

ISO 7240-12:2014-04 (E)

Fire detection and alarm systems - Part 12: Line type smoke detectors using a transmitted optical beam

Contents	Page
Foreword	v
Introduction	vii
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Requirements	3
4.1 Compliance	3
4.2 Individual alarm indication	3
4.3 Connection of ancillary devices	4
4.4 Monitoring of detachable detectors and connections	4
4.5 Manufacturer's adjustments	4
4.6 On-site adjustment of response threshold value	4
4.7 Protection of optical components	4
4.8 Limit of compensation	5
4.9 Fault signalling	5
4.10 Software-controlled detectors	5
5 Test methods	6
5.1 General	6
5.2 Reproducibility	9
5.3 Repeatability	10
5.4 Alignment dependence	10
5.5 Variation of supply parameters	11
5.6 Rapid changes in attenuation	12
5.7 Slow changes in attenuation	12
5.8 Optical path length dependence	13
5.9 Fire sensitivity	13
5.10 Stray light	15
5.11 Dry heat (operational)	16
5.12 Cold (operational)	17
5.13 Damp heat, steady-state (operational)	19
5.14 Damp heat, steady-state (endurance)	20
5.15 Vibration, sinusoidal (endurance)	20
5.16 Electromagnetic compatibility (EMC), immunity tests (operational)	21
5.17 Sulfur dioxide, SO ₂ , corrosion (endurance)	22
5.18 Impact (operational)	23
6 Test report	24
7 Marking	24
8 Data	25
Annex A (informative) Compensation for detector drift	26
Annex B (normative) Bench for response threshold value measurements	31

Annex C (normative) Fire test room	33
Annex D (normative)Smoulderingpyrolysiswoodfire(TF2)	35
Annex E (normative)Glowingsmoulderingcottonfire(TF3)	38
Annex F (normative)Flamingplastics(polyurethane)fire(TF4)	40
Annex G (normative) Flaming liquid (n-heptane)fire(TF5)	42
Annex H (normative) Smoke-measuring instruments	43
Annex I (normative) Apparatus for stray light	46
Annex J (informative) Information concerning the construction of the measuring ionization chamber	48