

# SVENSK STANDARD

## SS-EN 16334:2014

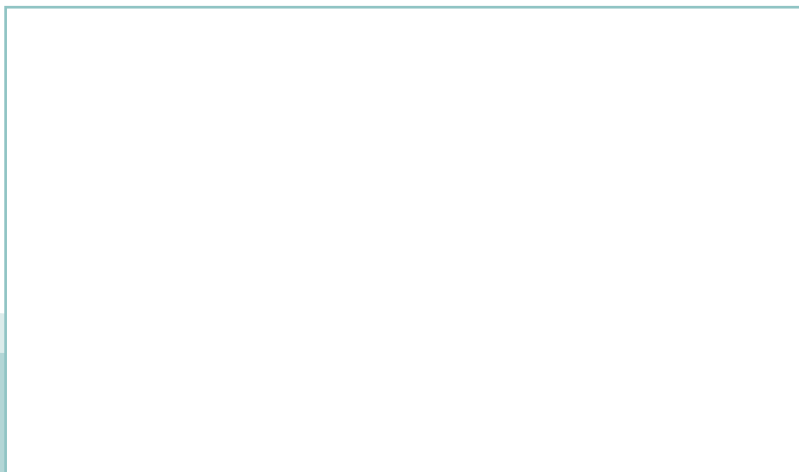


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### **Järnvägar – Passageraralarm – Systemkrav**

### **Railway applications – Passenger Alarm System – System requirements**



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Denna standard ersätter SS-EN 15327-1:2008, utgåva 1.

The European Standard EN 16334:2014 has the status of a Swedish Standard. This document contains the official version of EN 16334:2014.

This standard supersedes the Swedish Standard SS-EN 15327-1:2008, edition 1.

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EUROPEAN STANDARD

**EN 16334**

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2014

ICS 13.320; 45.060.20

Supersedes EN 15327-1:2008

English Version

## Railway applications - Passenger Alarm System - System requirements

Applications ferroviaires - Système d'alarme passager -  
Prescriptions relatives au système

Bahnanwendungen - Fahrgastalarmsystem -  
Systemanforderungen

This European Standard was approved by CEN on 22 May 2014.

CEN 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 CEN 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 CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## Foreword

This document (EN 16334:2014) has been prepared by Technical Committee CEN/TC 256 "Railway applications", the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2015 and conflicting national standards shall be withdrawn at the latest by February 2015.

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

This document supersedes EN 15327-1:2008.

This document has been prepared under a mandate given to CEN/CENELEC/ETSI by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directives 2008/57/EC.

For relationship with EU Directive 2008/57/EC, see informative Annex ZA, which is an integral part of this document.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



## 1 Scope

This European Standard specifies the characteristics of the Passenger Alarm System. The aim of the Passenger Alarm System is to:

- a) permit passengers in case of emergency situations to inform the driver;
- b) permit the driver to keep the train moving or to stop the train at a safe location;
- c) stop the train automatically:
  - 1) at a platform,
  - 2) if there is no acknowledgement by the driver.

This European Standard covers the Passenger Alarm System (PAS) fitted to the passenger carrying rolling stock and specifies:

- the functional requirements for an alarm triggered in the driving cab (Clause 6);
- the communication channel between the driver and passengers or on-board staff (6.4);
- the dynamic analysis of the Passenger Alarm System (Clause 7);
- the requirements for the degraded modes management (Clause 8);
- the safety related requirements (Clause 9);
- requirements for the Passenger Alarm Device and Passenger Alarm Device area (Clause 10).

This European Standard is applicable to rolling stock which are in the field of the Directive 2008/57/EC.

NOTE 1 Existing Passenger Alarm Systems may require modification to work in conjunction with vehicles that comply with this standard.

NOTE 2 Most of the requirements of UIC 541–6 are compliant with this standard.

Other communications systems named 'communication device for passengers' or 'call for aid' in the CR LOC and PAS TSI [1] respectively "Emergency call" or "Call for assistance" in the TSI PRM [3] are not covered by this standard.

NOTE 3 prEN 16683, *Railway applications – Call for aid and communication device – Requirements* covers these aspects.

## 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.

EN 13272, *Railway applications — Electrical lighting for rolling stock in public transport systems*

EN 14478:2005, *Railway applications — Braking — Generic vocabulary*

prEN 16186 (all parts), *Railway applications — Driver's cab*

ISO 3864-1, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs and safety markings*

ISO 3864-4:2011, *Graphical symbols — Safety colours and safety signs — Part 4: Colorimetric and photometric properties of safety sign materials*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 14478:2005 apply.

NOTE The definition for 'passenger alarm' given in EN 14478:2005, 4.9.2.2, is superseded by this document.

#### 3.1

##### **Closed Circuit Television**

##### **CCTV**

on board video recording system

#### 3.2

##### **PAD operated**

handle that is operated when it is manipulated in order to change its mechanical status and therefore to send an information to the PAS

#### 3.3

##### **Passenger Alarm Interface**

##### **PAI**

arrangement of equipment close to each other or one single equipment, which includes:

- passenger alarm device (see Clause 9);
- microphone;
- loudspeaker;
- visual indicators: lights;
- resetting device(s);
- information labels;
- a seal (optional)

#### 3.4

##### **Passenger Alarm Device**

##### **PAD**

interface to the PAS through which the requirement for a defined Passenger Alarm System demand is indicated or initiated by passengers or operating staff

Note 1 to entry: The PAD is sometimes called emergency handle or alarm handle. These short-terms should only be used where misunderstanding is not possible or in descriptions prepared for passengers. In this document, 'handle' is used as a generic term and its design is defined in 10.2.

#### 3.5

##### **standstill**

when the speed of the train has decreased to 3 km/h or less

## 4 Symbols and abbreviated terms

For the purposes of this document, the following symbols and abbreviated terms apply.

<b>CCTV</b>	Closed Circuit Television (see 3.1)
<b>PAI</b>	Passenger Alarm Interface (see 3.3)
<b>PAD</b>	Passenger Alarm Device (see 3.4)
<b>PAS</b>	Passenger Alarm System (see Clause 6)
<b>TCMS</b>	Train Control and Monitoring System

## 5 System overview, architecture and interfaces

An example of the system overview is described in Annex E.

## 6 Functional requirements

### 6.1 General

The aim of the Passenger Alarm System is:

- a) to permit passengers in case of emergency situation to inform the driver;
- b) to permit the driver to keep the train moving or to stop the train at a safe location;
- c) to stop the train automatically:
  - 1) at a platform,
  - 2) if no acknowledgement by the driver.

The mandatory functions that are set out in this clause are for normal mode operations. They are supplemented by additional optional functions which may be incorporated in the PAS. For degraded modes see Clause 8.

### 6.2 Advise the driver (and optionally on board staff members or control centre) of a potential danger

**6.2.1** PAD shall be available for passengers and staff (see Clause 10 for PAD installation requirements).

**6.2.2** The information that at least one PAD has been operated shall be transmitted to the driver.

**6.2.3** An acoustic and flashing visual signal shall be given to the driver when a PAD has been operated. For the duration of signals and triggering conditions see Clause 7.

Colour and frequency of visual and acoustic signals in the driver's cab shall conform to the prEN 16186 series requirements.

**6.2.4** In addition, if remote resetting of PADs is available, an acoustic signal shall be activated for each new activation of a PAD, in accordance with the safety requirements given in Clause 9.

**6.2.5** The maximum permitted delay from any PAD operated and the acoustic and visual signal for the driver is 2 s.