

© Copyright SEK Svensk Elstandard. Reproduction in any form without permission is prohibited.

Larmsystem – Del 11-33: Passerkontrollsysteem – Passerkontrollkonfigurering baserad på webbtjänster

*Alarm and electronic security systems –
Part 11-33: Electronic access control systems –
Access control configuration based on Web services*

Som svensk standard gäller europastandarden EN IEC 60839-11-33:2021. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 60839-11-33:2021.

Nationellt förord

Europastandarden EN IEC 60839-11-33:2021

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 60839-11-33, First edition, 2021 - Alarm and electronic security systems - Part 11-33: Electronic access control systems - Access control configuration based on Web services**

utarbetad inom International Electrotechnical Commission, IEC.

ICS 13.320.00

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

Genom att utforma sådana standarder blir säkerhetsfordringar tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK Svensk Elstandard

Box 1284
164 29 Kista
Tel 08-444 14 00
www.elstandard.se

October 2021

ICS 13.320

English Version

Alarm and electronic security systems - Part 11-33: Electronic
access control systems - Access control configuration based on
Web services
(IEC 60839-11-33:2021)

Systèmes d'alarme et de sécurité électroniques - Partie 11-
33: Systèmes de contrôle d'accès électronique -
Configuration du contrôle d'accès en fonction des services
Web
(IEC 60839-11-33:2021)

Alarmanlagen - Teil 11-33: Elektronische
Zutrittskontrollanlagen - Parametrierung der Zutrittskontrolle
basierend auf Web Services
(IEC 60839-11-33:2021)

This European Standard was approved by CENELEC on 2021-09-29. 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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, 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: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 79/646/FDIS, future edition 1 of IEC 60839-11-33, prepared by IEC/TC 79 “Alarm and electronic security systems” was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60839-11-33:2021.

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) 2022-06-29
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-09-29

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

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 60839-11-33:2021 was approved by CENELEC as a European Standard without any modification.

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.

<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 -EN 60839-11-1 Part 11-1: Electronic access control systems - System and components requirements	-EN 60839-11-1	2013
-	-		+ AC	2015
IEC 60839-11-2	2014	Alarm and electronic security systems -EN 60839-11-2 Part 11-2: Electronic access control systems - Application guidelines	-EN 60839-11-2	2015
-	-		+ AC	2015
IEC 60839-11-31	2016	Alarm and electronic security systems -EN 60839-11-31 Part 11-31: Electronic access control systems - Core interoperability protocol based on Web services	-EN 60839-11-31	2017
IEC 60839-11-32	2016	Alarm and electronic security systems -EN 60839-11-32 Part 11-32: Electronic access control systems - Access control monitoring based on Web services	-EN 60839-11-32	2017
ISO 16484-5	2017	Building automation and control systems EN ISO 16484-5 (BACS) - Part 5: Data communication protocol	EN ISO 16484-5	2017
RFC 5545	-	Internet Calendaring and Scheduling Core-Object Specification (iCalendar)		-
RFC 5234	-	Augmented BNF for Syntax Specifications:- ABNF		-



IEC 60839-11-33

Edition 1.0 2021-08

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Alarm and electronic security systems –
Part 11-33: Electronic access control systems – Access control configuration
based on Web services**

**Systèmes d'alarme et de sécurité électroniques –
Partie 11-33: Systèmes de contrôle d'accès électronique – Configuration du
contrôle d'accès en fonction des services Web**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 13.320

ISBN 978-2-8322-1011-4

**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	8
INTRODUCTION	10
1 Scope	11
2 Normative references	11
3 Terms and definitions	12
4 Overview	15
4.1 General.....	15
4.2 Namespaces	16
4.3 Error handling	17
5 Credential service.....	17
5.1 General.....	17
5.2 Service capabilities	18
5.2.1 General	18
5.2.2 ServiceCapabilities data structure.....	18
5.2.3 GetServiceCapabilities command	19
5.3 Credential information.....	20
5.3.1 General	20
5.3.2 Data structures	20
5.3.3 GetCredentialInfoList command.....	23
5.3.4 GetCredentials command	24
5.3.5 GetCredentialList command.....	25
5.3.6 CreateCredential command	26
5.3.7 SetCredential command.....	28
5.3.8 ModifyCredential command.....	30
5.3.9 DeleteCredential command.....	31
5.3.10 GetCredentialState command	32
5.3.11 EnableCredential command	32
5.3.12 DisableCredential command	33
5.3.13 ResetAntipassbackViolation command.....	33
5.3.14 GetSupportedFormatTypes command.....	34
5.3.15 GetCredentialIdentifiers command	34
5.3.16 SetCredentialIdentifier command	35
5.3.17 DeleteCredentialIdentifier command	36
5.3.18 GetCredentialAccessProfiles command	36
5.3.19 SetCredentialAccessProfiles command	37
5.3.20 DeleteCredentialAccessProfiles command	37
5.4 Notification topics	38
5.4.1 General	38
5.4.2 Event overview (informative).....	38
5.4.3 Status changes	38
5.4.4 Configuration changes	39
6 Access rules service.....	40
6.1 General.....	40
6.2 Service capabilities	41
6.2.1 General	41
6.2.2 ServiceCapabilities data structure.....	41

6.2.3	.GetServiceCapabilities command	41
6.3	Access profile information	41
6.3.1	General	41
6.3.2	Data structures	42
6.3.3	GetAccessProfileInfo command	42
6.3.4	GetAccessProfileInfoList command.....	43
6.3.5	GetAccessProfiles command	44
6.3.6	GetAccessProfileList command	45
6.3.7	CreateAccessProfile command	46
6.3.8	SetAccessProfile command	47
6.3.9	ModifyAccessProfile command	48
6.3.10	DeleteAccessProfile command.	49
6.4	Notification topics	50
6.4.1	General	50
6.4.2	Event overview (informative).....	50
6.4.3	Configuration changes.....	50
7	Authentication behaviour service	51
7.1	General.....	51
7.2	Example.....	51
7.3	Service capabilities	52
7.3.1	General	52
7.3.2	ServiceCapabilities data structure.....	52
7.3.3	GetServiceCapabilities command	53
7.4	Authentication profile information	53
7.4.1	General	53
7.4.2	Data structures	54
7.4.3	GetAuthenticationProfileInfo command	55
7.4.4	GetAuthenticationProfileInfoList command.....	56
7.4.5	GetAuthenticationProfiles command	57
7.4.6	GetAuthenticationProfileList command	58
7.4.7	CreateAuthenticationProfile command	59
7.4.8	SetAuthenticationProfile command	60
7.4.9	ModifyAuthenticationProfile command	61
7.4.10	DeleteAuthenticationProfile command.....	62
7.5	Security level information	63
7.5.1	General	63
7.5.2	Data structures	64
7.5.3	GetSecurityLevelInfo command	66
7.5.4	GetSecurityLevelInfoList command.....	66
7.5.5	GetSecurityLevels command	67
7.5.6	GetSecurityLevelList command.....	68
7.5.7	CreateSecurityLevel command	69
7.5.8	SetSecurityLevel command.....	70
7.5.9	ModifySecurityLevel command.....	71
7.5.10	DeleteSecurityLevel command.....	72
7.6	Notification topics	73
7.6.1	General	73
7.6.2	Event overview (informative).....	73
7.6.3	Configuration changes	73

8 Schedule service	74
8.1 General.....	74
8.2 Recurrence	76
8.2.1 General	76
8.2.2 Weekly recurrence.....	76
8.2.3 Extended recurrence	77
8.2.4 Standard schedule recurrence	77
8.2.5 Special day recurrence	77
8.3 Service capabilities.....	78
8.3.1 General	78
8.3.2 ServiceCapabilities data structure.....	78
8.3.3 GetServiceCapabilities command	79
8.4 Schedule information	79
8.4.1 General	79
8.4.2 Data structures	79
8.4.3 GetScheduleInfo command.....	82
8.4.4 GetScheduleInfoList command	83
8.4.5 GetSchedules command	84
8.4.6 GetScheduleList command	85
8.4.7 CreateSchedule command	86
8.4.8 SetSchedule command	87
8.4.9 ModifySchedule command	88
8.4.10 DeleteSchedule command	89
8.5 Special day group information.....	90
8.5.1 General	90
8.5.2 Data structures	90
8.5.3 GetSpecialDayGroupInfo command	90
8.5.4 GetSpecialDayGroupInfoList command.....	91
8.5.5 GetSpecialDayGroups command	92
8.5.6 GetSpecialDayGroupList command.....	93
8.5.7 CreateSpecialDayGroup command	94
8.5.8 SetSpecialDayGroup command	95
8.5.9 ModifySpecialDayGroup command	96
8.5.10 DeleteSpecialDayGroup command.....	97
8.6 Schedule status	97
8.6.1 ScheduleState data structure.....	97
8.6.2 GetScheduleState command.....	98
8.7 Notification topics	99
8.7.1 General	99
8.7.2 Event overview (informative).....	99
8.7.3 Status changes.....	99
8.7.4 Configuration changes.....	100
8.8 Examples.....	101
8.8.1 General	101
8.8.2 Access 24 x 7 for admin staff.....	101
8.8.3 Access on Monday and Wednesday from 06:00 to 20:00 for cleaning staff	101
8.8.4 Access from Friday 18:00 to 07:00 for maintenance staff.....	101
8.8.5 Access on weekdays from 08:00 to 17:00 for employees	102

8.8.6	Access from January 15, 2014, to January 14, 2015, from 09:00 to 18:00	103
8.8.7	Special days example 1	103
8.8.8	Special days example 2	104
8.8.9	Special days example 3	106
Annex A (normative)	Access control interface XML schemata	107
A.1	Credential service WSDL	107
A.2	Access rules service WSDL	127
A.3	Authentication behaviour service WSDL.....	137
A.4	Schedule service WSDL.....	155
Annex B (informative)	Mapping of mandatory functions in IEC 60839-11-1	174
Bibliography	182
Figure 1 – Overview of service dependencies	16	
Figure 2 – Main data structures in the credential service.....	18	
Figure 3 – Main data structures in the access rules service	40	
Figure 4 – Multiple schedules per access point	46	
Figure 5 – Result of schedule union	47	
Figure 6 – Authentication behaviour example.....	52	
Figure 7 – Related objects of an authentication profile	54	
Figure 8 – Related objects of a security level.....	63	
Figure 9 – Security level examples	65	
Figure 10 – Main data structures in the schedule service	74	
Figure 11 – Recurrence support matrix	76	
Figure 12 – Recurring events with an exception.....	77	
Figure 13 – Recurring events with a special day	78	
Figure 14 – SpecialDaysSchedule example.....	81	
Figure 15 – Example of special day with time part.....	81	
Figure 16 – Schedule states	98	
Table 1 – Defined namespaces in this document	16	
Table 2 – Referenced namespaces (with prefix).....	16	
Table 3 – GetServiceCapabilities command	19	
Table 4 – GetCredentialInfo command	23	
Table 5 – GetCredentialInfoList command	24	
Table 6 – GetCredentials command	25	
Table 7 – GetCredentialList command	26	
Table 8 – CreateCredential command	27	
Table 9 – SetCredential command	29	
Table 10 – ModifyCredential command	31	
Table 11 – DeleteCredential command	32	
Table 12 – GetCredentialState command.....	32	
Table 13 – EnableCredential command.....	33	
Table 14 – DisableCredential command	33	

Table 15 – ResetAntipassbackViolation command	34
Table 16 – GetSupportedFormatTypes command.....	34
Table 17 – GetCredentialIdentifiers command.....	35
Table 18 – SetCredentialIdentifier command.....	35
Table 19 – DeleteCredentialIdentifier command.....	36
Table 20 – GetCredentialAccessProfiles command	36
Table 21 – SetCredentialAccessProfiles command	37
Table 22 – DeleteCredentialAccessProfiles command.....	38
Table 23 – GetServiceCapabilities command	41
Table 24 – GetAccessProfileInfo command.....	43
Table 25 – GetAccessProfileInfoList command	44
Table 26 – GetAccessProfiles command	45
Table 27 – GetAccessProfileList command	46
Table 28 – CreateAccessProfile command	47
Table 29 – SetAccessProfile command	48
Table 30 – ModifyAccessProfile command	49
Table 31 – DeleteAccessProfile command	50
Table 32 – Example of schedule state to security level mapping	51
Table 33 – GetServiceCapabilities command	53
Table 34 – GetAuthenticationProfileInfo command	56
Table 35 – GetAuthenticationProfileInfoList command	57
Table 36 – GetAuthenticationProfiles command	58
Table 37 – GetAuthenticationProfileList command	59
Table 38 – CreateAuthenticationProfile command	60
Table 39 – SetAuthenticationProfile command	61
Table 40 – ModifyAuthenticationProfile command	62
Table 41 – DeleteAuthenticationProfile command	63
Table 42 – GetSecurityLevelInfo command	66
Table 43 – GetSecurityLevelInfoList command.....	67
Table 44 – GetSecurityLevels command	68
Table 45 – GetSecurityLevelList command	69
Table 46 – CreateSecurityLevel command	70
Table 47 – SetSecurityLevel command	71
Table 48 – ModifySecurityLevel command	72
Table 49 – DeleteSecurityLevel command	72
Table 50 – GetServiceCapabilities command	79
Table 51 – GetScheduleInfo command.....	83
Table 52 – GetScheduleInfoList command	84
Table 53 – GetSchedules command.....	85
Table 54 – GetScheduleList command	86
Table 55 – CreateSchedule command.....	87
Table 56 – SetSchedule command.....	88
Table 57 – ModifySchedule command.....	89

Table 58 – DeleteSchedule command	89
Table 59 – GetSpecialDayGroupInfo command	91
Table 60 – GetSpecialDayGroupInfoList command	92
Table 61 – GetSpecialDayGroups command	93
Table 62 – GetSpecialDayGroupList command	94
Table 63 – CreateSpecialDayGroup command	95
Table 64 – SetSpecialDayGroup command	96
Table 65 – ModifySpecialDayGroup command	97
Table 66 – DeleteSpecialDayGroup command	97
Table 67 – GetScheduleState command	99
Table B.1 – Access point interface requirements.....	175
Table B.2 – Indication and annunciation requirements	176
Table B.3 – Recognition requirements	179
Table B.4 – Duress signalling requirements	180
Table B.5 – Overriding requirements.....	181
Table B.6 – System self protection requirements	181

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ALARM AND ELECTRONIC SECURITY SYSTEMS –

Part 11-33: Electronic access control systems – Access control configuration based on Web services

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.

IEC 60839-11-33 has been prepared by IEC technical committee 79: Alarm and electronic security systems. It is an International Standard.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
79/646/FDIS	79/648/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

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.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

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

IMPORTANT – The "colour inside" logo on the cover page of this document 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 document makes it possible to build an alarm and electronic security system with clients, typically a monitoring console, and devices, typically an access control unit, from different manufacturers using common and well defined interfaces.

The document specifies only the data and control flow between a client and the services without reference to any physical device as the services required to implement a compliant electronic access control system (EACS) are not necessarily implemented on a single device, i.e. all services can be run on a control panel, event aggregator software on PC, etc.

This document does not define internal communication between an access control unit and its components if they are implemented on a single device.

This document is based upon work done by the ONVIF open industry forum. The ONVIF Credential specification, ONVIF Access Rules specification, ONVIF Authentication Behaviour specification and ONVIF Schedule specification are compatible with this document.

This document is accompanied by a set of computer readable interface definitions (see Annex A):

- credential service WSDL, see Clause A.1;
- access rules service WSDL, see Clause A.2;
- authentication behaviour service WSDL, see Clause A.3;
- schedule service WSDL, see Clause A.4.

Due to the differences in terminology used in IEC 60839-11-1:2013 and IEC 60839-11-2:2014 and the ONVIF specification that this part of IEC 60839 is based on, a reader should take special notice of the terms and definitions clause.

Additional services needed for monitoring of doors and access points (portal sides) are outside the scope of this document. These services are covered by IEC 60839-11-32.

ALARM AND ELECTRONIC SECURITY SYSTEMS –

Part 11-33: Electronic access control systems – Access control configuration based on Web services

1 Scope

This part of IEC 60839 defines the Web services interface for electronic access control systems. This includes listing electronic access control system components, their logical composition, monitoring their states and controlling them. It also includes a mapping of mandatory and optional requirements in accordance with IEC 60839-11-1:2013, as covered by Annex B.

This document applies to physical security only. Physical security prevents unauthorized personnel, attackers or accidental intruders from physically accessing a building, room, etc.

Web services usage and device management functionality are outside the scope of this document. Refer to IEC 60839-11-31:2016 for more information.

This document does not in any way limit a manufacturer to add other protocols or extend the protocol defined here. For rules on how to accomplish this, refer to IEC 60839-11-31:2016.

2 Normative references

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.

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

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

IEC 60839-11-31:2016, *Alarm and electronic security systems – Part 11-31: Electronic access control systems – Core interoperability protocol based on Web services*

IEC 60839-11-32:2016, *Alarm and electronic security systems – Part 11-32: Electronic access control systems – Access control monitoring based on Web services*

ISO 16484-5:2017, *Building automation and control systems (BACS) – Part 5: Data communication protocol*

RFC 5545, *Internet Calendaring and Scheduling Core Object Specification (iCalendar)*, (available at <https://tools.ietf.org/html/rfc5545>)

RFC 5234, *Augmented BNF for Syntax Specifications: ABNF*, (available at <https://tools.ietf.org/html/rfc5234>)