

ISO 7240-22:2017-09 (E)

Fire detection and alarm systems - Part 22: Smoke-detection equipment for ducts

Contents		Page
Foreword		vi
Introduction		vii
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Requirements	2
4.1	Compliance	2
4.2	Visual alarm indication	2
4.3	Connection of ancillary devices	2
4.4	Monitoring of detachable detectors	3
4.5	Manufacturer's adjustments	3
4.6	On-site adjustment of response behaviour	3
4.7	Requirements for software-controlled smoke-detection equipment for ducts	3
4.7.1	General	3
4.7.2	Software design	3
4.7.3	Storage of programs and data	3
5	Tests	4
5.1	General	4
5.1.1	Atmospheric conditions for tests	4
5.1.2	Mounting arrangements	4
5.1.3	Operating conditions for tests	4
5.1.4	Tolerances	4
5.1.5	Response threshold value	4
5.1.6	Provision for tests	5
5.1.7	Test schedule	6
5.1.8	Test report	6
5.2	Repeatability	6
5.2.1	Object of test	6
5.2.2	Test procedure	6
5.2.3	Requirements	7
5.3	Reproducibility	7
5.3.1	Object of test	7
5.3.2	Test procedure	7
5.3.3	Requirements	7
5.4	Variation in supply parameters	7
5.4.1	Object of test	7
5.4.2	Test procedure	8
5.4.3	Requirements	8
5.5	Dazzling	8
5.5.1	Object of test	8
5.5.2	Test procedure	8
5.5.3	Requirements	9
5.6	Dry heat (operational)	9
5.6.1	Object of test	9
5.6.2	Test procedure	9
5.6.3	Requirements	10

5.7	Cold (operational)	10
5.7.1	Object of test	10
5.7.2	Test procedure	10
5.7.3	Requirements	11
5.8	Damp heat, steady-state (operational)	11
5.8.1	Object of test	11
5.8.2	Test procedure	11
5.8.3	Requirements	11
5.9	Damp heat, steady-state (endurance)	12
5.9.1	Object of test	12
5.9.2	Test procedure	12
5.9.3	Requirements	12
5.10	Sulfur dioxide, SO ₂ , corrosion (endurance)	13
5.10.1	Object of test	13
5.10.2	Test procedure	13
5.10.3	Requirements	13
5.11	Shock (operational)	14
5.11.1	Object of test	14
5.11.2	Test procedure	14
5.11.3	Requirements	14
5.12	Impact (operational)	15
5.12.1	Object of test	15
5.12.2	Test procedure	15
5.12.3	Requirements	15
5.13	Vibration, sinusoidal (operational)	16
5.13.1	Object of test	16
5.13.2	Test procedure	16
5.13.3	Requirements	17
5.14	Vibration, sinusoidal (endurance)	17
5.14.1	Object of test	17
5.14.2	Test procedure	17
5.14.3	Requirements	18
5.15	Air leakage	18
5.15.1	Object of test	18
5.15.2	Test procedure	18
5.15.3	Requirements	18
5.16	Electromagnetic compatibility (EMC) immunity tests (operational)	19
5.16.1	Object of test	19
5.16.2	Test procedure	19
5.16.3	Requirements	19
5.17	Fire sensitivity	20
5.17.1	Object of test	20
5.17.2	Test procedure	20
5.17.3	Requirements	21
6	Test report	21
7	Marking	22
8	Data	22
8.1	Hardware documentation	22
8.2	Software documentation	23
Annex A (normative)Smoketunnelandfiretestroomarrangement for response measurements		24
Annex B (normative) Test aerosol for response threshold value measurements		25
Annex C (normative) Smoke-measuring instruments		26
Annex D (normative) Apparatus for dazzling test		30

Annex E (normative) Apparatus for impact test	31
Annex F (informative) Air-leakage test apparatus	33
Annex G (normative) Rapids mouldering (pyrolysis) wood fire (TF2)	34
Annex H (normative) Open plastics (polyurethane) fire (TF4)	37
Annex I (informative) Information concerning the construction of the smoke tunnel	39
Annex J (informative) Information concerning the construction of the measuring ionization chamber	42
Bibliography	44