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IEC 62682

Edition 2.0 2022-12
COMMENTED VERSION

INTERNATIONAL STANDARD



Management of alarm systems for the process industries

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 13.320; 25.040.40

ISBN 978-2-8322-6270-2

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MANAGEMENT OF ALARM SYSTEMS FOR THE PROCESS INDUSTRIES

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.
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This commented version (CMV) of the official standard IEC 62682:2022 edition 2.0 allows the user to identify the changes made to the previous IEC 62682:2014 edition 1.0. Furthermore, comments from IEC SC 65A experts are provided to explain the reasons of the most relevant changes, or to clarify any part of the content.

A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text. Experts' comments are identified by a blue-background number. Mouse over a number to display a pop-up note with the comment.

This publication contains the CMV and the official standard. The full list of comments is available at the end of the CMV.

IEC 62682 has been prepared by subcommittee 65A: System aspects, of IEC technical committee 65: Industrial-process measurement, control and automation. It is an International Standard.

This second edition cancels and replaces the first edition published in 2014. This edition constitutes a technical revision.

This edition includes minor technical changes with respect to the previous edition, based on changes to ANSI/ISA-18.2:2016. These include the inclusion of packaged systems in the scope (Clause 1), definitions (Clause 3) and alarm system requirements specification (Clause 7). There are changes to improve clarity in wording throughout the document.

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

Draft	Report on voting
65A/1046/FDIS	65A/1064/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.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://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

Purpose

This International Standard addresses the development, design, installation, and management of alarm systems in the process industries. Alarm management includes multiple work processes throughout the alarm-~~system~~ management life cycle. This document defines the terminology and models to develop an alarm system, and it defines the work processes recommended to effectively maintain the alarm-~~system~~ throughout the life cycle. Ineffective alarm systems have often been cited as contributing factors in the investigation reports following major process incidents. This document is intended to provide a methodology that will result in the improved safety, quality, and operation in the process industries.

The first edition of this document was adapted from ANSI/ISA-18.2-2009, *Management of Alarm Systems for the Process Industries*, an International Society of Automation (ISA) standard, and with due consideration of other guidance documents that have been developed throughout industry. This second edition has incorporated some changes made in ANSI/ISA-18.2-2016.

This document is not the first effort to define terminology and practices for effective alarm systems. In 1999 the Engineering Equipment and Materials Users' Association (EEMUA) issued Publication 191, *Alarm Systems: A Guide to Design, Management and Procurement*, with the 2nd edition published in 2007 and the 3rd edition published in 2013. In 2003 the User Association of Process Control Technology in Chemical and Pharmaceutical Industries (NAMUR) issued worksheet NA 102, *Alarm Management*, which was updated in 2008. During the development and maintenance of this document, every effort was made to keep terminology and practices consistent with the previous work of these respected organizations and committees.

This document provides requirements for alarm management and alarm systems. It is intended for those individuals and organizations that

- a) manufacture or implement embedded alarm systems,
- b) manufacture or ~~implement~~ install third-party alarm system software,
- c) design or install alarm systems,
- d) operate and ~~for~~ maintain alarm systems, and
- e) audit or assess alarm system performance.

Organization

This document is organized in ~~two~~ parts. ~~The first part is introductory in nature, (Clauses 1 to 5). The main body of the standard follows (Clauses 6 to 18).~~

The first part (Clause 1 to Clause 3) are normative without any mandatory requirements. Clause 4 contains mandatory requirements. Clause 5 is normative without any mandatory requirements. The main body of the standard (Clause 6 to Clause 18), describes mandatory requirements and non-mandatory recommendations.

Within this document, mandatory requirements are stated with "shall", non-mandatory recommendations are stated with "should", and permissible requirements are stated with "may". The phrase "is required" indicates the requirement has been stated previously in the document.

MANAGEMENT OF ALARM SYSTEMS FOR THE PROCESS INDUSTRIES

1 Scope

1.1 General applicability

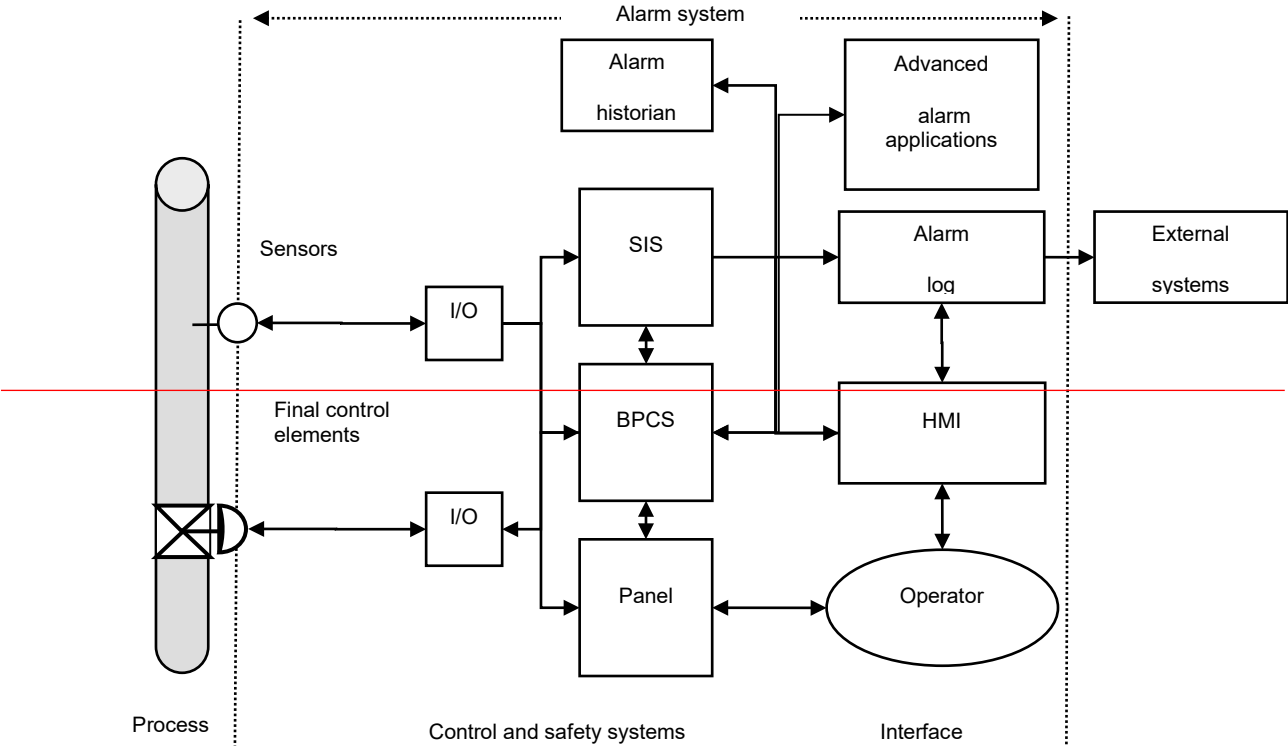
This document specifies general principles and processes for the ~~lifecycle~~ management of alarm systems based on ~~programmable electronic controller and computer-based human-machine interface (HMI) technology~~ controls system and human-machine interfaces (HMI) **1** for facilities in the process industries. It covers all alarms to be presented to the operator through the control system, which includes alarms from basic process control systems, annunciators ~~panels~~, packaged systems, and safety instrumented systems, ~~fire and gas systems, and emergency response systems~~ **2**.

The practices in this document are applicable to continuous, batch, and discrete processes. There can be differences in implementation to meet the specific needs based on process type.

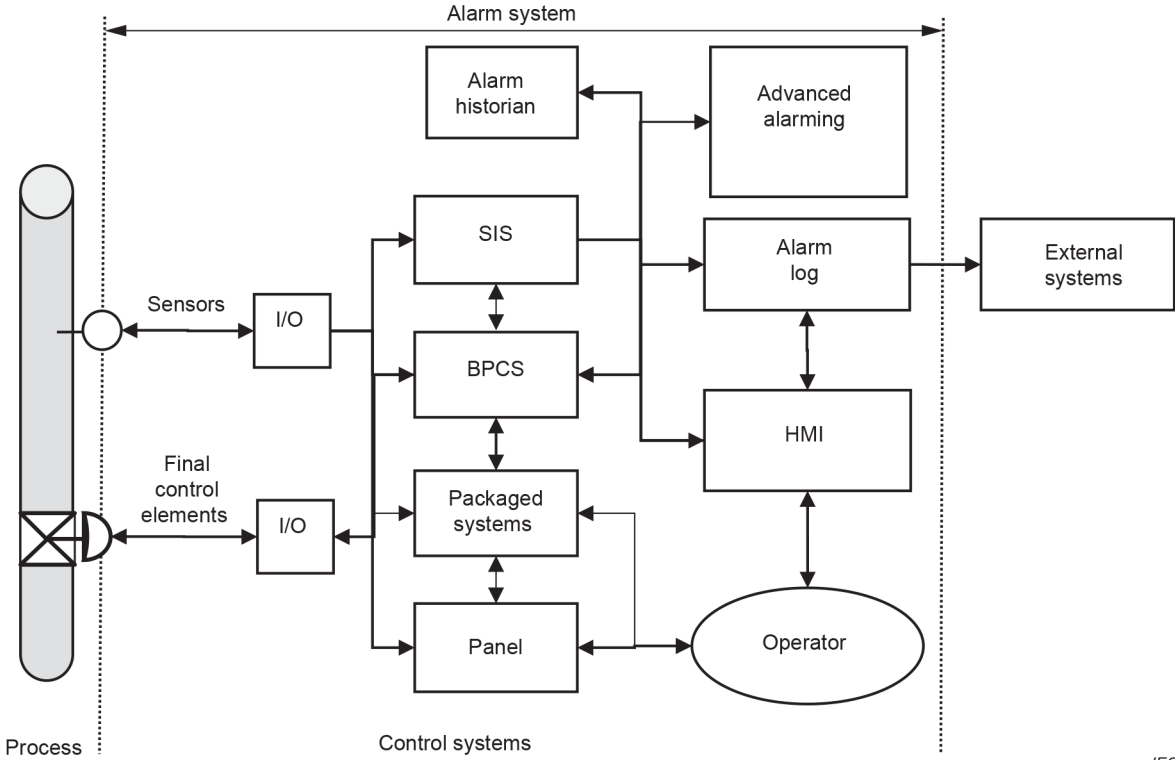
~~In jurisdictions where the governing authorities (e.g., national, federal, state, province, county, city) have established process safety design, process safety management, or other requirements, in addition to the requirements of this standard, these should be taken into consideration.~~ **3**

The primary function within the alarm system is to notify operators of abnormal process conditions or equipment malfunctions and support the response. The alarm systems can include both the basic process control system (BPCS) and the safety instrumented system (SIS), each of which uses measurements of process conditions and logic to generate alarms. Figure 1 illustrates the concepts of alarm and response dataflow through the alarm system. The alarm system also includes a mechanism for communicating the alarm information to the operator via an HMI, usually a computer screen or an annunciator ~~panel~~. Additional functions of the alarm system are an alarm and event log, an alarm historian, and the generation of performance metrics for the alarm system. There are external systems that can use the data from the alarm system.

Figure 1 is not intended to represent physical wiring. **4**



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NOTE 1 Packaged systems (e.g., refrigeration machines) can be included in the control system.

NOTE 2 Panel can refer to annunciator panel or other panel types.

NOTE 3 The lines are intended to represent data flow and not physical wiring. **5**

Figure 1 – Alarm system dataflow

1.2 Exclusions and inclusions

1.2.1 Operators

The functions of the operator receiving and responding to alarms are included in the scope of this document. Management of operators is excluded from the scope of this document.

1.2.2 Process sensors and final control elements

The alarms ~~from~~ implemented in sensors and final control elements are included in the scope of this document. ~~Process sensors and final control elements are shown in Figure 1 to indicate alarms can be implemented in these devices.~~ **6** The design and management of process sensors and final control elements are excluded from the scope of this document.

1.2.3 Annunciators

The integration of annunciators into an alarm system is included in the scope of this document. The specification and design of annunciators is excluded from the scope of this document.

1.2.4 Human machine interface

The appearance of alarms in the HMI and functions of alarm related displays are included in the scope of this document. The design and maintenance of the HMI are excluded from this document.

NOTE ANSI/ISA-101.01-2015 provides information on HMI design and maintenance.

1.2.5 Safety instrumented systems

The alarms ~~from~~ implemented in a safety instrumented system are included in the scope of this document. ~~The safety instrumented system (SIS) is shown in Figure 1 to indicate alarms can be implemented in these devices.~~ **7** The design and management of safety instrumented systems are excluded from this document.

NOTE IEC 61511-1 provides information on safety instrumented systems.

~~The alarms and diagnostics from fire detection and protective systems or security systems that are presented to the operator through the control system are included in the scope of this standard. Fire detection and protective systems and security systems are excluded from the scope of this standard.~~

1.2.6 Fire and gas detection and protective systems

The alarms from fire and gas detection and protective systems presented to the operator through the control system are included in the scope of this document. The design and management of fire and gas detection and protective systems is excluded from the scope of this document.

1.2.7 Security systems

The alarms from security systems presented to the operator through the control system are included in the scope of this document. The design and management of security systems is excluded from the scope of this document.

1.2.8 Packaged systems

The alarms from packaged systems presented to the operator through the control system are included in the scope of this document. The design and management of packaged systems is excluded from the scope of this document.

1.2.9 Event data

The indication and processing of analog, discrete, and event data other than alarm indications are excluded from the scope of this document. The analysis techniques using both alarm and event data are excluded from the scope of this document.

1.2.10 Alarm identification methods

Required methods of alarm identification are not specified in this document. Examples of alarm identification methods are listed.

1.2.11 Management of change

A specific management of change (MOC) procedure is not included in this document. Some requirements and recommendations for an MOC procedure are included.

1.2.12 Purchase specification

This document is not intended to be used as an alarm system purchase specification.

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.~~

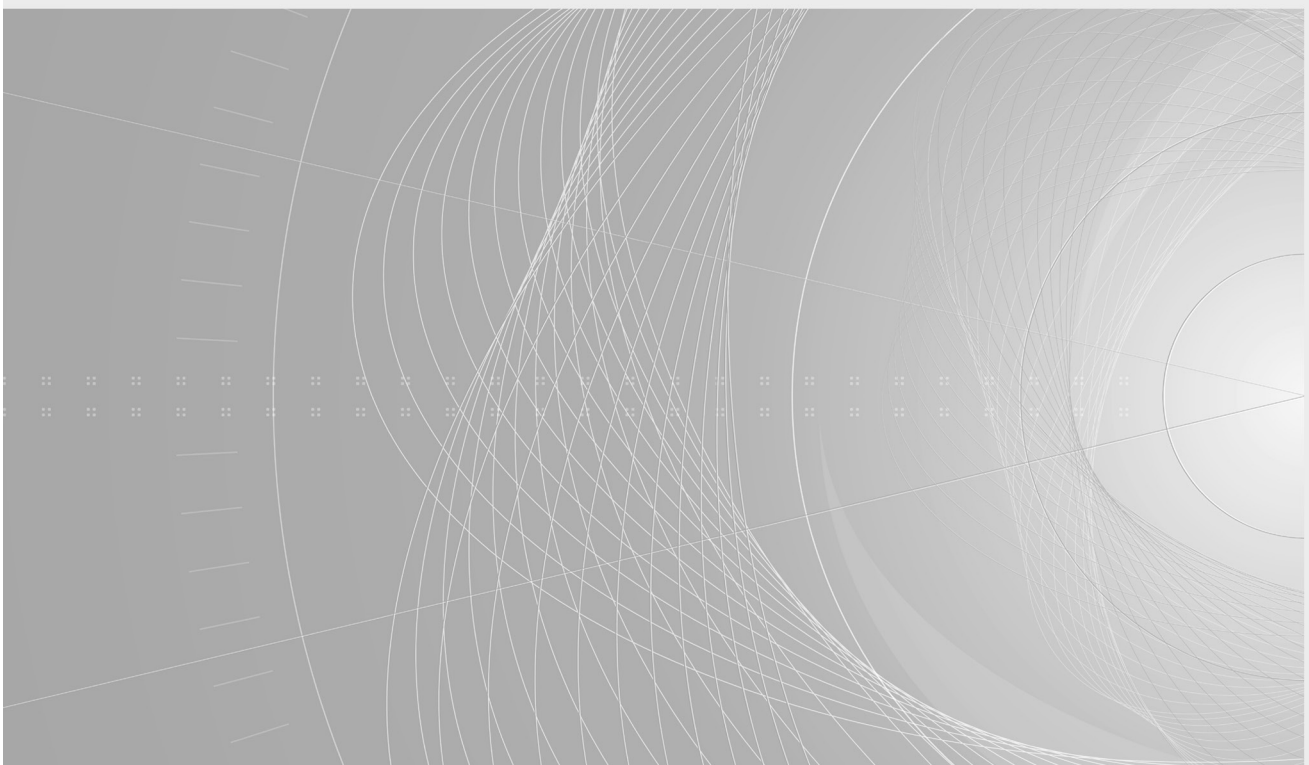
There are no normative references in this document.

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Management of alarm systems for the process industries

Gestion de systèmes d'alarme dans les industries de transformation



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MANAGEMENT OF ALARM SYSTEMS FOR THE PROCESS INDUSTRIES

FOREWORD

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IEC 62682 has been prepared by subcommittee 65A: System aspects, of IEC technical committee 65: Industrial-process measurement, control and automation. It is an International Standard.

This second edition cancels and replaces the first edition published in 2014. This edition constitutes a technical revision.

This edition includes minor technical changes with respect to the previous edition, based on changes to ANSI/ISA-18.2:2016. These include the inclusion of packaged systems in the scope (Clause 1), definitions (Clause 3) and alarm system requirements specification (Clause 7). There are changes to improve clarity in wording throughout the document.

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

Draft	Report on voting
65A/1046/FDIS	65A/1064/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.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://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.

INTRODUCTION

This International Standard addresses the development, design, installation, and management of alarm systems in the process industries. Alarm management includes multiple work processes throughout the alarm management life cycle. This document defines the terminology and models to develop an alarm system, and it defines the work processes recommended to effectively maintain the alarm throughout the life cycle. Ineffective alarm systems have often been cited as contributing factors in the investigation reports following major process incidents. This document is intended to provide a methodology that will result in the improved safety, quality, and operation in the process industries.

The first edition of this document was adapted from ANSI/ISA-18.2-2009, *Management of Alarm Systems for the Process Industries*, an International Society of Automation (ISA) standard, and with due consideration of other guidance documents that have been developed throughout industry. This second edition has incorporated some changes made in ANSI/ISA-18.2-2016.

This document is not the first effort to define terminology and practices for effective alarm systems. In 1999 the Engineering Equipment and Materials Users' Association (EEMUA) issued Publication 191, *Alarm Systems: A Guide to Design, Management and Procurement*, with the 2nd edition published in 2007 and the 3rd edition published in 2013. In 2003 the User Association of Process Control Technology in Chemical and Pharmaceutical Industries (NAMUR) issued worksheet NA 102, *Alarm Management*, which was updated in 2008. During the development and maintenance of this document, every effort was made to keep terminology and practices consistent with the previous work of these respected organizations and committees.

This document provides requirements for alarm management and alarm systems. It is intended for those individuals and organizations that

- a) manufacture or implement embedded alarm systems,
- b) manufacture or install third-party alarm system software,
- c) design or install alarm systems,
- d) operate and maintain alarm systems, and
- e) audit or assess alarm system performance.

This document is organized in parts. The first part (Clause 1 to Clause 3) are normative without any mandatory requirements. Clause 4 contains mandatory requirements. Clause 5 is normative without any mandatory requirements. The main body of the standard (Clause 6 to Clause 18), describes mandatory requirements and non-mandatory recommendations.

Within this document, mandatory requirements are stated with "shall", non-mandatory recommendations are stated with "should", and permissible requirements are stated with "may". The phrase "is required" indicates the requirement has been stated previously in the document.

MANAGEMENT OF ALARM SYSTEMS FOR THE PROCESS INDUSTRIES

1 Scope

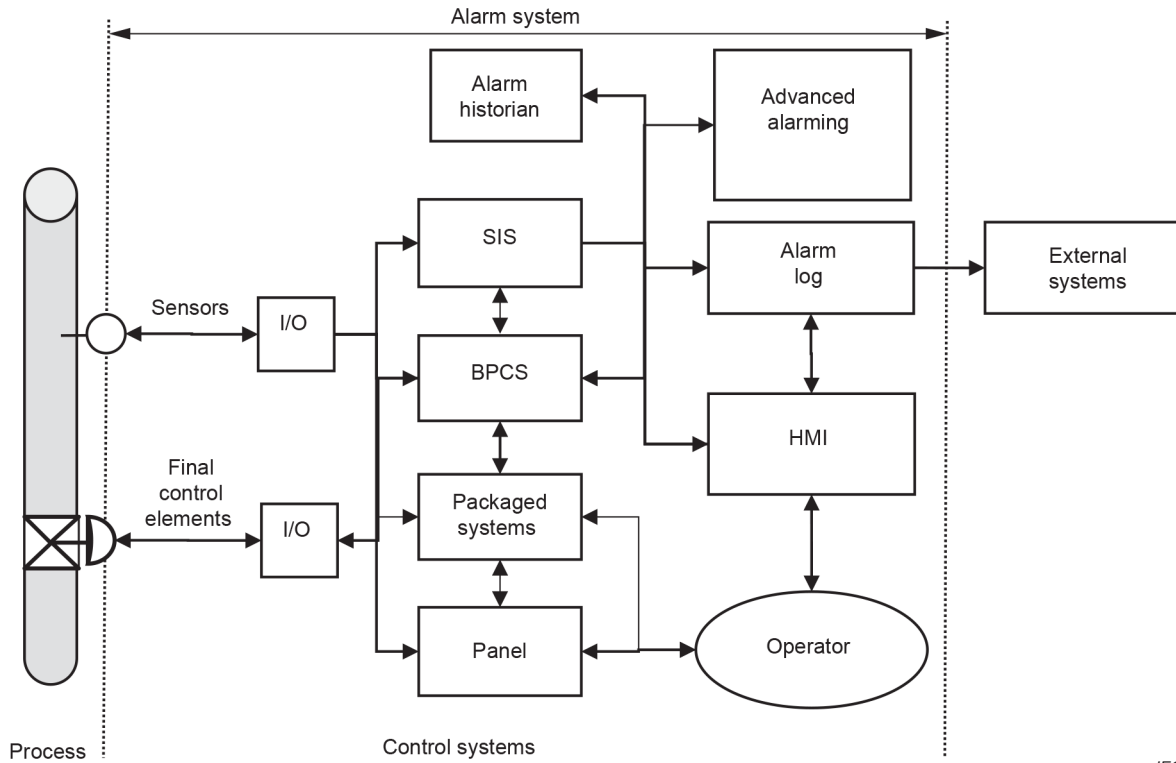
1.1 General applicability

This document specifies general principles and processes for the management of alarm systems based on controls system and human-machine interfaces (HMI) for facilities in the process industries. It covers all alarms to be presented to the operator through the control system, which includes alarms from basic process control systems, annunciators, packaged systems, and safety instrumented systems.

The practices in this document are applicable to continuous, batch, and discrete processes. There can be differences in implementation to meet the specific needs based on process type.

The primary function within the alarm system is to notify operators of abnormal process conditions or equipment malfunctions and support the response. The alarm systems can include both the basic process control system (BPCS) and the safety instrumented system (SIS), each of which uses measurements of process conditions and logic to generate alarms. Figure 1 illustrates the concepts of alarm and response dataflow through the alarm system. The alarm system also includes a mechanism for communicating the alarm information to the operator via an HMI, usually a computer screen or an annunciator. Additional functions of the alarm system are an alarm and event log, an alarm historian, and the generation of performance metrics for the alarm system. There are external systems that can use the data from the alarm system.

Figure 1 is not intended to represent physical wiring.



IEC

NOTE 1 Packaged systems (e.g., refrigeration machines) can be included in the control system.

NOTE 2 Panel can refer to annunciator panel or other panel types.

NOTE 3 The lines are intended to represent data flow and not physical wiring.

Figure 1 – Alarm system dataflow

1.2 Exclusions and inclusions

1.2.1 Operators

The functions of the operator receiving and responding to alarms are included in the scope of this document. Management of operators is excluded from the scope of this document.

1.2.2 Process sensors and final control elements

The alarms implemented in sensors and final control elements are included in the scope of this document. The design and management of process sensors and final control elements are excluded from the scope of this document.

1.2.3 Annunciators

The integration of annunciators into an alarm system is included in the scope of this document. The specification and design of annunciators is excluded from the scope of this document.

1.2.4 Human machine interface

The appearance of alarms in the HMI and functions of alarm related displays are included in the scope of this document. The design and maintenance of the HMI are excluded from this document.

NOTE ANSI/ISA-101.01-2015 provides information on HMI design and maintenance.

1.2.5 Safety instrumented systems

The alarms implemented in a safety instrumented system are included in the scope of this document. The design and management of safety instrumented systems are excluded from this document.

NOTE IEC 61511-1 provides information on safety instrumented systems.

1.2.6 Fire and gas detection and protective systems

The alarms from fire and gas detection and protective systems presented to the operator through the control system are included in the scope of this document. The design and management of fire and gas detection and protective systems is excluded from the scope of this document.

1.2.7 Security systems

The alarms from security systems presented to the operator through the control system are included in the scope of this document. The design and management of security systems is excluded from the scope of this document.

1.2.8 Packaged systems

The alarms from packaged systems presented to the operator through the control system are included in the scope of this document. The design and management of packaged systems is excluded from the scope of this document.

1.2.9 Event data

The indication and processing of analog, discrete, and event data other than alarm indications are excluded from the scope of this document. The analysis techniques using both alarm and event data are excluded from the scope of this document.

1.2.10 Alarm identification methods

Required methods of alarm identification are not specified in this document. Examples of alarm identification methods are listed.

1.2.11 Management of change

A specific management of change (MOC) procedure is not included in this document. Some requirements and recommendations for an MOC procedure are included.

1.2.12 Purchase specification

This document is not intended to be used as an alarm system purchase specification.

2 Normative references

There are no normative references in this document.

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

GESTION DE SYSTÈMES D'ALARME DANS LES INDUSTRIES DE TRANSFORMATION

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Cette deuxième édition annule et remplace la première édition parue en 2014. Cette édition constitue une révision technique.

Cette édition inclut des modifications techniques mineures par rapport à l'édition précédente, en se basant sur les modifications de l'ANSI/ISA-18.2:2016. Elles comprennent l'ajout de systèmes conditionnés dans le domaine d'application (Article 1), de définitions (Article 3) et la spécification des exigences relatives aux systèmes d'alarme (Article 7). Ces modifications ont été apportées pour améliorer la clarté de la formulation dans l'ensemble du document.

Le texte de cette Norme internationale est issu des documents suivants:

Projet	Rapport de vote
65A/1046/FDIS	65A/1064/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous www.iec.ch/members_experts/refdocs. Les principaux types de documents développés par l'IEC sont décrits plus en détail sous www.iec.ch/standardsdev/publications.

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- reconduit,
- supprimé,
- remplacé par une édition révisée, ou
- amendé.

INTRODUCTION

La présente Norme internationale traite du développement, de la conception, de l'installation et de la gestion de systèmes d'alarme dans les industries de transformation. La gestion des alarmes inclut plusieurs processus de travail pendant tout le cycle de vie de la gestion d'alarme. Le présent document définit la terminologie et les modèles pour développer un système d'alarme, il définit aussi les processus de travail recommandés pour maintenir efficacement l'alarme tout au long du cycle de vie. Des systèmes d'alarme inefficaces ont souvent été cités dans les rapports d'investigation comme des facteurs ayant contribué à des incidents de processus majeurs. Le présent document vise à fournir une méthodologie qui conduit à une sécurité, qualité et exploitation améliorées dans les industries de transformation.

La première édition du présent document a été adaptée de la norme ISA (International Society of Automation) ANSI/ISA-18.2-2009 *Management of Alarm Systems for the Process Industries*, en tenant pleinement compte d'autres documents d'orientation qui ont été élaborés dans l'ensemble du secteur. La présente deuxième édition incorpore certaines modifications apportées à l'ANSI/ISA-18.2-2016.

Le présent document n'est pas le premier effort visant à définir la terminologie et les pratiques pour des systèmes d'alarme efficaces. En 1999, l'EEMUA (Engineering Equipment and Materials Users' Association) a produit la Publication 191, *Alarm Systems: A Guide to Design, Management and Procurement*, avec la deuxième édition parue en 2007 et la troisième édition parue en 2013. En 2003, la NAMUR (User Association of Process Control Technology in Chemical and Pharmaceutical Industries) a publié la feuille de travail NA 102, *Alarm Management*, qui a été mise à jour en 2008. Au cours du développement et de la maintenance du présent document, tous les efforts ont été faits pour maintenir la terminologie et les pratiques cohérentes avec le travail antérieur de ces organisations et comités respectés.

Le présent document fournit les exigences relatives à la gestion des alarmes et aux systèmes d'alarme. Il est destiné aux personnes et aux organisations qui:

- a) fabriquent ou mettent en œuvre des systèmes d'alarme intégrés;
- b) fabriquent ou installent des logiciels pour systèmes d'alarme de tiers;
- c) conçoivent ou installent des systèmes d'alarme;
- d) exploitent et maintiennent des systèmes d'alarme; et
- e) auditent ou évaluent les performances des systèmes d'alarme.

Le présent document est organisé en plusieurs parties. La première partie (Article 1 à Article 3) est normative sans aucune exigence obligatoire. L'Article 4 contient des exigences obligatoires. L'Article 5 est normatif sans aucune exigence obligatoire. Le corps de la norme (Article 6 à Article 18) fournit les exigences obligatoires et des recommandations non obligatoires.

Dans le présent document, les exigences obligatoires sont indiquées par "doit", les recommandations non obligatoires sont indiquées par "il convient" et les exigences admissibles sont indiquées par "peut". L'expression "est exigé" indique que l'exigence a été énoncée précédemment dans le document.

GESTION DE SYSTÈMES D'ALARME DANS LES INDUSTRIES DE TRANSFORMATION

1 Domaine d'application

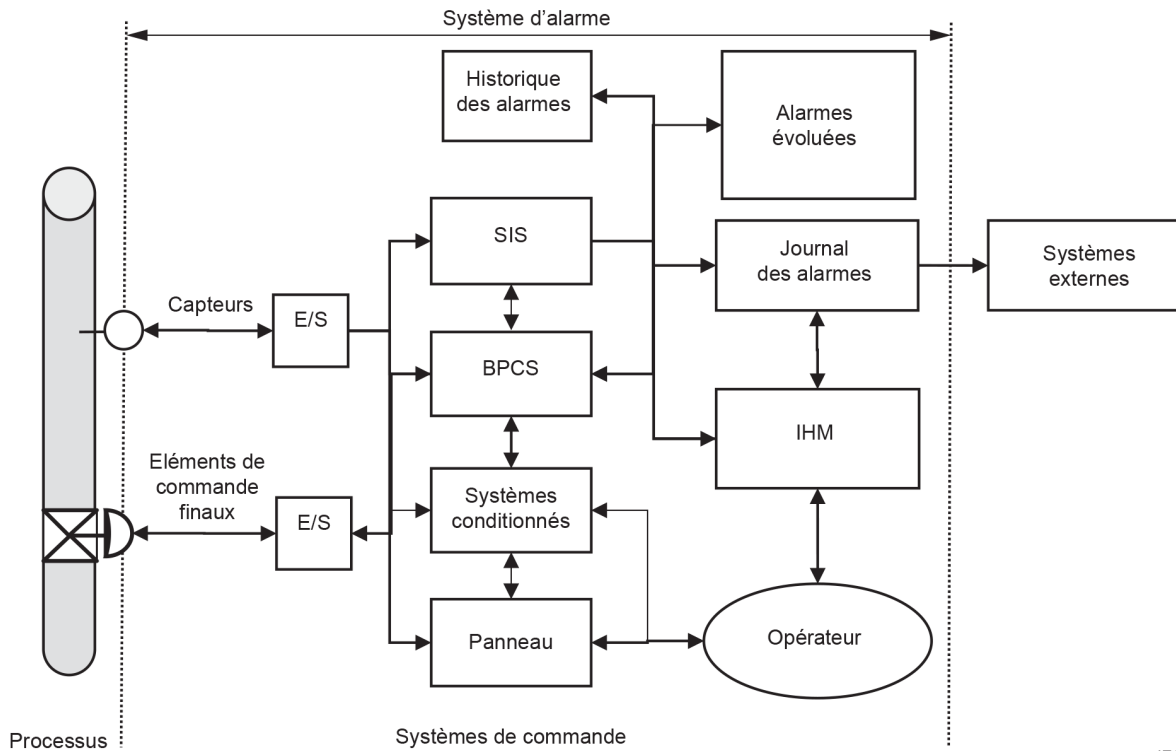
1.1 Applicabilité générale

Le présent document spécifie les principes et les processus généraux pour la gestion de systèmes d'alarme basés sur des systèmes de commande et des interfaces homme-machine (IHM) pour des moyens dans les industries de transformation. Il couvre toutes les alarmes présentées à l'opérateur par le système de commande, qui incluent les systèmes de commande de processus de base, les annonceurs, les systèmes conditionnés et les systèmes instrumentés de sécurité.

Les pratiques dans le présent document sont applicables aux processus continus, aux processus par lots et aux processus discrets. Il peut y avoir des différences de mise en œuvre pour satisfaire aux besoins spécifiques en fonction du type de processus.

La fonction première du système d'alarme est de notifier aux opérateurs les conditions de processus anormales ou les dysfonctionnements du matériel et d'aider à leur résolution. Les systèmes d'alarme peuvent inclure tant le système de commande de processus de base (BPCS) que le système instrumenté de sécurité (SIS), qui utilisent chacun les mesures des conditions de processus et une logique pour produire des alarmes. La Figure 1 représente les concepts d'alarme et de flux de données de réponse dans le système d'alarme. Le système d'alarme inclut également un mécanisme pour communiquer les informations d'alarme à l'opérateur par l'intermédiaire d'une IHM, habituellement un écran de calculateur ou un annonceur. Les fonctions supplémentaires du système d'alarme consistent en un journal des alarmes et des événements, un historique des alarmes et la production d'une métrique de performances pour le système d'alarme. Il existe des systèmes externes qui peuvent utiliser les données issues du système d'alarme.

La Figure 1 ne représente pas le câblage physique.



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NOTE 1 Les systèmes conditionnés (par exemple machines frigorifiques) peuvent être inclus dans le système de commande.

NOTE 2 Le terme "tableau" peut faire référence à un tableau annonciateur ou à d'autres types de tableaux.

NOTE 3 Les lignes sont destinées à représenter le flux de données et non le câblage physique.

Figure 1 – Flux de données du système d'alarme

1.2 Exclusions et inclusions

1.2.1 Opérateurs

Les fonctions de l'opérateur recevant des alarmes et y répondant sont incluses dans le domaine d'application du présent document. La gestion des opérateurs est exclue du domaine d'application du présent document.

1.2.2 Capteurs de processus et éléments de commande finaux

Les alarmes mises en œuvre dans des capteurs et des éléments finaux de commande sont incluses dans le domaine d'application du présent document. La conception et la gestion des capteurs de processus et des éléments finaux de commande sont exclues du domaine d'application du présent document.

1.2.3 Annonceurs

L'intégration d'annonceurs dans un système d'alarme est incluse dans le domaine d'application du présent document. La spécification et la conception d'annonceurs sont exclues du domaine d'application du présent document.

1.2.4 Interface homme-machine

L'aspect des alarmes dans l'IHM et les fonctions d'alarme relatives aux affichages sont inclus dans le domaine d'application du présent document. La conception et la maintenance de l'IHM sont exclues du présent document.

NOTE L'ANSI/ISA-101.01-2015 fournit des informations sur la conception et la maintenance de l'IHM.

1.2.5 Systèmes instrumentés de sécurité

Les alarmes mises en œuvre dans un système instrumenté de sécurité sont incluses dans le domaine d'application du présent document. La conception et la gestion des systèmes instrumentés de sécurité sont exclues du présent document.

NOTE L'IEC 61511-1 fournit des informations sur les systèmes instrumentés de sécurité.

1.2.6 Systèmes de détection et de protection contre l'incendie et le gaz

Les alarmes issues des systèmes de détection et de protection contre l'incendie et le gaz présentées à l'opérateur par le système de commande sont incluses dans le domaine d'application du présent document. La conception et la gestion des systèmes de détection et de protection contre l'incendie et le gaz sont exclues du domaine d'application du présent document.

1.2.7 Systèmes de sécurité

Les alarmes issues des systèmes de sécurité présentées à l'opérateur par le système de commande sont incluses dans le domaine d'application du présent document. La conception et la gestion des systèmes de sécurité sont exclues du domaine d'application du présent document.

1.2.8 Systèmes conditionnés

Les alarmes issues des systèmes conditionnés présentées à l'opérateur par le système de commande sont incluses dans le domaine d'application du présent document. La conception et la gestion des systèmes conditionnés sont exclues du domaine d'application du présent document.

1.2.9 Données d'événement

L'indication et le traitement des données analogiques, discrètes et événementielles autres que les indications d'alarme sont exclus du domaine d'application du présent document. Les techniques d'analyse utilisant des données d'alarme et d'événement sont exclues du domaine d'application du présent document.

1.2.10 Méthodes d'identification des alarmes

Des méthodes exigées d'identification d'alarme ne sont pas spécifiées dans le présent document. Des exemples de méthodes d'identification des alarmes sont énumérés.

1.2.11 Gestion des changements

Une procédure spécifique de gestion des changements (MOC) n'est pas incluse dans le présent document. Un certain nombre d'exigences et de recommandations relatives à une procédure MOC sont incluses.

1.2.12 Spécification d'achat

Le présent document n'est pas destiné à être utilisé comme une spécification d'achat de systèmes d'alarme.

2 Références normatives

Le présent document ne contient aucune référence normative.