

**TABLE 4D5**

**70°C thermoplastic insulated  
and sheathed flat cable with  
protective conductor  
(COPPER CONDUCTORS)**

**Reproduced from BS7671:2018  
Wiring Regulations**

**CURRENT-CARRYING CAPACITY (amperes) and  
VOLTAGE DROP (per ampere per metre):**

**Ambient temperature: 30°C  
Conductor operating temperature: 70°C**

Conductor cross-sectional area	Method 100# (above a plasterboard ceiling covered by thermal insulation not exceeding 100mm in thickness)	Method 101 # (above a plasterboard ceiling covered by thermal insulation exceeding 100mm in thickness)	Method 102# (in a stud wall with thermal insulation with cable touching the inner wall surface)	Method 103# (in a stud wall with thermal insulation with cable not touching the inner wall surface)	Reference Method C* (clipped direct)	Reference Method A* (enclosed in conduit in an insulated wall)	Voltage drop (per ampere per metre)
1	2	3	4	5	6	7	8
(mm <sup>2</sup> )	(A)	(A)	(A)	(A)	(A)	(A)	(mV/A/m)
1	13	10.5	13	8	16	11.5	44
1.5	16	13	16	10	20	14.5	29
2.5	17	21	13.5	13.5	27	20	18
4	22	27	18.5	18.5	37	26	11
6	27	35	23.5	23.5	47	32	7.3
10	36	47	32	32	64	44	4.4
16	46	63	42.5	42.5	85	57	2.8

A\* - For full installation method refer to Table 4A2 Installation Method 2 but for flat twin and earth cable

C\* - For full installation method refer to Table 4A2 Installation Method 20 but for flat twin and earth cable

100# - For full installation method refer to Table 4A2 Installation Method 100

101# - For full installation method refer to Table 4A2 Installation Method 101

102# - For full installation method refer to Table 4A2 Installation Method 102

103# - For full installation method refer to Table 4A2 Installation Method 103

Wherever practicable, a cable is to be fixed in a position such that it will not be covered with thermal insulation.

Regulation 523.9, BS 5803-5: Appendix C: Avoidance of overheating of electric cables.

Building Regulations Approved Document B and Thermal insulation: avoiding risks, BR 262, BRE, 2001 refer.