



NSAI
Standards

Irish Standard
I.S. EN 60839-11-2:2015&AC:2015

Alarm and electronic security systems - Part 11-2: Electronic access control systems - Application guidelines

I.S. EN 60839-11-2:2015&AC:2015

Incorporating amendments/corrigenda/National Annexes issued since publication:

EN 60839-11-2:2015/AC:2015

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:

EN 60839-11-2:2015

Published:

2015-04-17

This document was published under the authority of the NSAI and comes into effect on:

2015-12-08

ICS number:

NOTE: If blank see CEN/CENELEC cover page

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeán Náisiúnta na hÉireann

National Foreword

I.S. EN 60839-11-2:2015&AC:2015 is the adopted Irish version of the European Document EN 60839-11-2:2015, Alarm and electronic security systems - Part 11-2: Electronic access control systems - Application guidelines

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This page is intentionally left blank



Corrigendum to EN 60839-11-2:2015

English version

Title page

Add the following superseding note:

"supersedes EN 50133-7:1999".

European foreword:

Add the following paragraph:

"This document supersedes EN 50133-7:1999."

November 2015

This page is intentionally left blank

EUROPEAN STANDARD

EN 60839-11-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2015

ICS 13.320

English Version

**Alarm and electronic security systems - Part 11-2: Electronic
access control systems - Application guidelines
(IEC 60839-11-2:2014)**

Systèmes d'alarme et de sécurité électroniques - Partie 11-
2: Systèmes de contrôle d'accès électronique - Lignes
directrices d'application
(IEC 60839-11-2:2014)

Alarmanlagen - Teil 11-2: Elektronische
Zutrittskontrollanlagen - Anwendungsregeln
(IEC 60839-11-2:2014)

This European Standard was approved by CENELEC on 2015-04-07. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

This document (EN 60839-11-2:2015) consists of the text of IEC 60839-11-2:2014 prepared by IEC/TC 79 "Alarm and electronic security systems".

The following dates are fixed:

- latest date by which the document has to be implemented (dop) 2016-04-13
at national level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2018-04-13

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 60839-11-2:2014 was approved by CENELEC as a European Standard without any modification.

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

IEC 60950-1	NOTE	Harmonized as EN 60950-1.
IEC 61000-6-1	NOTE	Harmonized as EN 61000-6-1.
IEC 61000-6-3	NOTE	Harmonized as EN 61000-6-3

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 When 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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60839-11-1	2013	Alarm and electronic security systems - Part 11-1: Electronic access control systems - System and components requirements	EN 60839-11-1	2013
-	-		+AC	2013
-	-		+AC	2015

This page is intentionally left blank



IEC 60839-11-2

Edition 1.0 2014-07

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Alarm and electronic security systems –
Part 11-2: Electronic access control systems – Application guidelines**

**Systemes d'alarme et de sécurité électroniques –
Partie 11-2: Systemes de contrôle d'accès électronique – Lignes directrices
d'application**





THIS PUBLICATION IS COPYRIGHT PROTECTED
Copyright © 2014 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'IEC ou du Comité national de l'IEC du pays du demandeur. Si vous avez des questions sur le copyright de l'IEC ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de l'IEC de votre pays de résidence.

IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

IEC Catalogue - webstore.iec.ch/catalogue

The stand-alone application for consulting the entire bibliographical information on IEC International Standards, Technical Specifications, Technical Reports and other documents. Available for PC, Mac OS, Android Tablets and iPad.

IEC publications search - www.iec.ch/searchpub

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and also once a month by email.

Electropedia - www.electropedia.org

The world's leading online dictionary of electronic and electrical terms containing more than 30 000 terms and definitions in English and French, with equivalent terms in 14 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC Glossary - std.iec.ch/glossary

More than 55 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

IEC Customer Service Centre - webstore.iec.ch/csc

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: csc@iec.ch.

A propos de l'IEC

La Commission Electrotechnique Internationale (IEC) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

A propos des publications IEC

Le contenu technique des publications IEC est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

Catalogue IEC - webstore.iec.ch/catalogue

Application autonome pour consulter tous les renseignements bibliographiques sur les Normes internationales, Spécifications techniques, Rapports techniques et autres documents de l'IEC. Disponible pour PC, Mac OS, tablettes Android et iPad.

Recherche de publications IEC - www.iec.ch/searchpub

La recherche avancée permet de trouver des publications IEC en utilisant différents critères (numéro de référence, texte, comité d'études,...). Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

IEC Just Published - webstore.iec.ch/justpublished

Restez informé sur les nouvelles publications IEC. Just Published détaille les nouvelles publications parues. Disponible en ligne et aussi une fois par mois par email.

Electropedia - www.electropedia.org

Le premier dictionnaire en ligne de termes électroniques et électriques. Il contient plus de 30 000 termes et définitions en anglais et en français, ainsi que les termes équivalents dans 14 langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (IEV) en ligne.

Glossaire IEC - std.iec.ch/glossary

Plus de 55 000 entrées terminologiques électrotechniques, en anglais et en français, extraites des articles Termes et Définitions des publications IEC parues depuis 2002. Plus certaines entrées antérieures extraites des publications des CE 37, 77, 86 et CISPR de l'IEC.

Service Clients - webstore.iec.ch/csc

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: csc@iec.ch.



IEC 60839-11-2

Edition 1.0 2014-07

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Alarm and electronic security systems –
Part 11-2: Electronic access control systems – Application guidelines**

**Systèmes d'alarme et de sécurité électroniques –
Partie 11-2: Systèmes de contrôle d'accès électronique – Lignes directrices
d'application**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE
CODE PRIX

U

ICS 13.320

ISBN 978-2-8322-1774-0

**Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

CONTENTS

FOREWORD	4
INTRODUCTION	6
1 Scope	7
2 Normative references	7
3 Terms and definitions	7
4 Abbreviations	8
5 System architecture	8
6 Environmental and EMC considerations	9
6.1 General	9
6.2 Environmental Class I – Equipment situated in indoor but restricted to residential/office environment	9
6.3 Environmental Class II – Equipment situated indoor in general	9
6.4 Environmental Class III – Equipment situated outdoor – Sheltered or indoor extreme conditions	10
6.5 Environmental Class IV – Equipment situated outdoor – General	10
6.6 EMC	10
7 System planning	10
7.1 General	10
7.2 Risk assessment and security grading	11
7.3 System design	12
7.3.1 System and components selection	12
7.3.2 Operational considerations	14
8 System installation	16
8.1 General	16
8.2 Installation planning	17
8.2.1 Equipment	17
8.2.2 Cabling	19
9 Commissioning and system handover	19
9.1 Commissioning	19
9.2 System handover	20
10 System operation and maintenance	20
10.1 System operation	20
10.2 System maintenance	21
11 Documentation	21
11.1 General	21
11.2 Documentation for planning	21
11.3 Documentation for commissioning/system handover	22
11.4 Documentation for maintenance	22
Annex A (normative) Allowed exceptions for installed systems	23
A.1 General	23
A.2 Claims of compliance	23
A.3 Allowed exceptions	23
Annex B (informative) Standby battery capacity calculations	27
Bibliography	29

Figure 1 – Typical arrangement of components and interfaces of an EACS	9
Figure 2 – Risk assessment chart	11
Figure 3 – Example of system grade selection	13
Figure 4 – Equipment location versus security grade of protected area	17
Table 1 – Security grading	12
Table 2 – Power supply requirements for installed EACS	18
Table A.1 – Allowed exceptions for access point interface requirements	24
Table A.2 – Allowed exceptions for indication and annunciation requirements.....	24
Table A.3 – Allowed exceptions for recognition requirements	25
Table A.4 – Duress signalling requirements	25
Table A.5 – Overriding requirements.....	25
Table A.6 – Communication requirements	25
Table A.7 – Allowed exceptions for system self-protection requirements.....	25
Table A.8 – Allowed exceptions for power supply requirements	26

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ALARM AND ELECTRONIC SECURITY SYSTEMS –

Part 11-2: Electronic access control systems – Application guidelines

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60839-11-2 has been prepared by IEC technical committee 79: Alarm and electronic security systems.

The text of this standard is based on the following documents:

FDIS	Report on voting
79/476/FDIS	79/489/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 60839 series, published under the general title *Alarm and electronic security systems*, can be found on the IEC website.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

This standard is part of the IEC 60839 series, written to include the following parts:

Part 11-1: Electronic access control systems – System and components requirements

Part 11-2: Electronic access control systems – Application guidelines

This part of IEC 60839 describes the general requirements for planning, installation, operation, maintenance and documentation for the application of electronic access control systems (EACS).

The performance of the EACS is determined by the security grades allocated to the access points. A risk assessment that identifies the risks and perceived threats should first be carried out in order to establish the appropriate security grades.

Four security grades are available based upon the knowledge and tools available to a person intent upon gaining unauthorised access and the type of application, taking into account specific organizational aspects and the value of the assets.

Separate guidance is provided for each activity along with recommendations for the documentation needed. A brief description of each section covering the activities is provided below:

System planning: this section is intended to assist the designer with the selection of an electronic access control system (EACS) that provides the control of access and security integrity commensurate with the value of the assets requiring protection and the associated risks. See Clause 7.

System design should minimise potential vulnerabilities that could be exploited to circumvent the access control measures. It is recommended that safeguards are incorporated to give early warning of attempts to circumvent the access control measures. See 7.3.

System installation: this section is intended to help those responsible for installing the EACS by identifying issues which should be considered prior to commencing the installation and during the installation of the system in order to ensure the EACS is correctly implemented as specified during system planning. See Clause 8.

Commissioning and system handover: this section provides guidance to ensure the level of performance required in the system planning is obtained and that the end user is provided with the necessary documentation, records and operating instructions during the handover of the EACS. See Clause 9.

System operation and maintenance: includes information regarding the responsibilities of the end user of the EACS to ensure the system is operated correctly and adequately maintained. It covers inspection, service and the use of remote diagnostics in order that the level of performance determined during the system planning stages can be maintained. See Clause 10.

ALARM AND ELECTRONIC SECURITY SYSTEMS –

Part 11-2: Electronic access control systems – Application guidelines

1 Scope

This part of IEC 60839 defines the minimum requirements and guidance for the installation and operation of electronic access control systems (EACS) and/or accessory equipment to meet different levels of protection.

This standard includes requirements for planning, installation, commissioning, maintenance and documentation for the application of EACS installed in and around buildings and areas. The equipment functions are defined in the IEC 60839-11-1.

When the EACS includes functions relating to hold-up or the detection of intruders, the requirements in standards relating to intrusion and hold-up are also applicable.

This standard provides application guidelines intended to assist those responsible for establishing an EACS to ascertain the appropriate design and planning of the EACS, both in terms of levels of protection and levels of performance necessary to provide the degree of access control and protection considered appropriate for each installation. This is achieved by scaling or classifying the features of electronic access control systems related to the security functionality (e.g. recognition, access point actuation, access point monitoring, duress signaling and system self-protection) in line with the known or perceived threat conditions.

This standard does not cover the methods and procedures for conducting a risk assessment.

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.

IEC 60839-11-1:2013, *Alarm and electronic security systems – Part 11-1: Electronic access control systems – System and components requirements*

3 Terms and definitions

For the purposes of this document the terms and definitions given in IEC 60839-11-1, as well as the following, apply.

3.1

area zone

part of a protected area which has its own set of access levels

Note 1 to entry: It may have a different security grade than other area zones within the same protected area.

3.2

competent organization

organization possessing sufficient resources and staff with adequate expertise and training in the maintenance of EACS

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-