

**TECHNICAL
REPORT**

**ISO/IEC
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First edition
2001-06

**INFORMATION TECHNOLOGY –
HOME ELECTRONIC SYSTEM (HES)
APPLICATION MODEL**

**Part 4:
Security system for HES**



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This is a preview of "ISO/IEC TR 15067-4:2...". [Click here to purchase the full version from the ANSI store.](#)

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INFORMATION TECHNOLOGY – HOME ELECTRONIC SYSTEM (HES) APPLICATION MODEL

Part 4: Security system for HES

FOREWORD

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ISO/IEC 15067, which is a technical report of type 3, was prepared by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information technology.

This publication has been drafted in accordance with ISO/IEC directives, Part 3.

This document is not to be regarded as an International Standard. It is proposed for provisional application so that information and experience of its use in practice may be gathered. Comments on the content of this document should be sent to IEC Central Office.

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Technical Report ISO/IEC TR 15067 currently consists of four parts:

- *Part 1: Application services and protocol (under consideration)*
- *Part 2: Lighting model for HES*
- *Part 3: Model of an energy management system for HES (under consideration)*
- *Part 4: Model of a security system for HES*

This is a preview of "ISO/IEC TR 15067-4:2...". [Click here to purchase the full version from the ANSI store.](#)

INTRODUCTION

This model of a security system for residences extends the set of HES (Home Electronic System) application models. ISO/IEC JTC 1/SC 25, WG 1 has already developed and SC 25 has accepted models for lighting and energy management. These models are intended to facilitate validation of the language being specified for HES in ISO/IEC TR 15067-1: *Information technology - Home Electronic System (HES) application model – Application services and protocol.*

These models have been developed to foster interoperability among products from competing or complementary manufacturers. Product interoperability is essential when using home control standards, such as HES. This Technical Report defines a typical security system and describes the communications services needed. A high-level model for a security system using HES is presented.

INFORMATION TECHNOLOGY – HOME ELECTRONIC SYSTEM (HES) APPLICATION MODEL

Part 4: Security system for HES

1 Scope

Residential security systems are among the most popular applications in a home automation system. This model is intended to be generic. It is applicable to a wide variety of security functions that extend well-beyond traditional intrusion detection. Potential applications of home security as represented in this model include activity monitoring, duress monitoring, and safety monitoring of personal well-being.

The intrusion and safety applications of a security system are similar for commercial buildings. This generic model can therefore be extended to commercial building security functions.

2 A typical security system

2.1 Modes of operation

A modern security system provides more than detection of unauthorized entry into a building. The range of applications of a security system spans:

2.1.1 Intrusion detection

Sensor devices are installed to detect intrusion at particular locations in a building. The sensor types are described in 2.2.1. Sensors are connected to a security controller that is programmed with various algorithms. When a sensor is armed and tripped, the controller may sound an audible alarm locally and/or may issue a notification to a remote site, for example via telephone. The activation of the controller and choice of algorithm depends on user inputs from one or more control panels (user interfaces).

2.1.2 Restricted movement sensing

Typically, this mode of operating a security system is chosen when the occupants are sleeping. Sensors at the perimeter of the house and in selected rooms are armed. Activity and movement in the bedroom will not trip the alarm. Therefore, one or more motion detectors in the bedroom and possibly some window sensors are not monitored. All other sensors are monitored as for intrusion detection.

2.1.3 Activity monitoring

This is a relatively new application of a security system. The system is specifically programmed to alert a monitoring station or place a call to a family member upon the absence of internal motion. Examples where this scheme is used include:

2.1.3.1 Elderly person monitoring

The objective is to determine if the person is moving about the house while home. The absence of motion over a period of an hour or two when the person is not expected to be sleeping might indicate that the person needs help.