



BSI Standards Publication

## **Failure modes and effects analysis (FMEA and FMECA)**

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## National foreword

This British Standard is the UK implementation of EN IEC 60812:2018. It is identical to IEC 60812:2018. It supersedes BS EN 60812:2006, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee DS/1, Dependability.

A list of organizations represented on this committee can be obtained on request to its secretary.

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# EN IEC 60812

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English Version

## Failure modes and effects analysis (FMEA and FMECA) (IEC 60812:2018)

Analyse des modes de défaillance et de leurs effets (AMDE  
et AMDEC)  
(IEC 60812:2018)

Ausfalleffektanalyse (FMEA und FMECA)  
(IEC 60812:2018)

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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

**European foreword**

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The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2019-06-14
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2021-09-14

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60300-1	NOTE Harmonized as EN 60300-1
IEC 60300-3-1	NOTE Harmonized as EN 60300-3-1
IEC 60300-3-12	NOTE Harmonized as EN 60300-3-12
IEC 60300-3-11	NOTE Harmonized as EN 60300-3-11
IEC 61025	NOTE Harmonized as EN 61025
IEC 61078	NOTE Harmonized as EN 61078
IEC 61165	NOTE Harmonized as EN 61165
IEC 61508 series	NOTE Harmonized as EN 61508 series
IEC 61709	NOTE Harmonized as EN 61709
IEC 62061	NOTE Harmonized as EN 62061
IEC 62308	NOTE Harmonized as EN 62308
IEC 62502	NOTE Harmonized as EN 62502
IEC 62508	NOTE Harmonized as EN 62508
IEC 62551	NOTE Harmonized as EN 62551
IEC 62740	NOTE Harmonized as EN 62740
IEC 62741	NOTE Harmonized as EN 62741
ISO 9000	NOTE Harmonized as EN ISO 9000
ISO 13849-1	NOTE Harmonized as EN ISO 13849-1

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-192	-	International electrotechnical vocabulary -- Part 192: Dependability	--	-

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FAILURE MODES AND EFFECTS ANALYSIS (FMEA and FMECA)****FOREWORD**

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International Standard IEC 60812 has been prepared by IEC technical committee 56: Dependability.

This third edition cancels and replaces the second edition published in 2006. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) the normative text is generic and covers all applications;
- b) examples of applications for safety, automotive, software and (service) processes have been added as informative annexes;
- c) tailoring the FMEA for different applications is described;
- d) different reporting formats are described, including a database information system;
- e) alternative means of calculating risk priority numbers (RPN) have been added;
- f) a criticality matrix based method has been added;
- g) the relationship to other dependability analysis methods have been described.