

**Semiconductor devices - Micro-electromechanical
devices -- Part 19: Electronic compasses**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 27.09.2013.	Date of Availability of the European standard is 27.09.2013.
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ICS 31.080.99

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**Semiconductor devices -
Micro-electromechanical devices -
Part 19: Electronic compasses
(IEC 62047-19:2013)**

Dispositifs à semiconducteurs –
Dispositifs microélectromécaniques -
Partie 19: Compas électroniques
(CEI 62047-19:2013)

Halbleiterbauelemente -
Bauelemente der Mikrosystemtechnik -
Teil 19: Elektronische Kompass
(IEC 62047-19:2013)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 47F/156/FDIS, future edition 1 of IEC 62047-19, prepared by SC 47F "Microelectromechanical systems" of IEC/TC 47 "Semiconductor devices" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62047-19:2013.

The following dates are fixed:

- latest date by which the document has to be (dop) 2014-05-21
implemented at national level by
publication of an identical national
standard or by endorsement
- latest date by which the national (dow) 2016-08-21
standards conflicting with the
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In the official version, for Bibliography, the following note has to be added for the standard indicated:

EN ISO 11606	NOTE	Harmonized as ISO 11606 (not modified).
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CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references	6
3 Terms and definitions	6
4 Essential ratings and characteristics.....	7
4.1 Composition of e-compasses.....	7
4.1.1 General	7
4.1.2 Magnetic sensor section	8
4.1.3 Acceleration sensor section.....	8
4.1.4 Signal processing section	8
4.1.5 Peripheral hardware section	8
4.1.6 Peripheral software section	8
4.1.7 DUT.....	9
4.2 Ratings (Limiting values)	9
4.3 Recommended operating conditions	9
4.4 Electric characteristics	9
4.4.1 General	9
4.4.2 Characteristics of sensor sections	9
4.4.3 DC characteristics	10
5 Measuring methods	11
5.1 Sensitivity of the magnetic sensor section	11
5.1.1 Purpose.....	11
5.1.2 Circuit diagram	11
5.1.3 Principle of measurement	11
5.1.4 Precaution to be observed.....	12
5.1.5 Measurement procedure	12
5.1.6 Specified conditions	12
5.2 Linearity of the magnetic sensor section.....	13
5.2.1 Purpose.....	13
5.2.2 Measuring circuit	13
5.2.3 Principle of measurement	13
5.2.4 Precaution to be observed.....	13
5.2.5 Measurement procedure	14
5.2.6 Specified conditions	14
5.3 Output of the magnetic sensor section in a zero magnetic field environment.....	14
5.3.1 Purpose.....	14
5.3.2 Measuring circuit	14
5.3.3 Principle of measurement	16
5.3.4 Precaution to be observed.....	16
5.3.5 Measurement procedure	16
5.3.6 Specified conditions	16
5.4 Cross axis sensitivity of the magnetic sensor section	16
5.4.1 Purpose.....	16
5.4.2 Measuring circuit	16
5.4.3 Measuring method 1	17
5.4.4 Measuring method 2	18
5.4.5 Specified conditions	19

5.5	Sensitivity and offset of the acceleration sensor section	19
5.5.1	Purpose.....	19
5.5.2	Measuring circuit	20
5.5.3	Principle of measurement	20
5.5.4	Precaution of measurement	21
5.5.5	Measurement procedure	21
5.5.6	Specified conditions	21
5.6	Frequency bandwidth of the magnetic sensor section (analogue output).....	21
5.6.1	Purpose.....	21
5.6.2	Measuring circuit	21
5.6.3	Principle of measurement	22
5.6.4	Measurement procedure	23
5.6.5	Specified conditions	23
5.7	Current consumption	23
5.7.1	Purpose.....	23
5.7.2	Measuring circuit	23
5.7.3	Principle of measurement	24
5.7.4	Precaution for measurement.....	24
5.7.5	Measurement procedure	24
5.7.6	Specified conditions	24
Annex A	(informative) Considerations on essential ratings and characteristics	25
Annex B	(informative) Terminal coordinate system of e-compasses	26
Annex C	(informative) Descriptions of the pitch angle, roll angle, and yaw angle with drawings	28
Bibliography	30
Figure 1	– Composition of e-compasses	8
Figure 2	– Circuit to measure sensitivity	11
Figure 3	– Measuring method of linearity	13
Figure 5	– Measuring circuit using a magnetic shield room or a magnetic shield box.....	15
Figure 6	– Direction of DUT	20
Figure 7	– Block diagram of frequency measurement.....	22
Figure 8	– Current consumption measuring circuit	24
Figure B.1	– Mobile terminal coordinate system of magnetic sensors	26
Figure B.2	– Terminal coordinate system of acceleration sensors	27
Figure C.1	– Descriptions of the pitch angle, roll angle, and yaw angle with drawings	29
Table 1	– Characteristics of sensor sections	10
Table 2	– DC characteristics of e-compasses.....	10

SEMICONDUCTOR DEVICES – MICRO-ELECTROMECHANICAL DEVICES –

Part 19: Electronic compasses

1 Scope

This part of IEC 62047 defines terms, definitions, essential ratings and characteristics, and measuring methods of electronic compasses. This standard applies to electronic compasses composed of magnetic sensors and acceleration sensors, or magnetic sensors alone. This standard applies to electronic compasses for mobile electronic equipment.

For marine electronic compasses, see ISO 11606.

Electronic compasses are called “e-compasses” for short. Types of e-compasses are: 2-axis e-compasses, 3-axis e-compasses, 6-axis e-compasses, etc., all of which are covered by this standard.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

None

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

3-axis Helmholtz coil

three Helmholtz coils that generate magnetic fields at right angles to each other

3.2

zero magnetic field environment

magnetic field environments where magnetic field strength in a space including a device under test is lower than the strength specified

Note 1 to entry: The device under test (DUT) is defined in 4.1.7.

3.3

e-compass

electronic compass

compass that calculates and outputs an azimuth using the electrical output of sensors

Note 1 to entry: The term “e-compass” is used as an abbreviated term of electronic compass. (See the above Scope.)

3.4

2-axis e-compass

e-compass that uses a 2-axis magnetic sensor as a geomagnetism detection element