

## TABLE 4E2A Multicore 90°C thermosetting insulated cables, non armoured (copper conductors). BS7211

CURRENT-CARRYING CAPACITY (amperes):

Ambient temperature : 30°C  
Conductor operating temperature:90°C

Conductor cross-sectional area	Reference Method 4 (enclosed in an insulated wall etc.)		Reference Method 3 (enclosed in conduit on a wall or ceiling or in trunking etc.)		Reference Method 1 (clipped direct)		Reference Method 11 (on a perforated cable tray) or Reference Method 13 (free air)	
	2 core cable* single phase a.c or d.c.	3 or 4 core cable* three phase a.c.	2 core cable* single phase a.c or d.c.	3 or 4 core cable* three phase a.c.	2 core cable* single phase a.c. or d.c.	3 or 4 core cable* three phase a.c.	2 core cable* single phase a.c. or d.c.	3 or 4 core cable* three phase a.c.
1	2	3	4	5	6	7	8	9
(mm <sup>2</sup> )	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
1	14.5	13	17	15	19	17	21	18
1.5	18.5	16.5	22	19.5	24	22	26	23
2.5	25	22	30	26	33	30	36	32
4	33	30	40	35	45	40	49	42
6	42	38	51	44	58	52	63	54
10	57	51	69	60	80	71	86	75
16	76	68	91	80	107	96	115	100
25	99	89	119	105	138	119	149	127
35	121	109	146	128	171	147	185	158
50	145	130	175	154	209	179	225	192
70	183	164	221	194	269	229	289	246
95	220	197	265	233	328	278	352	298
120	253	227	305	268	382	322	410	346
150	290	259	334	300	441	371	473	399
185	329	295	384	340	506	424	542	456
240	386	346	459	398	599	500	641	538
300	442	396	532	455	693	576	741	621
400	-	-	625	536	803	677	865	741

**NOTES:**

1. Where the conductor is to be protected by a semi-enclosed fuse to BS3036, see item 6.2 of the preface to this appendix within the 16th edition regs.

2. Where a conductor operates at a temperature exceeding 70°C it shall be ascertained that the equipment connected to the conductor is suitable for the conductor operating temperature (see Regulation 512-02)

3 \* With or without a protective conductor

4. For cable in rigid pvc conduit the values stated in table 4D2 are applicable (see Regulation 512-02).

5. Where cables in this table are connected to equipment or accessories designed to operate at a temperature not exceeding 70°C, the current ratings given in the equivalent table for 70°C thermoplastic (pvc) insulated cables (Table 4D4A) shall be used (see Reg 523-01-01)

VOLTAGE DROP (per ampere per metre)

**TABLE 4E2B**

Conductor operating temperature: 90°C

Conductor Cross-Sectional area	2 core cable d.c.	2 core cable single-phase a.c.			3 or 4 core cable three phase a.c.		
1	2	3			4		
(mm <sup>2</sup> )	(mV/A/m)	(mV/A/m)			(mV/A/m)		
1	46	46			40		
1.5	31	31			27		
2.5	19	19			16		
4	12	12			10		
6	7.9	7.9			6.8		
10	4.7	4.7			4.0		
16	2.9	2.9			2.5		
		r	x	z	r	x	z
25	1.85	1.85	0.160	1.90	1.60	0.140	1.60
35	1.35	1.35	0.155	1.35	1.15	0.135	1.15
50	0.98	0.99	0.155	1.00	0.86	0.135	0.87
70	0.67	0.67	0.150	0.69	0.59	0.130	0.60
95	0.49	0.50	0.150	0.52	0.43	0.130	0.45
120	0.39	0.40	0.145	0.42	0.34	0.130	0.37
150	0.31	0.32	0.145	0.35	0.28	0.125	0.30
185	0.25	0.26	0.145	0.29	0.22	0.125	0.26
240	0.195	0.20	0.140	0.24	0.175	0.125	0.21
300	0.155	0.160	0.140	0.21	0.140	0.120	0.185
400	0.120	0.130	0.140	0.190	0.115	0.120	0.165