

ISO 7240-13:2020 (E)

Fire detection and alarm systems — Part 13: Compatibility assessment of system components

Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms, definitions and abbreviated terms
3.1	Definitions
3.2	Abbreviated terms
4	Requirements
4.1	Conformance
4.2	General system requirements
4.3	Transmission path(s) (TP)
4.3.1	General
4.3.2	TP using wires
4.3.3	TP using radio frequency links
4.3.4	TP using optical fibres
4.3.5	Network TP
5	Assessment methods and tests
5.1	General
5.2	Provision of equipment and supporting information and tools
5.3	Configuration
5.3.1	General
5.3.2	Configuration at field level for assessment
5.3.3	Configuration at control level for network assessment
5.4	Standard atmospheric conditions for testing
5.5	Functional test for compatibility assessment on field level
5.5.1	The objective of the test
5.5.2	Test schedule
5.5.3	Functional tests for compatibility in the different conditions
5.5.3.1	Fire alarm condition
5.5.3.1.1	Procedure
5.5.3.1.2	Criteria of acceptance
5.5.3.2	Voice alarm condition
5.5.3.2.1	Procedure
5.5.3.2.2	Criteria of acceptance
5.5.3.3	Fault warning condition: interruption or short circuit on a transmission path
5.5.3.3.1	Interruption on a transmission path
5.5.3.3.1.1	Procedure
5.5.3.3.1.2	Criteria of acceptance
5.5.3.3.2	Short circuit on a transmission path using wires
5.5.3.3.2.1	Procedure
5.5.3.3.2.2	Criteria of acceptance
5.5.3.3.3	Earth fault on a transmission path using wires
5.5.3.3.3.1	Procedure
5.5.3.3.3.2	Criteria of acceptance
5.5.3.4	Removal of detachable components
5.5.3.4.1	Procedure
5.5.3.4.2	Criteria of acceptance

- 5.5.3.5 Reduction of power supply voltage
 - 5.5.3.5.1 Procedure
 - 5.5.3.5.2 Criteria of acceptance
- 5.5.3.6 Disablement condition
 - 5.5.3.6.1 Procedure
 - 5.5.3.6.2 Criteria of acceptance
- 5.5.3.7 Test condition
 - 5.5.3.7.1 Procedure
 - 5.5.3.7.2 Criteria of acceptance
- 5.6 Functional tests for connectability assessment on field level
 - 5.6.1 The objective of the test
 - 5.6.2 Test schedule
 - 5.6.3 Functional test for connectability
 - 5.6.3.1 Procedure
 - 5.6.3.2 Criteria of acceptance

6 Test report

7 Marking

8 Data

- 8.1 General
- 8.2 Documentation for compatibility
- 8.3 Documentation for connectability
- 8.4 Software documentation

Annex A (informative) Example of levels used in FDAS

Annex B (informative) Classification of functions of the FDAS

- B.1 General
- B.2 Fire detection function
- B.3 Fire alarm to occupants in the premises
- B.4 Fire alarm to summon external assistance (usually the fire brigade)
- B.5 Activation of fire protection function
 - B.5.1 Equipment directly triggered by the FDAS
 - B.5.2 Systems driven by the information coming from the FDAS
- B.6 Remote indication 1 (remote panels, fire brigade panels, etc.)
- B.7 Remote indication 2 (printers, interface to building management system, etc.)
- B.8 Input function
- B.9 Output function
- B.10 Devices used to connect transmission paths (gateway, data switch, etc.)

Annex C (informative) Example methodology for theoretical analysis

- C.1 Introduction
- C.2 Method of test
 - C.2.1 General
 - C.2.2 List of characteristics
 - C.2.2.1 Mechanical connections
 - C.2.2.2 Power supply and distribution analysis
 - C.2.2.2.1 Voltage range
 - C.2.2.2.2 Current
 - C.2.2.2.3 Supply characteristics
 - C.2.2.2.4 Power supply voltage range
 - C.2.2.2.5 Fault performance
 - C.2.2.3 Data exchange analysis
 - C.2.2.3.1 General
 - C.2.2.3.2 Transmission characteristics
 - C.2.2.3.2.1 General
 - C.2.2.3.2.2 Voltage range
 - C.2.2.3.2.3 Current
 - C.2.2.3.2.4 Timing
 - C.2.2.3.2.5 Tolerances
 - C.2.2.3.2.6 Fault performance
 - C.2.2.3.3 Transmission protocol(s)

- C.2.2.4** **Functionality**
- C.2.2.4.1** **General**
- C.2.2.4.2** **Received data**
- C.2.2.4.3** **Transmitted data**

Annex D (normative) **Software design documentation**

Annex E (informative) **Flowchart for assessment of compatibility/connectability**

Annex F (informative) **Functions of a fire detection and alarm systems**

Page count: 26