

DIN EN 54-7:2006-09 (E)

Fire detection and fire alarm systems - Part 7: Smoke detectors - Point detectors using scattered light, transmitted light or ionization

Contents	Page
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	7
4 Requirements	7
4.1 Compliance	7
4.2 Individual alarm indication	7
4.3 Connection of ancillary devices	7
4.4 Monitoring of detachable detectors	7
4.5 Manufacturer's adjustments	7
4.6 On-site adjustment of response behaviour	8
4.7 Protection against the ingress of foreign bodies	8
4.8 Response to slowly developing fires	8
4.9 Marking	8
4.10 Data	9
4.11 Additional requirements for software controlled detectors	9
5 Tests	10
5.1 General	10
5.2 Repeatability	13
5.3 Directional dependence	14
5.4 Reproducibility	14
5.5 Variation in supply parameters	15
5.6 Air movement	15
5.7 Dazzling	16
5.8 Dry heat (operational)	17
5.9 Cold (operational)	17
5.10 Damp heat, steady state (operational)	18
5.11 Damp heat, steady state (endurance)	19
5.12 Sulphur dioxide (SO ₂) corrosion (endurance)	20
5.13 Shock (operational)	20
5.14 Impact (operational)	21
5.15 Vibration, sinusoidal (operational)	22
5.16 Vibration, sinusoidal (endurance)	23
5.17 Electromagnetic Compatibility (EMC), Immunity tests (operational)	24
5.18 Fire sensitivity	25
Annex A (normative) Smoke tunnel for response threshold value measurements	27
Annex B (normative) Test aerosol for response threshold value measurements	28
Annex C (normative) Smoke measuring instruments	29
Annex D (normative) Apparatus for dazzling test	34
Annex E (informative) Apparatus for impact test	35

Annex F (normative) Fire test room	37
Annex G (normative) Smouldering (pyrolysis) wood fire (TF2)	39
Annex H (normative) Glowing smouldering cotton fire (TF3)	41
Annex I (normative) Flaming plastics (polyurethane) fire (TF4)	43
Annex J (normative) Flaming liquid (n-heptane) fire (TF5)	45
Annex K (informative) Information concerning the construction of the smoke tunnel	47
Annex L (informative) Information concerning the requirements for the response to slowly developing fires	49
Annex M (informative) Information concerning the construction of the measuring ionization chamber	53
Annex N (normative) Additional requirements and test methods for smoke detectors with more than one smoke sensor	55
Annex ZA (informative) Clauses of this European Standard addressing essential requirements or other provisions of EU Directives	57
Bibliography	63