

## **On-Site Guide (BS 7671:2018+A2:2022) – Errata (September 2024)**

This document contains corrections to the first printing of On-Site Guide (BS 7671:2018+A2:2022) Eighth Edition that appear in the 2022 reprint and is intended for immediate implementation. Where appropriate, deleted text has been ruled through and changes and additions shown in red. Sufficient existing text has been included to enable users to identify the nature and application of the change to each provision.

3.7.2.1 has been amended and Figure 3.7.2.1 removed.

12.3 has been amended.

Table B6 has been amended.

## On-Site Guide (BS 7671:2018+A2:2022) – Errata (September 2024)

### Page 33

#### 3.7.2.1 Surge protection requirements

Regulation 443.4.1 of BS 7671 states that:

- ▶ “Protection against transient overvoltages shall be provided where the consequence caused by the overvoltage could result in:
  - (i) serious injury to, or loss of, human life (for example. Hospitals and, care homes, or in the provision of home dialysis equipment)
  - (ii) failure of a safety service, as defined in Part 2
  - (iii) significant financial or data loss.
- ▶ For all other cases, protection against transient overvoltages shall be provided unless the owner of the installation declares it is not required due to any loss or damage being tolerable and they accept the risk of damage to equipment and any consequential loss.”

Therefore, protection against transient overvoltages shall be provided where the consequence caused by overvoltage:

- (a) results in serious injury to, or loss of, human life, (for example hospitals and care homes or in the provision of home dialysis equipment);
- (b) results in the interruption of public services and/or damage to cultural heritage, (for example in data centres or heritage status buildings, such as museums and castles);
- (c) results in the interruption of commercial or industrial activity (for example, in banks, hotels, supermarkets, industrial plants or farms); or
- (d) affects a large number of collocated individuals (for example, in offices, universities, schools or residential tower blocks).

~~For all cases other than those listed above, a risk assessment to determine if protection against transient overvoltages is required (see BS 7671 Appendix 16 and IET Guidance Note 1 for further information):~~

~~**NOTE:** — The protection against lightning risk assessment method of BS EN 62305-2 must be used for high-risk installations such as nuclear or chemical sites where the consequences of transient overvoltages could lead to explosions or harmful chemical or radioactive emissions thus affecting the environment.~~

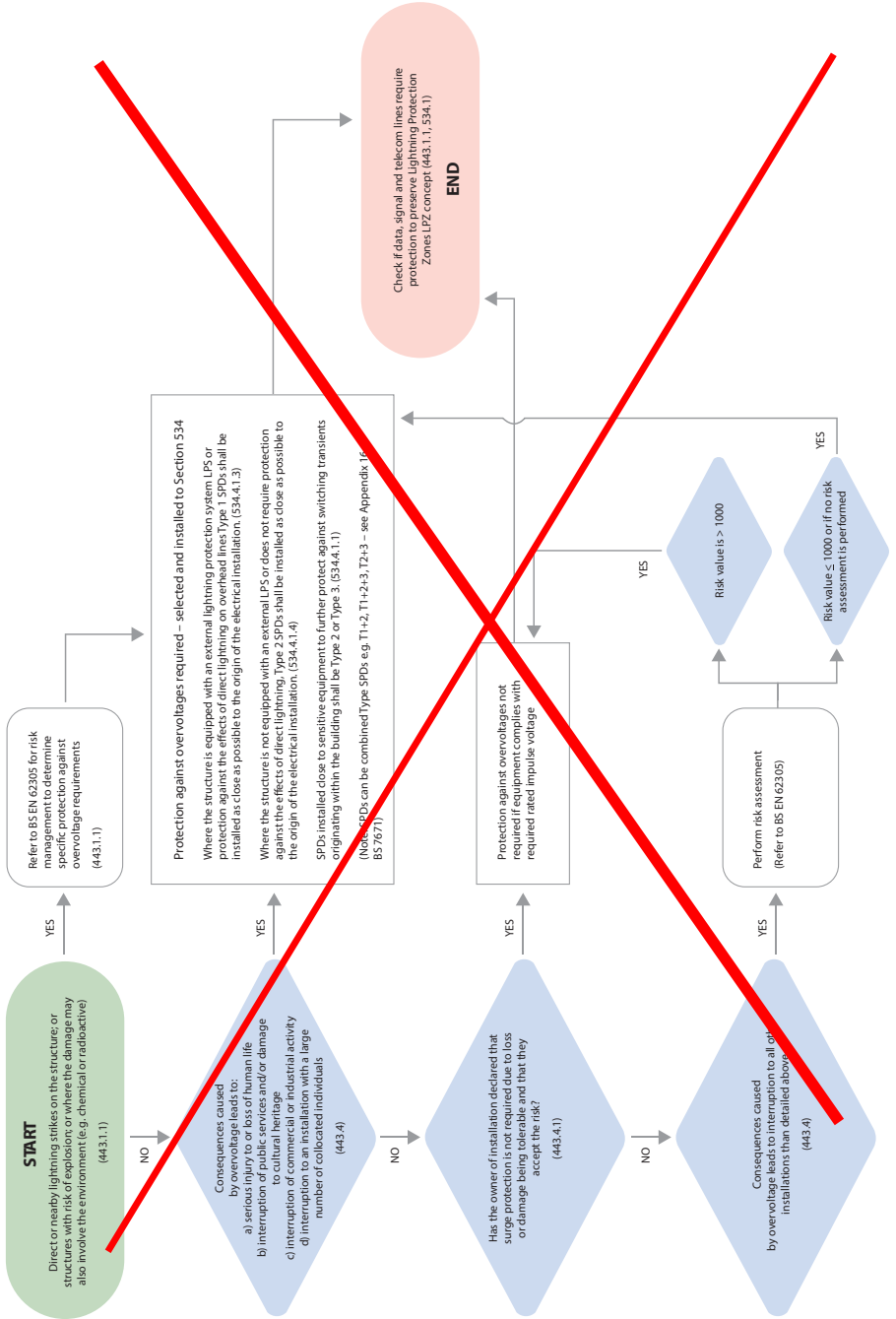
~~The flow chart in Figure 3.7.2.1 is designed to aid the decision-making process for electrical installations within the scope of this Guide. See IET Guidance Note 1 for more information.~~

For all other cases, protection against transient overvoltages shall be provided unless the owner of the installation declares it is not required due to any loss or damage being tolerable, and they accept the risk of damage to equipment and consequential loss.

It is recommended that a record of this declaration is signed by the owner of the installation, usually the Client, and attached to the relevant certification for the installation.

[Figure 3.7.2.1 is removed.]

▼ **Figure 3-7.2.1 SPD decision flow chart for installations within the scope of this Guide**



## **12.3 Operating modes**

The main operating modes that may be adopted for each type of PEI (individual, collective or shared) are:

- (i)** direct feeding mode;
- (ii)** reverse feeding mode; and
- (iii)** island mode.

Storage units can:

- (i)** supply current-using equipment;
- (ii)** be charged by local power supplies; or
- (iii)** be charged by the public network (except when operating in island mode).

~~Except when operating in island mode:~~

Local power supplies can supply:

- (i)** current-using equipment;
- (ii)** local storage units; or
- (iii)** the public network (except when operating in island mode).

~~Except when operating in island mode:~~

▼ **Table B6** Circuit-breakers. Maximum measured earth fault loop impedance (in  $\Omega$ ) at ambient temperature where the overcurrent device is a circuit-breaker to BS 3871 or BS EN 60898 or RCBO to BS EN 61009

**0.1 to 5 second disconnection times**

Circuit-breaker type	Circuit-breaker rating (amperes)														
	3	5	6	10	15	16	20	25	30	32	40	45	50	63	100
1	14-56	8.74	7-28	4-4	2-93	2-76	2-2	1-76	1-47	1-38	1-1	0.98	0.88	0-7	0.44
1 new	14.57	7.29	4.37	2.92	2.74	2.19	1.75	1.46	1.37	1.10				0.70	
2	8-4	5-0	4-2	2-5	1-67	1-58	1-25	1-0	0-83	0.79	0.63	0.56	0-5	0-4	0.25
2 new	8.33	5.00	4.17	2.50	1.57	1.57	1.00	0.84					0.50	0.40	
B	11-65	7-0	5-87	3-5	2-3	2-2	1-75	1-4	1.17	1-1	0.88	0.78	0-7	0.56	0.35
B new	11.66	7.00	5.83	3.50	2.34	2.19	1.40			1.10			0.70		
3&C	5-82	3-49	2-91	1-75	1-16	1-09	0-87	0-7	0-58	0.55	0.44	0-38	0.35	0-27	0-17
C and 3	5.83	3.50	2.92	1.17	1.10	1.10	0.88	0.70	0.59			0.39	0.28	0.18	
D (4.0 s) new		1.46	0.88		0.55	0.44	0.35		0.28	-	-	-	-	-	-
D (5 s) new		2.92	1.75		1.10	0.88	0.70		0.55	0.44			0.35	0.28	0.18

Circuit-breaker type	Circuit-breaker rating (amperes)														
	6	10	16	20	25	32	40	50	63	100					
D-0.4-sec	1.46	0-87	0.55	0.44	0.35	0.28	-	-	-	-	-	-	-	-	-
D-5-sec	2-91	1.75	1-09	0-87	0-7	0.55	0.44	0.35	0.28	0.17					

*Circuit-breakers. Maximum measured earth fault loop impedance (in  $\Omega$ ) at ambient temperature where the overcurrent device is a circuit-breaker to BS EN 60898 type D or RCBO to BS EN 61009-type D*

Regulation 434.5.2 of BS 7671 requires that the protective conductor csa meets the requirements of BS EN 60898-1, -2 or BS EN 61009-1, or the minimum quoted by the manufacturer. The sizes given in Table B7 are for energy limiting class 3, Types B and C devices only.

**Table B6 is replaced.**

▼ **Table B6** Circuit-breakers. Maximum measured earth fault loop impedance (in  $\Omega$ ) at ambient temperature where the overcurrent device is a circuit-breaker to BS 3871 or BS EN 60898 or RCBO to BS EN 61009

**0.1 to 5 second disconnection times**

Circuit-breaker type	Circuit-breaker rating (amperes)														
	3	5	6	10	15	16	20	25	30	32	40	45	50	63	100
1	14.57	8.74	7.29	4.37	2.92	2.74	2.19	1.75	1.46	1.37	1.10	0.98	0.88	0.70	0.44
2	8.33	5.00	4.17	2.50	1.67	1.57	1.25	1.00	0.84	0.79	0.63	0.56	0.50	0.40	0.25
B	11.66	7.00	5.83	3.50	2.34	2.19	1.75	1.40	1.17	1.10	0.88	0.78	0.70	0.56	0.35
C and 3	5.83	3.50	2.92	1.75	1.17	1.10	0.88	0.70	0.59	0.55	0.44	0.39	0.35	0.28	0.18
D (0.4 s)			1.46	0.88		0.55	0.44	0.35		0.28	-	-	-	-	-
D (5 s)			2.92	1.75		1.10	0.88	0.70		0.55	0.44	0.35	0.28	0.18	

Regulation 434.5.2 of BS 7671 requires that the protective conductor csa meets the requirements of BS EN 60898-1, -2 or BS EN 61009-1, or the minimum quoted by the manufacturer. The sizes given in Table B7 are for energy limiting class 3, Types B and C devices only.