105MG5R2 | 105MG5R4 |
|------------------|---------------|---------------|
| Outside Diameter | 15,9 0.625 | 15,9 0.625 |
| # Pole Pairs | 2 | 4 |

MAGNET SELECTION GUIDE

This guide is designed to aid in determining the best magnet for use with a Hall effect sensor. There are several factors to consider when choosing a magnet. The most important is gap distances. There must be adequate magnetic gauss to operate the sensor at the correct distance. By using the maximum operate magnetic gauss characteristics (see sensor order guides), you can determine which magnet(s) will operate the sensor. Other important factors include temperature range and the physical environment of the application.

| Material and Process | Physical Strength | Temperature Range* | Magnetic Shock Resistance | Resistance To Demagnetization | Gap Distance** & Gauss Level @ 25°C† | | | | | | Catalog Listing |
|----------------------|-------------------|--|---------------------------|-------------------------------|--------------------------------------|--------------|--------------|--------------|--------------|--------------|---|
| | | | | | 0,25 .010 | 0,76 .030 | 1,27 .050 | 2,54 .100 | 3,81 .150 | 5,08 .200 | |
| Alnico V Cast | Good | -40 to 300°C | Poor | Fair | 1460 | 1320 | 1170 | 810 | 575 | 420 | 101MG3 |
| Alnico VIII Sintered | Good | -40 to 250°C -40 to 140°C -40 to 140°C | Good | Excellent | 1050 | 900 | 755 | 470 | 295 | 195 | 101MG7 102MG11 102MG15 107MG1*** |
| | | | | | 7800 | 7800 | 7800 | 750 | 550 | 375 | |
| Alnico VI Sintered | Good | -40 to 250°C | Good | Good | 730 | 550 | 410 | 205 | 115 | 75 | 101MG2L1 |
| Indox 1 Pressed | Good | 0 to 100°C | Good | Excellent | 700 | 520 | 375 | 175 | 85 | 45 | 105MG5R2 105MG5R4 |
| Rare Earth Pressed | Poor | -40 to 250°C | Good | Excellent | 1110 | 630 | 365 | 120 | 55 | 25 | 103MG5 103MG6 103MG8 106MG10 |
| | | | | | 2900 | 1400 | 850 | 260 | 130 | 70 | |
| | | | | | 2620 | 2100 | 1600 | 940 | 550 | 350 | |
| | | | | | 2620 | 2100 | 1600 | 940 | 550 | 350 | |

* Magnet will not be damaged over temperature range.

** Gap distance from sensing surface.

*** Measurement device saturated @ 800 gauss.

†milliTesla = Gauss × 10⁻¹