

Irish Standard I.S. EN 60839-11-1:2013&AC:2015

Alarm and electronic security systems - Part 11-1: Electronic access control systems -System and components requirements

 $\ \odot$ CENELEC 2015 No copying without NSAI permission except as permitted by copyright law.

I.S. EN 60839-11-1:2013&AC:2015

Incorporating amendments/corrigenda/National Annexes issued since publication:

EN 60839-11-1:2013/AC:2015

2015-03-17

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: Published:

EN 60839-11-1:2013 2013-06-28

This document was published ICS number:

under the authority of the NSAI and comes into effect on: 13.320

NOTE: If blank see CEN/CENELEC cover page

NSAI T +353 1 807 3800 Sales:

 1 Swift Square,
 F +353 1 807 3838
 T +353 1 857 6730

 Northwood, Santry
 E standards@nsai.ie
 F +353 1 857 6729

 Dublin 9
 W NSAI.ie
 W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

EN 60839-11-1:2013/AC:2015



Corrigendum to EN 60839-11-1:2013

English version

This corrigendum replaces the first corrigendum issued on 2013-11-22

Title page

In the header of the title page, add "Supersedes EN 50133-1:1996 and EN 50133-2-1:2000".

Foreword

Add the following text after the dop and dow information:

"This document supersedes EN 50133-1:1996 and EN 50133-2-1:2000."

February 2015

This is a free page sample. Access the full version online.

This page is intentionally left blank

EUROPEAN STANDARD

EN 60839-11-1

NORME EUROPÉENNE EUROPÄISCHE NORM

June 2013

ICS 13.320

English version

Alarm and electronic security systems -Part 11-1: Electronic access control systems -System and components requirements

(IEC 60839-11-1:2013)

Systèmes d'alarme et de sécurité électroniques -Partie 11-1: Systèmes de contrôle d'accès électronique - Exigences système et exigences concernant les composants (CEI 60839-11-1:2013)

Alarmanlagen -Teil 11-1: Elektronische Zutrittskontrollanlagen - Anforderungen an Anlagen und Geräte (IEC 60839-11-1:2013)

This European Standard was approved by CENELEC on 2013-06-11. 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.

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 79/410/FDIS, future edition 1 of IEC 60839-11-1, prepared by IEC TC 79 "Alarm and electronic security systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60839-11-1:2013.

The following dates are fixed:

•	latest date by which the document has	(dop)	2014-03-11
	to be implemented at national level by		
	publication of an identical national		
	standard or by endorsement		
•	latest date by which the national	(dow)	2016-06-11
	standards conflicting with the		
	document have to be withdrawn		

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 60839-11-1:2013 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
 Harmonised as EN 60950-1.

 IEC 61000-6-1
 NOTE
 Harmonised as EN 61000-6-1.

 IEC 61000-6-3
 NOTE
 Harmonised 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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	EN/HD	<u>Year</u>
IEC 60068-1	-	Environmental testing - Part 1: General and guidance	EN 60068-1	-
IEC 60529	-	Degrees of protection provided by enclosures (IP Code)	-	-
IEC 62262	-	Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)	EN 62262	-
IEC 62599-1	-	Alarm systems - Part 1: Environmental test methods	-	-
IEC 62599-2	-	Alarm systems - Part 2: Electromagnetic compatibility - Immunity requirements for components of fire and security alarm systems	-	-
IEC 62642-1	-	Alarm systems - Intrusion and hold-up systems - Part 1: System requirements	-	-
IEC 62642-6	-	Alarm systems - Intrusion and hold-up systems - Part 2-6: Intrusion detectors - Opening contacts (magnetic)	-	-

This is a free page sample. Access the full version online.

This page is intentionally left blank



IEC 60839-11-1

Edition 1.0 2013-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE



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

Systèmes d'alarme et de sécurité électroniques – Partie 11-1: Systèmes de contrôle d'accès électronique – Exigences système et exigences concernant les composants





THIS PUBLICATION IS COPYRIGHT PROTECTED Copyright © 2013 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 la CEI ou du Comité national de la CEI du pays du demandeur.

Si vous avez des questions sur le copyright de la CEI ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de la CEI de votre pays de résidence.

IEC Central Office Tel.: +41 22 919 02 11 3, rue de Varembé Fax: +41 22 919 03 00

CH-1211 Geneva 20 info@iec.ch Switzerland 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.

Useful links:

IEC publications search - www.iec.ch/searchpub

The advanced search enables you 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 on-line 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 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) on-line.

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 la CEI

La Commission Electrotechnique Internationale (CEI) 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 CEI

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

Liens utiles:

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

La recherche avancée vous permet de trouver des publications CEI 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.

Just Published CEI - webstore.iec.ch/justpublished

Restez informé sur les nouvelles publications de la CEI. 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 au monde 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 les langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (VEI) en ligne.

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 60839-11-1

Edition 1.0 2013-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE



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

Systèmes d'alarme et de sécurité électroniques – Partie 11-1: Systèmes de contrôle d'accès électronique – Exigences système et exigences concernant les composants

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

PRICE CODE CODE PRIX

ICS 13.320 ISBN 978-2-83220-761-1

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.

- 2 -

CONTENTS

FU	KEW			5
INT	ROD	UCTION	l	7
1	Scop	e		8
2	Normative references			
3	Terms and definitions			
4	Abbr	eviation	ıs	20
5			models and system architecture	
		•	ormance functionality requirements	
6	-	-		23
	6.1		fication methodology and functionalities – Determining the levels of tion	23
	6.2	•	s point interface requirements	
	·	6.2.1		
		6.2.2	Access control	
		6.2.3	Portal status	
	6.3	Indicat	tion and annunciation (display, alert, logging) requirements	
		6.3.1	Annunciation	
		6.3.2	Display	
		6.3.3	Alert	
		6.3.4	Logging	
	6.4		nition requirements	
	6.5 Duress signalling requirements			
	6.6		ding requirements	
	6.7		unication requirements	
	6.8		n self-protection requirements	
	6.9	-	supply requirements	
7	Envi		tal and EMC (immunity) requirements	
8	Test	method	S	38
	8.1		al conditions	
	0.1	8.1.1	Atmospheric conditions for tests	
		8.1.2	Operating conditions for tests	
		8.1.3	Specimen configuration	
		8.1.4	Mounting arrangements	
		8.1.5	Tolerances	
		8.1.6	Provisions for tests	
		8.1.7	Optional functions	
	8.2		ed functional test	
	8.3	Functional tests for access point interface		
		8.3.1	Object of the test	
		8.3.2	Principle	
		8.3.3	Procedure	
		8.3.4	Criteria for compliance	
	8.4		onal tests for indication/annunciation (displaying, alert and logging)	
	5 .∓	8.4.1	Object of the test	
		8.4.2	Principles	
		8.4.3	Test procedure	
			Criteria for compliance	

	8.5	Test m	ethods for recognition functionalities	46
		8.5.1	Object of the test	46
		8.5.2	Principles	47
		8.5.3	Test procedure	47
		8.5.4	Criteria for compliance	48
	8.6	Functional tests for duress signalling		
		8.6.1	Object of the test	48
		8.6.2	Principles	48
		8.6.3	Test procedure (ref. Table 5, lines 1 to 3)	48
		8.6.4	Criteria for compliance	49
	8.7	Functio	onal tests for overriding	49
		8.7.1	Object of the test	
		8.7.2	Principles	49
		8.7.3	Test procedure (ref. Table 6, lines 1 to 7)	
		8.7.4	Criteria for compliance	
	8.8		onal tests for communication and self-protection	
		8.8.1	Object of the test	
		8.8.2	Principles	
		8.8.3	Test procedure (ref. Table 7, lines 1 to 28)	
		8.8.4	Criteria for compliance	
	8.9		supply requirements	
		8.9.1	Test of standby power duration	
		8.9.2	Test of charger and standby power source capacity	
		8.9.3	Test for low or missing battery condition	
	8.10		nmental and EMC (immunity) tests	
			Test procedure	
			Initial measurements	
			State of the specimen during conditioning	
			Conditioning	
			Measurement during conditioning	
			Final measurements	
	0 1 1		Criteria for compliance	
9			port	
9			on and marking	
	9.1		entation	
Δ	9.2		g	
			ive) Timing diagram	
Bibl	liograp	ohy		58
Figi	ure 1 -	- Conce	ptual model	22
Figi	ure 2 -	- Typica	al architecture of an electronic access control system	23
_			ole of system test configuration	
			ng diagram	
T. '	.14	0		2.1
			classification	
			point interface requirements	
Tab	le 3 –	Indicati	ion and annunciation requirements	27

This is a free page sample. Access the full version online. I.S. EN 60839-11-1:2013&AC:2015

60839-11-1 © IEC:2013

- 5 -

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ALARM AND ELECTRONIC SECURITY SYSTEMS -

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

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 60839-11-1 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	
79/410/FDIS	79/416/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.

-6-

60839-11-1 © IEC:2013

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.

60839-11-1 © IEC:2013

-7-

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 functionalities of electronic access control systems (EACS) for use in security applications. The design, planning, installation, operation, and maintenance are part of the application guidelines in IEC 60839-11-21. The risk analysis is not part of this standard and the risk levels are for informational purposes only.

An electronic access control system consists of one or more components that when interconnected meet the functionality criteria stated in this standard.

This standard defines different security grades and the functionalities of the access control system associated with each of these grades. It includes also the minimum environmental and EMC compliance criteria as applicable for components of the electronic access control system in every grade.

When a part of an electronic access control system (e.g. access point interface) forms a part of an alarm system (intrusion, hold-up, VSS [Video Surveillance Systems], etc.) that part shall also fulfil the relevant requirements of the applicable IEC standards. Functions additional to the mandatory functions specified in this standard may be included in the electronic access control system providing they do not prevent the requirements of this standard from being met.

This International standard also applies to access control systems sharing means of recognition, detection, triggering, interconnection, control, communication, alert signalling and power supplies with other applications. The operation of an access control system should not be adversely influenced by other applications.

An electronic access control system may consist of any number of access points. This standard addresses the security grade classification for each access point.

Compliance of the individual component parts of the electronic access control system can be assessed to this standard provided all relevant requirements are applied.

The specific requirements for access point actuators, such as electric door openers, electronic locks, turnstiles and barriers are included in other standards.

¹ Under consideration.

60839-11-1 © IEC:2013

ALARM AND ELECTRONIC SECURITY SYSTEMS -

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

1 Scope

This part of IEC 60839 specifies the minimum functionality, performance requirements and test methods for electronic access control systems and components used for physical access (entry and exit) in and around buildings and protected areas. It does not include requirements for access point actuators and sensors.

This standard is not intended to cover requirements for off premise transmission associated with intrusion or hold up alarm signals.

This standard applies to electronic access control systems and components intended to be used in security applications for the granting of access and includes requirements for logging, identification and control of information.

The standard comprises the following:

- A conceptual model and system architecture.
- Criteria covering:
 - classification based on performance functionalities and capabilities;
 - access point interface requirements;
 - indication and annunciation requirements (display, alert, logging);
 - duress signalling and overriding;
 - · recognition requirements;
 - system self-protection requirements;
 - communication between the component parts of the electronic access control system and with other systems.
- Requirements for environmental conditions (indoor/outdoor use) and electromagnetic compatibility.
- Test methods.

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 60068-1, Environmental testing – Part 1: General and guidance

IEC 60529, Degrees of protection provided by enclosures (IP Code)

IEC 62262, Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)



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

Product Page

- Dooking for additional Standards? Visit Intertek Inform Infostore
- Dearn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation