

ISO 7240-16:2007-07 (E)

Fire detection and alarm systems - Part 16: Sound system control and indicating equipment

Contents		Page
Foreword		vi
Introduction		viii
1	Scope	1
2	Normative references	1
3	Terms, definitions and abbreviated terms	3
3.1	Terms and definitions	3
3.2	Abbreviations	4
4	General requirements	4
4.1	General	4
4.2	Combined s.s.c.i.e. and c.i.e	4
4.3	Power supply	4
5	General requirements for indications	4
5.1	Display of functional conditions	4
5.2	Display of indications	5
5.3	Indications on alphanumeric displays	5
5.4	Indication of the supply of power	5
5.5	Additional indications	5
6	Quiescent condition	5
7	Voice-alarm condition	6
7.1	Reception and processing of alarm signal	6
7.2	Alert signal - Optional function	6
7.3	Evacuate signal	6
7.4	Indication of the voice-alarm condition	6
7.5	Audible warning - Optional function	7
7.6	Delay before entering the voice-alarm condition - Optional function	7
7.7	Phased evacuation - Optional function	7
7.8	Silencing the voice-alarm condition	8
7.9	Reset of the voice-alarm condition	8
7.10	Output to alarm devices - Optional function	8
7.11	Voice-alarm condition output signal - Optional function	8
8	Fault-warning condition	9
8.1	Reception and processing of fault signals	9
8.2	Indication of faults in specified functions	9
8.3	System fault	10
8.4	Audible indication	10
8.5	Reset of fault indications	11
8.6	Fault-warning condition output signal	11
9	Disabled condition - Optional function	11
9.1	General	11
9.2	Indication of the disabled condition	11
9.3	Indication of specific disablements	11

9.4	Disablement condition output - Optional function	12
10	Test condition - Optional function	12
10.1	General	12
10.2	Indication of the test condition	12
10.3	Indication of specific emergency loudspeaker zones in the test state	12
11	Manual mode control - Optional function	12
11.1	General	12
11.2	Indications of emergency loudspeaker zones in the voice-alarm condition	13
11.3	Indication of emergency loudspeaker zones in the fault-warning condition - Optional function	13
11.4	Indication of emergency loudspeaker zones in the disabled condition - Optional function	13
12	Interface to external control device(s) - Optional function	13
13	Emergency microphone - Optional function	14
13.1	General	14
13.2	Microphone priority - Optional function	14
13.3	Microphone emergency loudspeaker zone control - Optional function	14
14	Design requirements	14
14.1	General requirements and manufacturer's declarations	14
14.2	Documentation	15
14.3	Mechanical design requirements	15
14.4	Electrical and other design requirements	16
14.5	Integrity of transmission paths	16
14.6	Accessibility of indications and controls	16
14.7	Indications by means of light-emitting indicators	17
14.8	Indications on alphanumeric displays	17
14.9	Colours of indications	18
14.10	Audible indications	18
14.11	Testing of indicators	18
14.12	Audio performance	18
14.13	Message store	20
14.14	Redundant power amplifiers - Optional function	20
15	Additional design requirements for software-controlled s.s.c.i.e	21
15.1	General requirements and manufacturer's declarations	21
15.2	Software documentation	21
15.3	Software design	22
15.4	Program monitoring	22
15.5	The storage of programs and data	22
15.6	Monitoring of memory contents	23
16	Marking	23
17	Tests	23
17.1	General	23
17.2	Functional test	24
17.3	Test schedule	27
17.4	Output power	28
17.5	Signal-to-noise ratio	29
17.6	Frequency response of s.s.c.i.e. without microphone(s)	30
17.7	Frequency response of s.s.c.i.e. with microphone(s)	31
17.8	Cold (operational)	32
17.9	Damp heat, steady state (operational)	33
17.10	Damp heat, steady state (endurance)	34
17.11	Impact (operational)	35
17.12	Vibration, sinusoidal (operational)	36
17.13	Vibration, sinusoidal (endurance)	37

17.14	Supply voltage variation (operational)	38
17.15	Electromagnetic compatibility (EMC), immunity tests (operational)	39
18	Test report	40
Annex A (informative) Use of optional functions		41
Annex B (informative) Common indications, controls and outputs when the s.s.c.i.e. and the c.i.e. are combined		43
Annex C (informative) Interface between the s.s.c.i.e. and the emergency-detection system		44
Annex D (informative) Explanation of access levels		45
Annex E (informative) Design requirements for software-controlled s.s.c.i.e		47