



NATIONAL RULES FOR ELECTRICAL INSTALLATIONS

Fourth Edition

ET 101:2008.

Updates (Amendments, Corrigenda and Errata) 06/2009

- Page vi: Insert after 1st Paragraph: Section 710: "Medical Locations" was prepared by Technical Committee No.10 "Electrical Equipment in Medical Practice".
- Page 61: Clause 442: Foreword, Second paragraph, second line: Delete "sstem", insert "system".
- Page 69: Clause 462.2: Delete present clause 462.2 and replace with new clause:
462.2: A main isolating switch shall be provided for every installation and located within 2m of the main supply point.

Where there are two or more supplies, their means for isolation shall comply with the relevant sub-clauses 539.2.1 to 539.2.5.

Where the main isolating switch is located in a switch room, it shall comply with 539.3.

- Page 74: Clause 514.3.6: Add: This sub-clause does not apply to cables used solely for control circuits.
- Page 89: Clause 523.6.3, third line, delete "ten per cent", insert "fifteen per cent".
- Page 99: Clause 530.5.3: Delete present clause 530.5.3 and replace with new clause:
530.5.3: A distribution board shall be located in a location where it is readily accessible. A distribution board located in a switch room shall comply with 539

A wall-mounted distribution board shall be mounted at a height not greater than 2.25m measured from the floor to the top surface of the board.

In addition, where a wall-mounted distribution board is mounted at a height less than 1.4m measured from the floor to the bottom surface of the distribution board, it shall be accessible only by authorized persons.

Note: The intention of the third paragraph is to prevent ready access by young children (i.e. in areas with External Influence Classification BA2 in accordance with Annex 51D.

- Page 100: Clause 530.6: Add the following as a new paragraph, to be inserted above "Note":
The above requirements do not apply to certain control devices, such as for thermostatic control, for which the manufacturer's instructions shall be observed.

- Page 114: Clause 537.5.5: Insert the following new paragraph between the first paragraph and the Note”:
- A wall-mounted switch-assembly connected to more than one circuit shall be provided with an appropriate permanent indelibly-marked warning notice, which may be affixed inside the enclosure.
- Page 120: Table 54A: 2nd column, column heading: Add “S_E” after mm².
- Table 54A: 2nd column, row, 3: Replace $S \div 0.5$ with $S/2$.
- Table 54A: 3rd column, row 3: Replace $S_E \div 0.5$ with $S_E /2$.
- Page 122 Table 54C: 2nd column, row 3: Replace $S \div 0.5$ with $S/2$.
- Table 54C: 3rd column, row 3: Replace $S \div 0.5$ with $S/2$.
- Page 133 Clause 551.6.2: Add the following at the end of the clause:
- c) All control units shall be de-energised e.g. control circuits of night storage installations.
- Page 136 Clause 554.1.1: Delete second paragraph and insert:
- Socket-outlets for general purposes shall be mounted at a height not lower than 400mm and not higher than 1200mm above floor-level. This requirement does not apply to the following:
- a) Proprietary socket-outlet systems specifically designed for mounting on the floor, in skirting or on a pedestal and normally intended for use in a commercial premises.
 - b) Socket-outlets complying with 554.4.2.
 - c) Socket-outlets providing dedicated connection for specific electrical appliances or equipment, and normally not accessible for general purposes. Such socket-outlets shall be mounted at a height not lower than 100mm above floor level.
- Page 138 Clause 555.1.2, second line: Delete “600mm, insert “1600mm”.
- Page 138 Clause 555.3.2: Add the following at the end of the clause as a new paragraph:
- This requirement shall not apply to equipment used for industrial purposes.
- Page 153 Clause 613.6.2.1 i) First line: Delete Z_L, insert Z_a.
- iv) Formula: Delete \geq . Insert \leq
- Page 159 At end of first paragraph, add “abused.” after “it is not”.
- Page 165 Clause 701.416.1: Delete “an RCD”. Insert “a dedicated RCD”.
- Page 168 Clause 701.559.03 Note: Add
- This requirement applies to e.g. hotels, guest-houses, nursing homes. It is not necessary to provide a standby source of illumination in situations such as domestic bathrooms.
- Page 172 Fig. 701.4: Top and middle diagram: After double asterisk, insert “Zone 1 or Zone 3. See 701.30.02 and 701.30.05”.
- Page 172 Fig. 701.4: Bottom middle diagram: Delete dimension 0.05m. Insert 0.10m
- Page 175 Fig. 702.52.01: Delete “a metal”. Insert “an accessible metal”.

- Page 178 Fig. 702.2: Replace horizontal dimension “h” with “1.5m”. Delete the vertical dimension “h” and its associated arrows.
- Page 182 Fig. 703.1: Delete “Zone 4” and vertical dimension 0.3m. Delete vertical dimension 2.1m.
- Page 184 Clause 704.410.03: Delete (415), insert (413).
- Page 200 Section 710: Insert the following paragraph after the heading titled “Introduction”
- Please refer to ET 217, *Guidance to Medical Locations* (to be published in 2009). This guidance should be applied in hospitals, private clinics, medical and dental practices, health care centres and dedicated medical rooms in the workplace to ensure safety of patients and medical staff.
- Page 210 Clause 710.62.01 f) delete “not less than”, insert “not more than”.
- Page 213 Clause 711.559.5.01. Insert full-stop after “materials”. Insert 711.559.5.02 , and the text following, as a separate sub-clause.
- Page 236 Clause 753.2: Definitions
- Heating Element: Replace definition with: “ A cable, with or without a screen or sheath, intended to emit heat.”
- Heating Mat: After “electrical” delete “or other”.
- Page 246 Annex 51A
- Paragraph 1: Delete “S.I. No. 732 of 2007: Safety, Health and Welfare at Work (General Application) (Amendment) Regulations 2007” and substitute “S.I. No. 299 of 2007: Safety, Health and Welfare at Work (General Application) Regulations 2007, Part 3 (Electricity), amended by S.I. No. 732 of 2007: Safety, Health and Welfare at Work (General Application) (Amendment) Regulations 2007”.
- Paragraph 3: Delete “S.I. No. 299 of 2007”, insert “S.I. No. 428 of 1992 and S.I. No. 307 of 1994”
- Page 250 Last sentence “Example: First line: Delete “IP45”, insert “IP55”.
- Page 252 Table A51D: Third column, 1st panel: The word “vibrations” should be in italics.
- Page 259 Annex 52C, Title: Delete “Normative”, insert “Informative”.
- Page 291 Table A52-J5, Title: Delete “PVC-insulated single-core”. Insert “PVC-insulated single-core and multi-core”.
- Page 297: Clause 4: Second sentence, delete “In some cases”, insert “In all cases”.
- Page 305 Annex 55A, Title: Delete “Normative”, insert “Informative”.
- Page 308 Annex 55A, Clause 4.2 d): Insert the following new paragraph at the end of the present clause:
See sub-clause 531.2.5.4

Page309 Annex 55A, Clause 8.1: Delete “The required height of an indoor socket-outlet above the floor is between 400mm and 1200mm.” and replace it with the following:

“The required height of a socket-outlet intended for general use is between 400mm and 1200mm above floor level. Exceptions are dedicated socket-outlets not readily accessible and used for specific equipment or appliances, e.g. kitchen appliances that are continuously connected.”

Page 330: Declaration of Compliance: 4th line: Delete Annex 43B. Insert Annex 63B instead.

Page 340: Boxes – for light-switches: Delete 537.5.2.7. Insert 537.5.5

Page346 Information technology equipment. Delete “Ax 54D. Insert “Ax 54C”

**TABLE A61C-1: MAXIMUM VALUES OF FAULT-LOOP IMPEDANCE Z_L FOR 230V AC CIRCUITS
WITH RATINGS NOT EXCEEDING 35A
Maximum Disconnecting time: 0.4s (Table 41A)**

Fuses

1.

Fuse: VDE 0635 (DZ) (Class gL) General purpose

| | | | | | | |
|--------------|------|------|------|------|------|------|
| Rating A: | 6 | 10 | 16 | 20 | 25 | 35 |
| $Z_L \Omega$ | 5.03 | 3.02 | 1.47 | 1.01 | 0.87 | 0.54 |

2.

Fuse: VDE 0636 (NO) (NEOZED) General purpose, domestic

| | | | | | | |
|----------------|------|------|------|------|------|------|
| Rating A | 6 | 10 | 16 | 20 | 25 | 35 |
| $Z_L \Omega$: | 4.69 | 2.01 | 1.47 | 0.94 | 0.87 | 0.54 |

3.

Fuse: VDE 0636 (NH)

| | | | | | | |
|--------------|------|------|------|------|------|------|
| Rating A: | 6 | 10 | 16 | 20 | 25 | 35 |
| $Z_L \Omega$ | 4.29 | 2.35 | 1.47 | 1.00 | 0.80 | 0.67 |

4.

Fuse: BS 88 Part 2 (gG) General purpose

| | | | | | | |
|----------------|------|------|------|------|------|------|
| Rating A: | 6 | 10 | 16 | 20 | 25 | 35 |
| $Z_L \Omega$: | 6.00 | 3.55 | 1.88 | 1.24 | 1.01 | 0.74 |

MCBs AND RCBOs

(An RCBO is a combined MCB and RCD)

Type B: General Purpose, Type C: Motors & Lighting Systems, Type D: Transformers only

5

MCB Type B (I.S. EN 60898) and RCBO Type B (I.S. EN 61009) General Purpose

| | | | | | | |
|----------------|------|------|------|------|------|------|
| Rating A: | 6 | 10 | 16 | 20 | 25 | 32 |
| $Z_L \Omega$: | 5.14 | 3.08 | 1.93 | 1.54 | 1.23 | 0.94 |

6.

MCB Type C (I.S. EN 60898) and RCBO Type C (I.S. EN 61009) Motors, Lighting Systems

| | | | | | | |
|----------------|------|------|------|------|------|------|
| Rating A | 6 | 10 | 16 | 20 | 25 | 32 |
| $Z_L \Omega$: | 2.57 | 1.54 | 0.96 | 0.77 | 0.62 | 0.48 |

7.

MCB Type D (I.S. EN 60898) and RCBO Type D (I.S. EN 61009) For Transformers only

| | | | | | | |
|----------------|------|------|------|------|------|------|
| Rating A: | 6 | 10 | 16 | 20 | 25 | 32 |
| $Z_L \Omega$: | 1.28 | 0.77 | 0.48 | 0.39 | 0.31 | 0.24 |

**TABLE A61C-2: MAXIMUM VALUES OF FAULT-LOOP IMPEDANCE Z_L FOR CIRCUITS
WITH RATINGS EXCEEDING 35A**

Maximum disconnecting time: 5s

FUSES

1.

Fuse: VDE 0635 (DZ) (Class gL) General purpose

| | | | | |
|----------------|------|------|------|------|
| Rating A | 50 | 63 | 80 | 100 |
| $Z_L \Omega$: | 0.74 | 0.54 | 0.34 | 0.26 |

2.

Fuse: VDE 0636 (NO) (NEOZED) General purpose, domestic

| | | | | |
|----------------|------|------|------|------|
| Rating A: | 50 | 63 | 80 | 100 |
| $Z_L \Omega$: | 0.60 | 0.47 | 0.33 | 0.26 |

3.

Fuse: VDE 0636 (NH)

| | | | | |
|----------------|------|------|------|------|
| Rating A | 50 | 63 | 80 | 100 |
| $Z_L \Omega$: | 0.74 | 0.67 | 0.33 | 0.27 |

4.

Fuse: BS 88 Part 2 (gG) General purpose

| | | | |
|----------------|------|------|------|
| Rating A: | 40 | 50 | 63 |
| $Z_L \Omega$: | 0.94 | 0.74 | 0.57 |

MCBs AND RCBOs

(An RCBO is a combined MCB and RCD)

Type B: General Purpose, Type C: Motors & Lighting Systems, Type D: Transformers only

5.

MCB Type B (I.S. EN 60898) and RCBO Type B (I.S. EN 61009) General Purpose

| | | | | |
|----------------|------|------|------|------|
| Rating A: | 40 | 50 | 63 | 80 |
| $Z_L \Omega$: | 0.77 | 0.62 | 0.49 | 0.39 |

6.

MCB Type C (I.S. EN 60898) and RCBO Type C (I.S. EN 61009) Motors, Lighting Systems

| | | | | |
|----------------|------|------|------|------|
| Rating A: | 40 | 50 | 63 | 80 |
| $Z_L \Omega$: | 0.39 | 0.31 | 0.24 | 0.19 |

7.

MCB Type D (I.S. EN 60898) and RCBO Type D (I.S. EN 61009) For Transformers only

| | | | |
|----------------|------|------|------|
| Rating A: | 40 | 50 | 63 |
| $Z_L \Omega$: | 0.19 | 0.15 | 0.12 |