

STANDARDS AUSTRALIA

Amendment No. 1
to
AS 1603.7—1996
Automatic fire detection and alarm systems
Part 7: Optical beam smoke detectors

REVISED TEXT

The 1996 edition of AS 1603.7 is amended as follows; the amendments should be inserted in the appropriate places.

SUMMARY: This Amendment applies to Clauses 1.1, 1.3, 1.5.8, 3.3.2, 3.5, 5.2.2, 5.2.3, Table 5.1, Appendices A, B, C, G and Figure C1.

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No. 1
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2001

Page 4 Clause 1.1, 2nd line

After the words ‘optical beam smoke detectors’ *insert* the following:
(beam detectors).

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Page 4 Clause 1.3

Delete ‘2546.1, Part 1: General requirements and test methods’ and *replace* with the following:

2546.3 Part 3: Design and use

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Page 5 Clause 1.5.8

Delete existing Clause 1.5.8 and *replace* with the following:

1.5.8 Maximum range

The distance between the beam emitting and beam receiving units or, for reflected type beams, the distance between the beam transmitter/receiver and the retro-reflector, at which the detector can be aligned and commissioned correctly following the manufacturer’s recommended procedure and without using any of the available compensation, or the manufacturer’s rated maximum distance, whichever is the lesser.

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Page 8 Clause 3.3.2, 2nd line

Delete ‘AS 2546.1’ and *replace* with ‘AS 2546.3’.

Page 8 Clause 3.5

Delete the existing Clause 3.5 and *replace* with the following:

3.5 INDICATING FACILITIES

Visual alarm indicators shall be red when lit. No other indicator shall be red. The visual alarm indicator may blink to indicate that the device is operational. A required visual alarm indicator shall be discernible as on or off when tested to the method of AS 2362.25.

Where a remote indicator is provided, it shall meet the above requirements.

Where a remote indicating facility is provided, the failure of the remote indicator, a short circuit or an open circuit shall not prejudice the alarm operation of the detector.

Page 10 Clause 5.2.2

Delete first sentence and *replace* with the following:

When tested in accordance with Appendix A, and at the minimum range specified by the manufacturer, detectors —

Page 10 Clause 5.2.2 Item (c)

Delete the existing Clause 5.2.2(c) and *replace* with the following:

- (c) shall register an alarm within the transmittance range 0.5 to 0.0, except that the detector shall register a fault when the beam is obscured by at least 90% in less than 5 s.
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Page 10 Clause 5.2.3

Add the following new paragraphs:

An alternative test method, which is mutually acceptable to the test laboratory and the manufacturer, may be substituted for the test procedure in Appendix B.

The optical beam smoke detector shall meet the functional requirements of Clause 5.2.2, Items (a), (b), and (c), when tested at the manufacturer's specified range in accordance with Appendix A.

Page 11 New Clause 5.2.3A

Insert the following new Clause 5.2.3A:

5.2.3A Beam compensation

The optical beam smoke detector shall incorporate a compensation mechanism against gradual changes in the received beam signal. When tested in accordance with Appendix G, the optical beam smoke detector shall meet the functional requirements of Clause 5.2.2, Items (a), (b), and (c), after beam signal step changes of +15% and -25%. The rate of compensation shall not be less than 1% total obscuration per hour nor more than 1% total obscuration per minute. Discrete compensation steps shall not exceed the equivalent of 10% total obscuration.

The requirement for drift compensation is deemed to be satisfied where the requirements of Clause 5.2.3 are met at 150% of manufacturer's maximum range.

Page 11 Table 5.1

Delete the existing Table 5.1 and *replace* with the following:

TABLE 5.1
TEST SCHEDULE FOR DETECTORS

Order	Characteristics	Clause	Specimen					Test method
			1	2	3	4	5	
1	Assess for compliance with Sections 2 and 3		/					
2	Normal operation	5.2.2	/	/	/	/	/	Appendix A
3	Maximum range	5.2.3	/	/				Appendix B
4	Compensation	5.2.4	/	/				Appendix G
5	Control of beam alignment	5.2.5	/	/				Appendix C
6	Insulation resistance	5.3.2.1					/	AS 2362.5
7	Voltage stability	5.3.1	/					AS 2362.4
8	Static discharge	5.3.3	/					AS 2362.6
9	E M interference	5.3.4		/				AS 2362.7
10	Impulse voltage	5.3.5		/				AS 2362.8
11	High-frequency disturbance	5.3.6		/				AS 2362.9
12	Low temperature	5.3.7			/			AS 2362.10
13	Dry heat	5.3.9			/			AS 2362.12
14	Damp heat	5.3.8			/			AS 2362.11
15	Vibration	5.3.10			/			AS 2362.15
16	Corrosion	5.3.11					/	AS 2362.13
17	Impact	5.3.12	/					AS 2362.16
18	Dust	5.3.13				/		AS 2362.19
19	Visible light rejection	5.3.14			/			Appendix E
20	Long-term stability	5.3.15			/			Appendix F
21	Screw thread strength	5.2.1	/					AS 3100
22	Insulation resistance	5.3.2.2					/	AS 2362.5
23	Fire test	5.2.5		/	/			Appendix D
24	Normal operation	5.2.2	/	/	/	/	/	Appendix A
25	Assessment of information	5.1.1						

Page 14 Paragraph A3(b), 2nd line

Delete the words ‘minimum distance specified by the manufacturer’ and *replace* with ‘appropriate distance as required by the relevant clauses of this Standard’.

Page 14 Paragraph A3(c), 1st and 2nd lines

Delete (or 0.67 for reflector type).