

## TABLE 4J2A Multicore 90°C thermosetting insulated and thermoplastic sheathed cables, non-armoured (Aluminium Conductors)

CURRENT-CARRYING CAPACITY (amperes):

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

Conductor cross-sectional area	Reference Method A (enclosed in conduit in thermally insulated wall, etc.)		Reference Method B (enclosed in conduit on a wall or in trunking)		Reference Method C (clipped direct)		Reference Method E (in free air or on a perforated cable tray etc horizontal or vertical)	
	1 two core cable, single phase a.c or d.c.	1 three- or four-core cable, three phase a.c.	1 two core cable, single-phase a.c. or d.c.	1 three- or four-core cable, three phase a.c.	1 two core cable single phase a.c. or d.c.	1 three- or four-core cable, three phase a.c.	1 two core cable, single phase a.c. or d.c.	1 three- or four-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)
16	60	55	72	64	84	76	91	77
25	78	71	94	84	101	90	108	97
35	96	87	115	103	126	112	135	120
50	115	104	138	124	154	136	164	146
70	145	131	175	154	198	174	211	187
95	175	157	210	188	241	211	257	227
120	-	180	-	216	-	245	-	263
150	-	206	-	240	-	283	-	304
185	-	233	-	272	-	323	-	347
240	-	237	-	318	-	382	-	409
300	-	313	-	364	-	440	-	471

**NOTES:**

- Where a conductor operates at a temperature exceeding 70°C it must be ascertained that the equipment connected to the conductor is suitable for the conductor operating temperature (see Regulation 512.1.2).
- 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 insulated cables (Table 4H2A) must be used (see also Regulation 523.1)

VOLTAGE DROP (per ampere per metre) **TABLE 4J2B** Conductor operating temperature: 70°C

Conductor cross-sectional area	Two-core cable, d.c.	Two-core cable, single-phase a.c.			Three- or four-core cable, three-phase a.c.		
		r	x	z	r	x	z
1	2	3			4		
(mm <sup>2</sup> )	(mV/A/m)	(mV/A/m)			(mV/A/m)		
16	4.8	4.8			4.2		
25	3.1	3.1	0.165	3.1	2.7	0.140	2.7
35	2.2	2.2	0.160	2.2	1.90	0.140	1.95
50	1.60	1.65	0.160	1.65	1.40	0.135	1.45
70	1.10	1.10	0.155	1.15	0.96	0.135	0.97
95	0.82	0.82	0.150	0.84	0.71	0.130	0.72
120	-	-	-	-	0.56	0.130	0.58
150	-	-	-	-	0.45	0.130	0.47
185	-	-	-	-	0.37	0.130	0.39
240	-	-	-	-	0.28	0.125	0.31
300	-	-	-	-	0.23	0.125	0.26

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