

# COMITÉ EUROPÉEN DES ASSURANCES

SECRETARIAT GENERAL  
3bis, rue de la Chaussée d'Antin F 75009 Paris  
Tél. : +33 1 44 83 11 73 Fax : +33 1 44 83 11 85  
Web : cea.assur.org



DELEGATION A BRUXELLES  
Square de Meeûs, 29 B 1000 Bruxelles  
Tél. : +32 2 547 58 11 Fax : +32 2 547 58 19  
Web : cea.assur.org

## **PROPERTY INSURANCE COMMITTEE Prevention Specifications**

### **Aim-oriented requirements for Alarm Transmission Systems (ATS)**

*CEA 4039: August 2002 (en)*

*Copyright by CEA – 3 bis, rue de la Chaussée d'Antin – 75009 PARIS*

# CEA Theft Section

## Aim-oriented requirements for Alarm Transmission Systems (ATS)

### 1 Scope

This document describes aim-oriented requirements for Alarm Transmission Systems (ATS) which are used for intruder, hold-up and fire alarm systems. The process after presentation of alarm messages, e.g. the starting-up of an intervention or the process of alarm verification, is not in the scope of this document.

### 2 Purpose

The purpose of the document is to define insurer's requirements in relation to ATS to ensure accurate and timely delivery of alarm messages, on the assumption that the external influences likely undermine the correct function of ATS are similar to those identified in the IAS system documents (see doc's Tamper Security, Operational Security of IAS, Security against Natural Environmental Influences, Functional Reliability).

### 3 Terms and definitions

**Alarm Receiving Centre (ARC):** A continuously manned centre to which information concerning the status of one or more alarm systems is reported.

**Alarm Transmission System (ATS):** Equipment and network used to transfer information concerned with the state of one or more alarm systems to one or more ARC's and to display the alarm status or the changed status of alarm systems in response to the receipt of incoming alarm messages.

*Note: The second function of the ATS is in addition to the definition in EN 50136-1-1.*

**Intruder alarm system (IAS):** An alarm system to detect and indicate the presence, entry or attempted entry of an intruder into supervised premises.

**Fire alarm system (FAS):** The group of components which – once arranged in a specified system configuration are capable of detecting, indicating a fire and giving signal for appropriate action.

**Hold-up alarm system (HUAS):** An alarm system providing the means for a user to deliberately generate a hold-up condition.

## **4 Requirements**

### **4.1 Availability**

The availability of the ATS components shall be at least the same as for the components of the IAS (see doc. Functional Reliability); availability of the transmission paths shall be at least 95 % per year (FAS at least 98,5 %).

*Note: Due to the variety of different telecommunication networks in Europe and the different measurement methods of the availability the values defined in the European Standard EN 50136-1-1 cannot be used.*

Subject to the above tolerances a transmission of an alarm message shall be possible at any time. If the ATS is not available for more than the times given in the following table this shall be notified as follows:

IAS class 1:	180 s at least indicate at IAS
IAS class 2:	180 s indicate at IAS and to ARC <sup>1)</sup>
IAS class 3:	20 s indicate at IAS and to ARC <sup>2)</sup>
Fire alarm systems:	100 s indicate at FAS and to ARC <sup>2)</sup>

<sup>1)</sup> If not possible, a second ATS could be used in addition.

<sup>2)</sup> If not possible, a second ATS with a separate independent transmission path could be used in addition.

### **4.2 Transmission Time**

The entire time of the transmission of a fire, hold-up, duress, intrusion and tamper message including switching, acknowledgement and indication shall be not more than

IAS class 1:	180 s
IAS class 2 and 3:	10 s
Fire alarm systems:	10 s

The entire time of the transmission of fault and other messages shall be not more than 180 s.

*Note: Achievement of these times depends on adequate of both – the technology of the ATS and the organizational capacity of the ARC.*

### **4.3 Priority**

Where messages arrive at the ARC simultaneously they shall be presented according to the following priority:

1. Fire
2. Hold-up/Duress
3. Intrusion/tamper in set-state of IAS
4. Tamper in unset-state of IAS
5. Fault
6. Status

*Note: Priority is primarily a problem of the presentation of a message at the ARC rather than a technical transmission issue.*

#### 4.4 Capacity of messages

The required capacity of message is dependent on the dimension and complexity of the IAS connected to the ATS. At least the following messages shall be transmitted (see also doc. Indication/Notification Functions):

Message	Notification		
	IAS Class 1 (with ATS)	IAS Class 2	IAS Class 3
Intrusion	M	M	M
Tamper IAS set	M	M (as tamper alarm)	M (as tamper alarm)
IAS unset	Op	M (as tamper signal)	M (as tamper signal)
Fault	Op	M (as fault)	M (as fault)
Hold-up	M (as hold-up) <sup>1)</sup>	M (as hold-up) <sup>1)</sup>	M (as hold-up) <sup>1)</sup>
Fire	M (as fire) <sup>1)</sup>	M (as fire) <sup>1)</sup>	M (as fire) <sup>1)</sup>
State Set/unset	Op	M	M
Zone identification	Op	Op	M
Detection point identification	Op	Op	M

M = Mandatory

Op = Optional

<sup>1)</sup> If hold-up/fire is included in the IAS

Message	Notification
	FAS
Fire	M
Fault	M

M = Mandatory

Op = Optional

Alarm verification procedures may require additional capacity (e.g. for the transmission of detailed information of each detector).

#### 4.5 Information correctness

Signal integrity shall be sufficiently robust that no information may be corrupted and/or lost during transmission and presentation at the ARC.

The source of the message has to be assured in class 2 and 3 IAS.

#### 4.6 Information secret

The means of signalling shall be neither easily identifiable nor readily accessible to unauthorised persons.

For class 3 IAS information secrecy must be maintained even in the event of unauthorised access to the means of signalling.

#### 4.7 Presentation of information

The presentation of messages shall be clear, unambiguous and incapable of misinterpretation.

All messages including source and precise time/date of receipt shall be recorded and retraceable for a minimum period of one year.

Overview of the functions of an Alarm Transmission System (ATS)

