

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Amendment No. 1
to
AS/NZS 3000:2018
Electrical installations (known as the Australian/New Zealand Wiring Rules)

REVISED TEXT

The 2018 edition of AS/NZS 3000 is amended as follows; the amendment(s) should be inserted in the appropriate place(s).

SUMMARY: This Amendment applies to the Preface, Clauses 1.4.79, 2.1.2, 2.2.1.2, 2.2.2, 2.3.2.1.2, 2.3.2.2.1, 2.3.3.6, 2.5.1.2, 2.5.4.4.3, 2.5.5.2, 2.5.7.2.3, 2.6.2.2.1, 2.6.2.2.3, 2.6.3.2.2, 2.6.3.2.3.1, 2.6.3.2.3.2, 2.6.3.2.3.3, 2.6.3.2.5, 2.6.3.2.6, 2.6.3.3.1, 2.6.3.3.2, 2.7.3, 2.10.2.1, 2.10.2.2, 2.10.2.5, 2.10.3.4.2, 2.10.4.2, 2.10.4.3, 2.10.5.4, 2.10.6, 3.4.1, 3.9.8.2.1, 4.1.5 (new), 4.4.1.1.2, 4.5.2.3.3, 4.5.2.3.5, 4.8.1, 4.8.2.3, 4.12.2, 4.13.1.1, 4.17, 5.4.6.1, 5.5.3.5, 6.2.2.1, 6.2.2.2, 6.2.4.2, 6.2.4.4, 6.2.4.5, 6.3.4.5, 6.4.1, 6.4.4.5, 6.6.3.3, 7.2.1.2, 7.2.2.1, 7.2.4.2, 7.2.5.1, 7.2.5.6.1, 7.2.5.6.4, 7.2.9.3.2, 7.2.10.3, 7.2.10.4.2, 7.3.2, 7.3.4.1, 7.4.8.2, 7.4.8.3, 7.6.3, 7.8.1, 7.8.2, 7.8.2.12, 7.8.2.15, 7.9, 8.2.2, 8.3.3.1 and 8.3.9.2.2, Figures 2.1, 2.7, 2.16, 4.9, 5.1, 5.3, 5.4, 5.5, 6.11, 7.7, Tables 6.1, 6.2 and 8.2, and Appendices A, B, C and I, and Index.

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Preface

- 1 In Section 4, *add* the following text to Item 12:
Application of Clause 4.8 has been clarified.
 - 2 In Section 4, *add* the following new Item 16:
16 A warning about possible adverse effects of air extract systems has been added.
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Clause 1.4.79

Delete the Note and *replace* with the following:

Exceptions: Under the multiple earthed neutral (MEN) earthing system this term does not apply to the following:

- 1 *Earthing conductors.*
- 2 *The MEN connection and the neutral bar or link at which the MEN connection is made.*
- 3 *The neutral bar or link in a switchboard without an MEN connection where the active supply to the switchboard has been isolated.*
- 4 *The sheath of an MIMS cable and associated conductive fittings used as a combined protective earthing and neutral (PEN) conductor in an earth sheath return (ESR) system.*
- 5 *Conductive supports and enclosures associated with an unprotected consumers mains that are earthed in accordance with Clause 5.5.3.5.*
- 6 *A submain neutral conductor or final subcircuit neutral conductor where the active supply to the submain or final subcircuit has been isolated.*

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Clause 2.1.2

In Item (a) *delete* “electric al” and *replace* with “electrical”.

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Clause 2.2.1.2

Delete the text of the clause and *replace* with the following:

All live conductors of every submain and every final subcircuit shall commence at a main switchboard or at a distribution switchboard.

All live conductors of a submain or a final subcircuit shall be connected at the one switchboard.

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Clause 2.2.2

At the end of Item (b)(i) *add* the word “or”.

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Clause 2.3.2.1.2 (For the hard copy version only)

In the Note to Item (b)(i)(B), *delete* “Clause 5.5.3.1(b)” and *replace* with “Clause 5.5.3.1”.

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Clause 2.3.2.2.1

At the end of Items (a), (b), (c), (d) *add* the word “and”.

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Clause 2.3.3.6

- 1 At the end of Item (c)(i) *add* the word “and”.
 - 2 *Delete* Item (c)(iii) and *replace* with the following:
 - (iii) the main switch shall not be capable of being overridden or bypassed by programmable control systems or the like.
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Clause 2.5.1.2

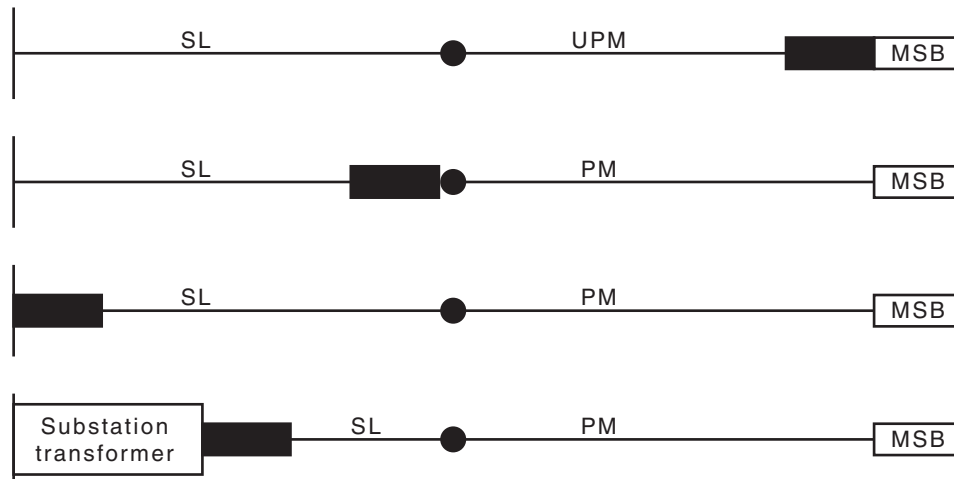
In Item (c), *delete* the first sentence of third paragraph and *replace* with the following:

Unprotected consumer mains are those that are not protected by a service protective device as shown in Figure 2.1.

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Figure 2.1

Delete the Figure and replace with the following:



LEGEND:

-  Service protective device — provides short-circuit protection but not necessarily overload and earth fault protection
-  Main switchboard
-  Point of supply
- SL Service line
- PM Protected consumer mains
- UPM Unprotected consumer mains

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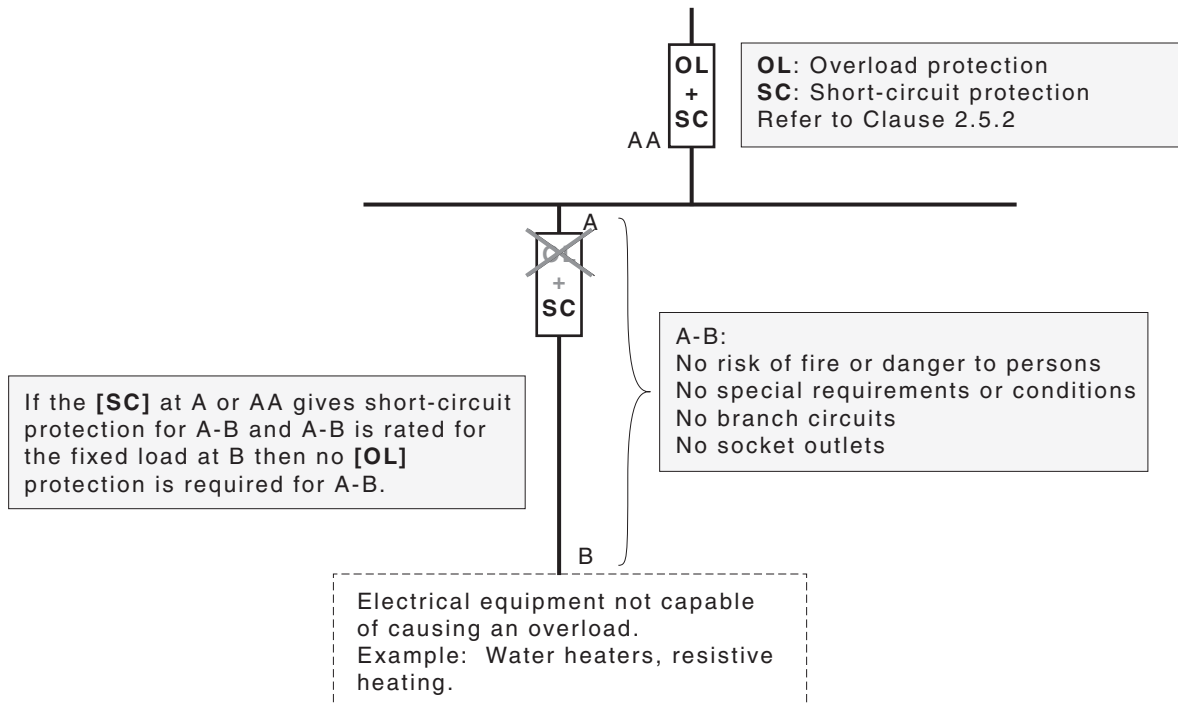
Clause 2.5.4.4.3

Delete “Clause 2.5.4.5” and replace with “Clause 2.5.4.2”.

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Figure 2.7

Delete the figure and *replace* with the following:



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Clause 2.5.5.2

At the end of Items (a) and (b) *add* the word “and”.

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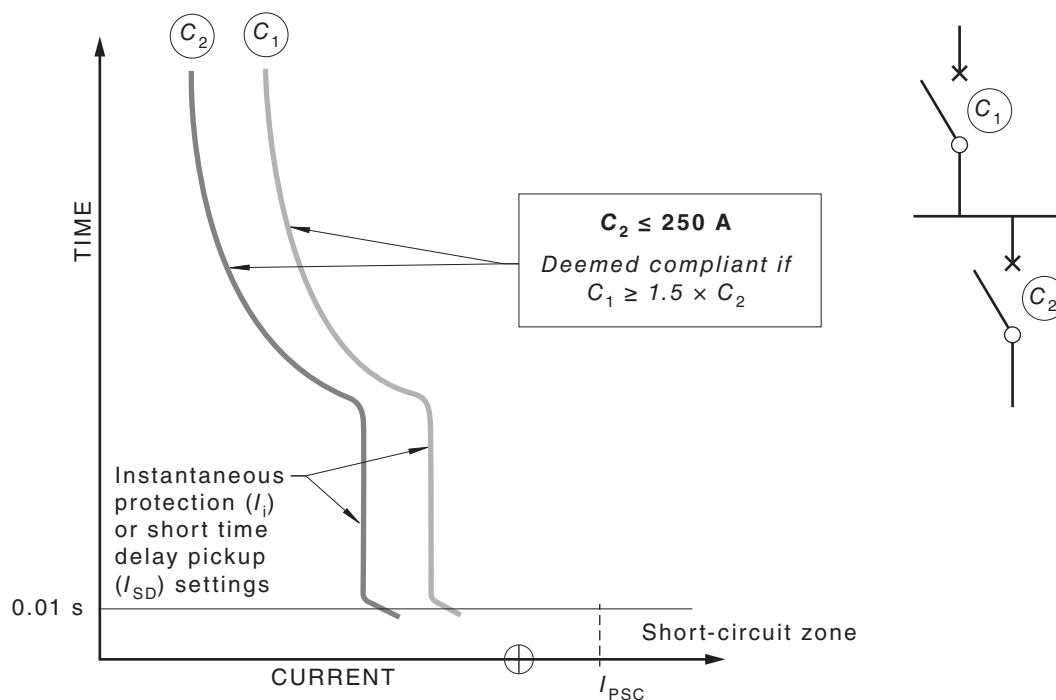
Clause 2.5.7.2.3

- 1 In Item (a)(ii) *delete* the first paragraph and *replace* with the following:
For ratings of C_2 greater than or equal to 250 A, and less than 800 A, discrimination shall be provided between overload curves.
- 2 In Item (a)(iii), *add* “Refer to Figure 2.16” as the second paragraph.
- 3 At the end of Item (a)(iii), *add* the following:
Exception: For ratings of $C_2 \leq 80$ A discrimination is not required.

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Figure 2.16

- 1 *Delete the figure and replace with the following:*



- 2 *Add the following note below the figure:*

NOTE: See Clause 2.5.7.2.3(a)(iii) for exception.

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Clause 2.6.2.2.1

In Note 1 Item (c), *delete* “Type I” and *replace* with “Type I”.

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Clause 2.6.2.2.3

Delete Item (b) and *replace* with the following:

- (b) be of a Type that provides protection against electric shock that complies with the requirements of a Type A RCD in accordance with AS/NZS 61008.1 or AS/NZS 61009.1.

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Clause 2.6.3.2.2

- 1 At the end of Items (a) and (b) *add* the word “or”.
- 2 *Delete* the text of Item (c) and *replace* with the following:
 - (c) common areas of multiple residential electrical installations; or

3 *Add* the following new Note at the end of Item (c):

NOTE: Common areas are those that are available for use by all residents, or groups of residents and their invitees.

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Clause 2.6.3.2.3.1

At the end of Items (a) and (b) *add* the word “or”.

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Clause 2.6.3.2.3.2

Delete the exception and *replace* with the following:

Exception: Where the wiring system is installed with additional mechanical protection against mechanical damage, complying with the requirements of Clause 3.9.4.4(a) or Clause 3.9.4.4(b), the RCD protection specifically intended for the protection of that socket-outlet or direct connected electrical equipment can be installed at, or adjacent to the socket-outlet or direct connected electrical equipment (e.g. factory).

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Clause 2.6.3.2.3.3

- 1 At the end of Item (c) *delete* “and”.
 - 2 At the end of Items (a), (b) and (c) *add* the word “or”.
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Clause 2.6.3.2.5

In Item (a) *add* the following note after the exception:

NOTE: For the purpose of this Clause, combination fan, light and heater units, smoke detectors, exhaust fans and ceiling sweep fans are all regarded as lighting points.

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Clause 2.6.3.2.6

Add the following note at the end of the second paragraph:

NOTE: For purposes of this Clause, combination fan, light and heater units, smoke detectors, exhaust fans and ceiling sweep fans are all regarded as lighting points.

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Clause 2.6.3.3.1

- 1 *Add* the following Note after Item (b):

NOTE: For purposes of this Clause, combination fan, light and heater units, smoke detectors, exhaust fans and ceiling sweep fans are all regarded as lighting points.

2 At the end of Items (c)(i) and (c)(ii) *add* the word “or”.

3 At the end of the clause, *delete* Note 1.

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Clause 2.6.3.3.2

1 At the end of Items (a)(i) and (a)(ii) *add* the word “and”.

2 At the end of Item (b)(i) *add* the word “and”.

3 In Exception 2, fifth dot point, at the end of the first dash point *add* the word “and”.

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Clauses 2.7.3

At the end of Item (a) *add* the word “and”.

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Clause 2.10.2.1

At the end of Item (a) *add* the word “and”.

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Clauses 2.10.2.2

At the end of Item (a) *add* the word “and”.

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Clause 2.10.2.5

At the end of Items (c)(i) and (c)(ii) *add* the word “and”.

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Clause 2.10.3.4.2

Delete Exception 2 and *replace* with the following:

- 2 *Circuit-breakers and combination fuse switch (CFS) devices may be fixed on the back of, or behind, a switchboard panel frame or escutcheon—*
- *provided that they may be operated from the front of the switchboard panel frame or escutcheon; or*
 - *if used solely as a fault-current limiter; or*
 - *if used to protect instruments or control equipment on the switchboard.*
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Clause 2.10.4.2

Delete the second paragraph, including the Note, and *replace* with the following:

Where tunnel-type terminals having clamping screws that are in direct contact with the conductors are provided for connection of—

- (a) the main incoming neutral conductor; or
- (b) the main earthing conductor; or
- (c) the connection between the main earthing terminal/connection or bar and the neutral bar (MEN connection); or
- (d) a neutral conductor used as a combined protective earthing and neutral (PEN) conductor for protective earthing of any portion of an electrical installation,

the terminal shall be of a type having—

- (i) two screws; or
- (ii) one screw with an outside diameter not less than 80% of the tunnel diameter.

NOTE: This requirement does not apply to connections arranged so that the conductor is clamped by suitable ferrules or plates in direct contact with the conductor.

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Clause 2.10.4.3

- 1 At the end of Items (a) and (b) *add* the word “and”.
- 2 In Item (c) *delete* the words “or link”.

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Clause 2.10.5.4

Delete Exceptions and *replace* with the following:

Exception: This marking need not apply to the following:

Where the MEN connection is made at a terminal at one extremity of the bar and the main neutral conductor is connected to the next adjacent terminal.

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Clause 2.10.6

At the end of Item (a) *add* the word “and”.

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Clause 3.4.1

Add the following new Exception at the end of the third paragraph:

Exception: This requirement does not apply to the existing wiring system when extending or altering the circuit.

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Clause 3.9.8.2.1

Delete the Exception and Note and *replace* with the following:

Exception: These requirements need not apply to switchboards at which circuits are terminated.

NOTE: For the purposes of this Clause, wiring enclosures such as cable trays, with removable covers or with no covers at all, where the cables can be accessed without cutting or destroying the enclosure, are not considered to be pipes, tubes or conduits.

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Clause 4.1.5

Add the following new clause after Clause 4.1.4:

4.1.5 Air extraction systems

Air extraction systems may adversely affect the safe operation of combustion appliances, including those in other rooms, potentially resulting in carbon monoxide poisoning. Advise the customer to have their flued combustion appliances tested by a competent person to ensure correct operation.

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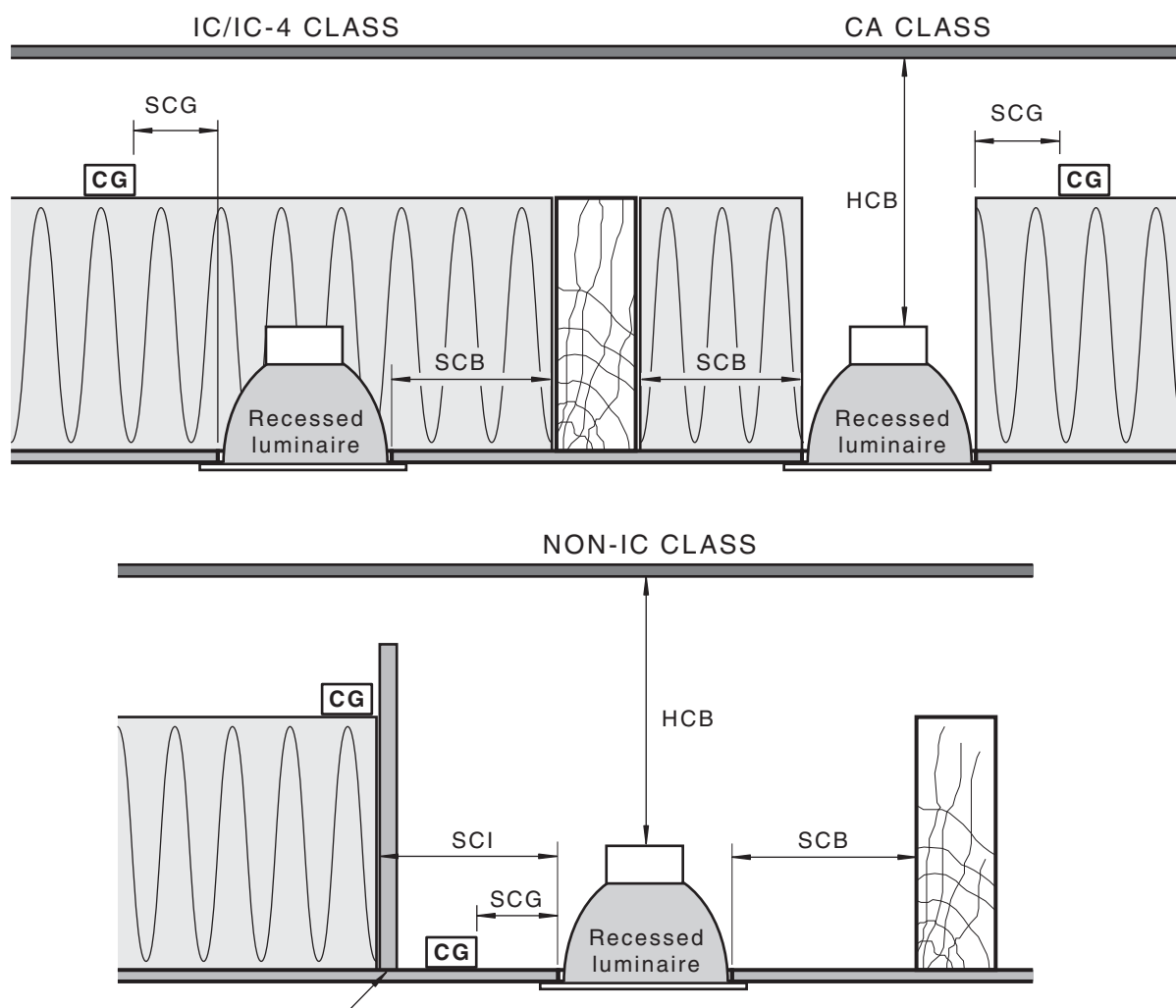
Clause 4.4.1.1.2

In NZ-only Item (ii) Note 1, *delete* “Type 1” and *replace* with “Type I”.

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Figure 4.9

Delete figure and replace with the following:



FIXED GUARD REQUIRED WHERE:-

- insulation materials are not secured in position;
- loose materials are present.

Dimension	Any lamp up to 100 W
HCB—height clearance to building element	100 mm
SCB—side clearance to building element	100 mm
SCI—side clearance to insulation	100 mm
SCG—side clearance to auxiliary equipment [control gear (CG)]	50 mm

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