

AS5000-MA4X2H-1

Axial Magnet 4x2x1mm

Bomatec #606416

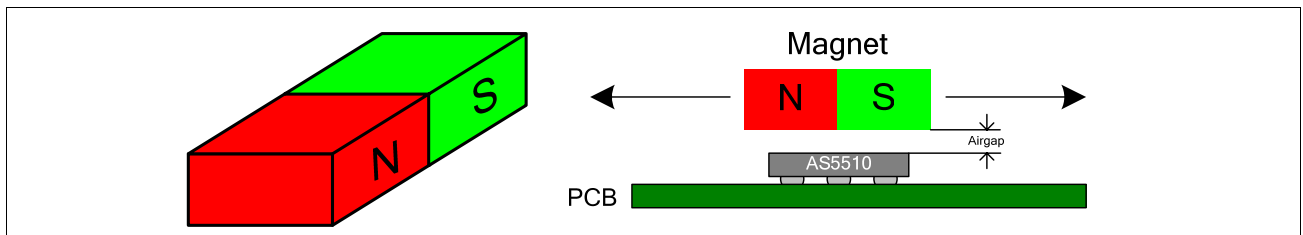
Data Sheet

1 General Description

The AS5000-4X2H-1 is an axial magnet used with the AS5510 linear encoder, in order to measure small linear displacements.

The magnet is mounted on the top of the AS5510. The airgap depends on the desired resolution and displacement range for the end application.

Figure 1. Linear Position Sensor with AS5510 + Magnet



2 Technical Specification

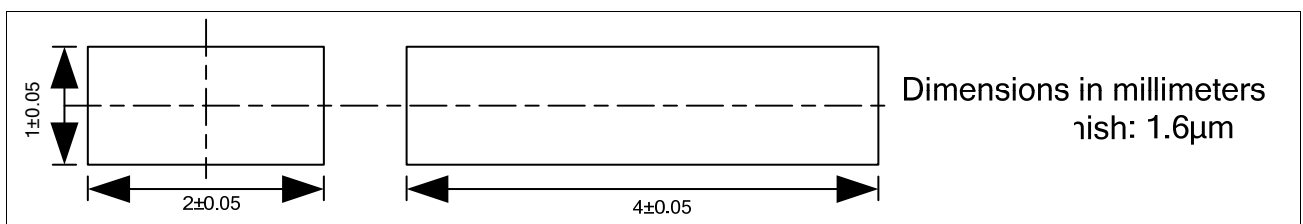
2.1 Magnetic Specification

Table 1. Magnetic Specification

Type	Min.	Nominal	Unit
Material	NdFeB sintered, Ni-coated		-
Property Grade	BMN-35H		-
Remanence Br	1.17	1.21	T
Coercive Force HcB	860	907	kA/m
Intrinsic Coercive Force HcJ	1353	-	kA/m
Max Energy Product (BH) max.	263	279	kJ/m ³
Working Temperature	-	120	°C
Density	7.5		g/cm ³

2.2 Dimensions

Figure 2. Mechanical Dimensions



2.3 Magnetic field representation

Figure 3: Magnetic field representation over AS5510 Hall sensor

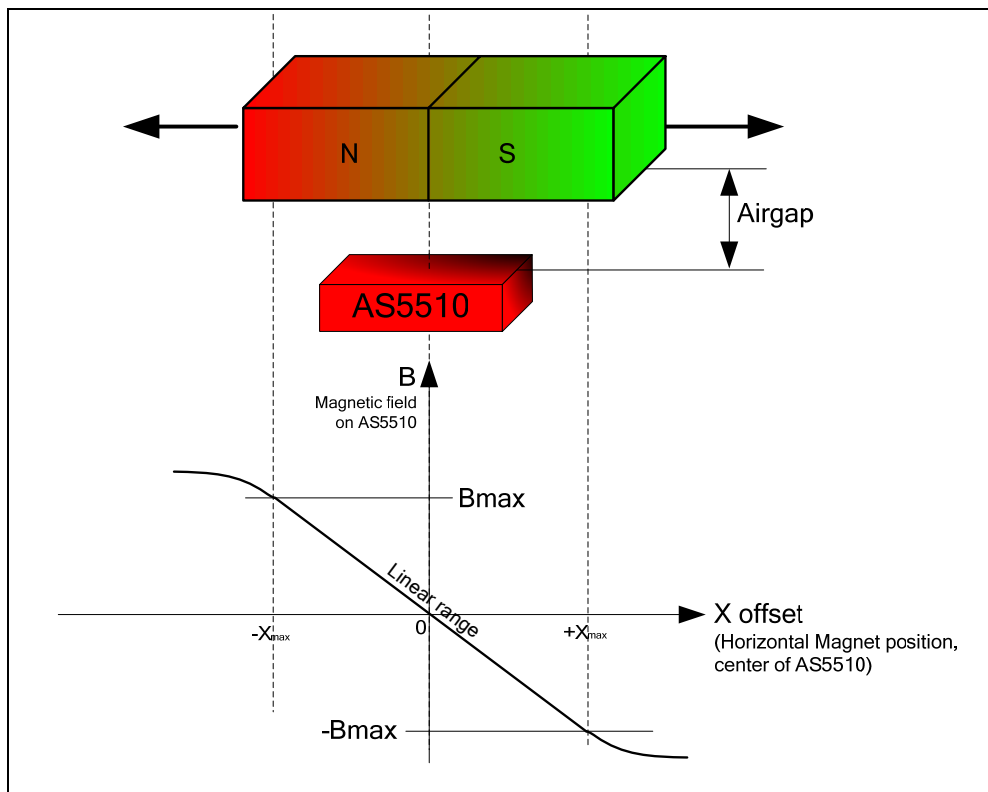
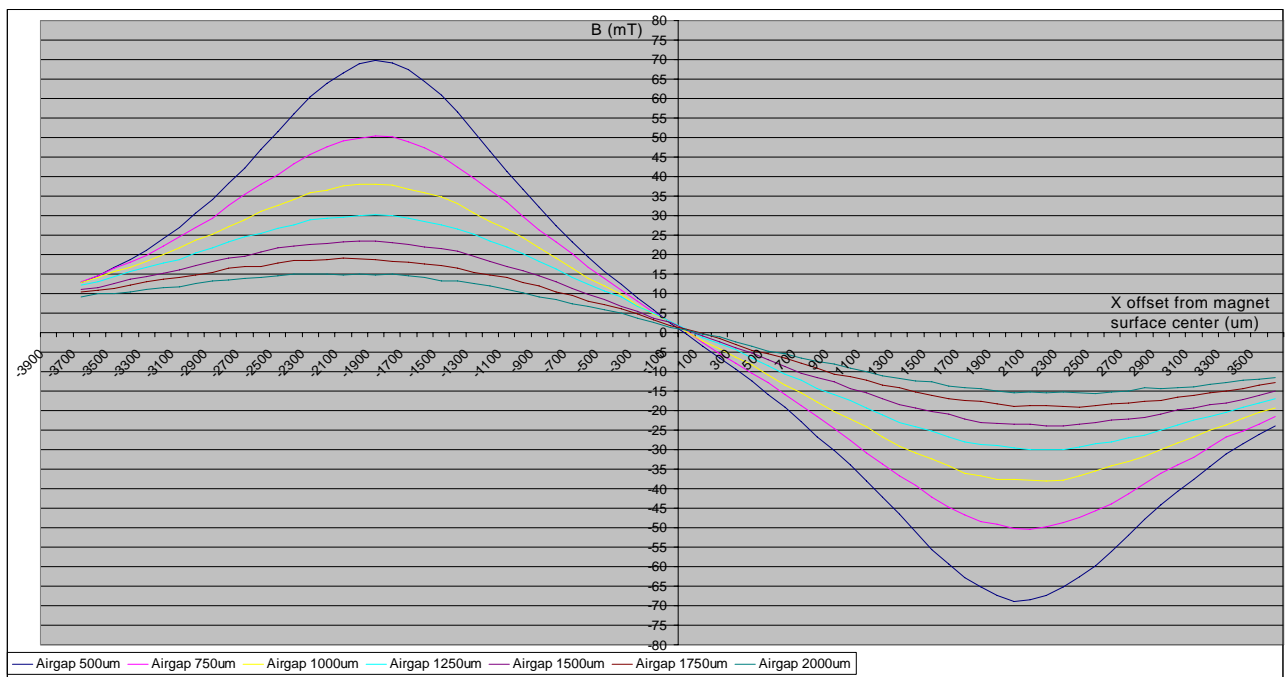


Figure 4: Magnet scan



If a magnet holder is used, this one ferromagnetic in order to keep the maximum magnetic field strength and maximum linearity.

Materials as brass, copper, aluminium, stainless steel are the best choices to make this part.

3 Magnet Supplier Information

BOMATEC AG
Hofstrasse 1
CH-8181 Höri, Switzerland
Phone: +41-44-872 10 00
Fax: +41-44-872 10 01
e-mail: contact@bomatec.ch

4 Revision History

Table 2. Revision History

Revision No.	Description	Change Date
1.00	Initial revision	13. Apr. 2011

5 Copyrights

Copyright © 2011, austriamicrosystems AG, Schloss Premstaetten, 8141 Unterpremstaetten, Austria – Europe. Trademarks Registered ®. All rights reserved. The material herein may not be reproduced, adapted, merged, translated, stored, or used without the prior written consent of the copyright owner. All products and companies mentioned are trademarks or registered trademarks of their respective companies.

6 Disclaimer

Devices sold by austriamicrosystems AG are covered by the warranty and patent indemnification provisions appearing in its Term of Sale. austriamicrosystems AG makes no warranty, express, statutory, implied, or by description regarding the information set forth herein or regarding the freedom of the described devices from patent infringement. austriamicrosystems AG reserves the right to change specifications and prices at any time and without notice. Therefore, prior to designing this product into a system, it is necessary to check with austriamicrosystems AG for current information. This product is intended for use in normal commercial applications. Applications requiring extended temperature range, unusual environmental requirements, or high reliability applications, such as military, medical life-support or life sustaining equipment are specifically not recommended without additional processing by austriamicrosystems AG for each application.

The information furnished here by austriamicrosystems AG is believed to be correct and accurate. However, austriamicrosystems AG shall not be liable to recipient or any third party for any damages, including but not limited to personal injury, property damage, loss of profits, loss of use, interruption of business or indirect, special, incidental or consequential damages, of any kind, in connection with or arising out of the furnishing, performance or use of the technical data herein. No obligation or liability to recipient or any third party shall arise or flow out of austriamicrosystems AG rendering of technical or other services.



Contact Information

Headquarters

austriamicrosystems AG
A-8141 Schloss Premstaetten, Austria
Tel: +43 (0) 3136 500 0
Fax: +43 (0) 3136 525 01

For Sales Offices, Distributors and Representatives, please visit:

<http://www.austriamicrosystems.com/contact>