

## Quality Assurance Coordination Memo

Honeywell International, Inc  
12001 State Highway 55  
Plymouth, MN 55441

<b>PRODUCT NAME</b>	HMC1043L	<b>REF. NUMBER</b>	QA14-004
<b>Customer</b>	All HMC1043L Customers	<b>Initial Issue Date</b>	8/28/2014
<b>Attention</b>	Quality or Contract rep	<b>Issue # / Date</b>	1
<b>Cord Memo Type</b>	Performance Update	<b>Originator</b>	<b>Wayne Orf Quality Manager</b>
<b>Status</b>	Open		

### **SUBJECT: HMC1043L XY Orthogonality**

#### **Scope of Product Affected**

All HMC1043L parts manufactured with a date code of 1433 (YYWW) or earlier. Note: HMC1043 product is not affected by this issue.

#### **Description of Product Performance**

Testing of a limited sample of HMC1043L material as produced is exhibiting an X-Y orthogonality error of approximately -10.5 degrees; tested units range from -7 to -13 degrees. Therefore the customer would see an angle between the X and Y axis that is nominally 79.5, not the typical 90 degrees.

Testing has found the X-Z and Y-Z orthogonality is not affected.

Honeywell testing of the HMC1043L material to-date shows the orthogonality error described above is stable and shows no reliability concerns.

#### **System Effects**

As a result of the non-orthogonal X-Y axis, the customer may see an increased off-axis signal (in the x-y plane only) when compared to the HMC1043 device. For example, a magnetic field directed parallel to the X axis which results in a 1 mV signal on the x-sensor would simultaneously produce a ~0.182 mV signal on the y-axis sensor. (Nominal signal on the y-sensor should be zero for orthogonal axis).

#### **Disposition/Recommendations**

If the part performance is unacceptable to the customer, they may return the parts to Honeywell for full credit. Honeywell testing has shown the errors are repeatable and consequently may be correctable by customer software. See technical contact below.

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### **Honeywell Actions**

Until Honeywell resolves the issue, more of the affected material can only be made available upon customer request, with a customer signed waiver, should the current material be acceptable in the customer application (including current orders).

Honeywell is working through a series of Design of Experiments (DOE's) to determine Root Cause and Corrective Action in regards to the X-Y Orthogonality error. Additionally, Honeywell is testing other HMC1043L data sheet parameters to assess their compliance. An update to this Quality Alert can be expected in October.

### **References**

HMC1043L Preliminary Datasheet

### **Contact Information**

Return Material Authorization can be requested at the following website location:  
[https://b2b-precisionsensors.honeywell.com/plymouth\\_b2b/returns>Returns.jsp](https://b2b-precisionsensors.honeywell.com/plymouth_b2b/returns>Returns.jsp)

For Technical assistance, please contact:

Mike Freeman  
Mike.Freeman@Honeywell.com  
+1 763-954-2070

For ordering information: [www.magneticsensors.com](http://www.magneticsensors.com)

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