

Requirements for Electrical Installations

**Amendment No 1, (AMD 13628)
February 2002**

**IEE Wiring Regulations
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Introduction to Amendment No 1 (AMD 13628) to BS 7671 : 2001

Amendment No 1 to BS 7671 : 2001 provides table ratings specifically for UK National Type insulated and sheathed flat twin cables with protective conductor (Table 4D5A). These ratings are generally greater than those ratings given in Table 4D2A.

Regulation 433-02-04 is amended to require the ratings of ring circuit cables to be not less than 20 A instead of $0.67 I_n$.

Other, generally editorial, changes have been made.

This amendment comes into effect on 1st February 2002.

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Amend 433-02-04 as follows.

433-02-04 For a ring final circuit protected by a 30 A or 32 A protective device complying with BS 88, BS 1361, BS 3036, BS EN 60898, BS EN 60947-2 or BS EN 61009-1 (RCBO) and supplying accessories to BS 1363 and wired with copper conductors, the minimum cross-sectional area of both phase and neutral conductors is 2.5 mm² except for two-core mineral insulated cables to BS 6207 for which the minimum is 1.5 mm². Such ring final circuits are deemed to meet the requirements of Regulation 433-02-01 if the current-carrying capacity (I_z) of the cable is not less than 0.67 times the rated current or the current setting (I_n) of the protective device 20 A, and if, under the intended conditions of use, the load current in any part of the ring is unlikely to exceed for long periods the current-carrying capacity (I_z) of the cable.

Reason: to require that the current carrying capacity of ring circuit cables be not less than 20 A and to require that the load current in any part of ring final circuits is unlikely to exceed I_z for long periods, see Regulation 433-01-01.

Amend 604-02-02(i) and (ii) as follows.

604-02-02

- (i) ~~25 V, 1 phase, SELV~~ - portable hand lamps in confined or damp locations
- (ii) ~~50 V, 1 phase, SELV~~  ~~portable hand lamps in confined or damp locations~~
Deleted by BS 7671 : 2017, Amendment No 1.

Reason: to correct an editorial error.

Amend 607-02-02 as follows.

607-02-02 Equipment having a protective conductor current exceeding 3.5 mA but not exceeding 10 mA, shall either be permanently connected to the fixed wiring of the installation without the use of a plug and socket-outlet or connected by means of a connector-plug and socket complying with BS EN 60309-2.

Reason: to correct an error.

Amend Appendix 4, Contents as follows.

COPPER CONDUCTORS

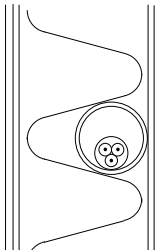
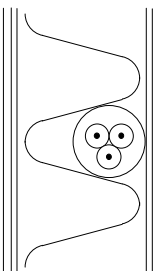
70 °C THERMOPLASTIC (PVC) INSULATED CABLES

- 4D1 Single-core non-armoured, with or without sheath
- 4D2 Multicore non-armoured
- 4D3 Single-core armoured (non-magnetic armour)
- 4D4 Multicore armoured
- 4D5 Flat cable with protective conductor

Reason: to include Table 4D5A added by the amendment.

Amend Table 4A1 as follows.

TABLE 4A1
Schedule of Installation Methods of Cables (including Reference Method)

Installation method		Examples	Appropriate Reference Method for determining current-carrying capacity
Number	Description		
1	2	3	4
6	Sheathed cables in conduit in a thermally insulating wall etc. (otherwise as Reference Method 4)		Method 4 or <u>Method 6 for cable type covered by Table 4D5A.</u>
15	Sheathed cables installed directly in a thermally insulating wall or above a thermally insulating ceiling, the cable being in contact with a thermally conductive surface on one side (otherwise as Reference Method 4)		Method 4 or <u>Method 15 for cable type covered by Table 4D5A.</u>

Reason: to include Table 4D5A added by the amendment. Note, **bold font** is used because the Method is also a Reference Method.

Amend Table 4A2, BS 6004 as follows.

TABLE 4A2
Schedule of appropriate current rating tables

Specification Number	Specification Title	Applicable Current Rating Tables	Conductor Operating Temperature
BS 6004 : 2000	Electric cables. PVC insulated, non-armoured cables for voltages up to and including 450/750 V, for electric power, lighting and internal wiring.	4D1, 4D2 4E1	70 °C, 90 °C
	<u>PVC insulated and sheathed flat cable with protective conductor to Table 8</u>	<u>4D5</u>	<u>70 °C</u>

Reason: to include Table 4D5A added by the amendment.

Amend Table 4D1A, 2.5 mm² conductor, column 2 as follows.

TABLE 4D1A
Single-core 70 °C thermoplastic (pvc) insulated cables, non-armoured, with or without sheath
(COPPER CONDUCTORS)

1	2	3
(mm ²)	(A)	(A)
1	11	10.5
1.5	14.5	13.5
2.5	19.5 <u>20</u>	18
4	26	24
6	34	31

Reason: to recognise the increased current carrying capacities of UK National Type insulated and sheathed flat twin cables with protective conductor.

Add a new table 4D5A as follows.

Reason: to recognise the increased current carrying capacities of UK National Type insulated and sheathed flat twin cables with protective conductor.

TABLE 4D5A
70 °C thermoplastic (pvc) insulated and sheathed flat cable with protective conductor
(COPPER CONDUCTORS)

BS 6004 Table 8

CURRENT-CARRYING CAPACITY (amperes): Ambient temperature: 30 °C
 Conductor operating temperature: 70 °C

Conductor cross-sectional area	Installation Method 6* (Enclosed in conduit in an insulated wall)	Installation Method 15* (Installed directly in an insulated wall)	Reference Method 1 (clipped direct)	Voltage drop (per ampere per metre)
1	1 two-core cable, single-phase a.c. or d.c.			
(mm ²)	(A)	(A)	(A)	(mV/A/m)
1	11.5	12	16	44
1.5	14.5	15	20	29
2.5	20	21	27	18
4	26	27	37	11
6	32	35	47	7.3
10	44	47	64	4.4
16	57	63	85	2.8

NOTES:

1. Where the conductor is to be protected by a semi-enclosed fuse to BS 3036, see item 6.2 of the preface to this appendix.
2. * These methods are regarded as Reference Methods for the cable types specified by the table.