



TABLE 4D3A - Single-core armoured 70 °C thermoplastic insulated cables (non-magnetic armour) (COPPER CONDUCTORS)

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

CURRENT-CARRYING CAPACITY (amperes):

Conductor cross-sectional area	Reference Method C (clipped direct)		Reference Method F (in free air or on a perforated cable tray, horizontal or vertical)								
	Touching		Touching			Spaced by one cable diameter					
	2 cables, single-phase AC or DC flat	3 or 4 cables, three-phase AC flat	2 cables, single-phase AC or DC flat	3 cables, three-phase AC flat	3 cables, three-phase AC trefoil	2 cables, DC		2 cables, single-phase AC		3 or 4 cables, three-phase AC	
						Horizontal	Vertical	Horizontal	Vertical	Horizontal	Vertical
1 (mm ²)	2 (A)	3 (A)	4 (A)	5 (A)	6 (A)	7 (A)	8 (A)	9 (A)	10 (A)	11 (A)	12 (A)
50	193	179	205	189	181	229	216	229	217	230	212
70	245	225	259	238	231	294	279	287	272	286	263
95	296	269	313	285	280	357	340	349	332	338	313
120	342	309	360	327	324	415	396	401	383	385	357
150	393	352	413	373	373	479	458	449	429	436	405
185	447	399	469	422	425	548	525	511	489	490	456
240	525	465	550	492	501	648	622	593	568	566	528
300	594	515	624	547	567	748	719	668	640	616	578
400	687	575	723	618	657	885	851	737	707	674	632
500	763	622	805	673	731	1035	997	810	777	721	676
630	843	669	891	728	809	1218	1174	893	856	771	723
800	919	710	976	777	886	1441	1390	943	905	824	772
1000	975	737	1041	808	945	1685	1627	1008	967	872	816

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Table 4D3B

Conductor operating temperature: 70 °C

VOLTAGE DROP (per ampere per metre):

Conductor cross-sectional area	2 cables, DC	Reference Methods C & F (clipped direct, on tray or free air)														
		2 cables, single-phase AC						3 or 4 cables, three-phase AC								
		touching			spaced*			trefoil and touching			flat and touching			flat and spaced*		
1	2	3			4			5			6			7		
(mm ²)	(mV/A/m)	(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)		
		R	X	Z	R	X	Z	R	X	Z	R	X	Z	R	X	Z
50	0.93	0.93	0.22	0.95	0.92	0.30	0.97	0.80	0.190	0.82	0.79	0.26	0.84	0.79	0.34	0.86
70	0.63	0.64	0.21	0.68	0.66	0.29	0.72	0.56	0.180	0.58	0.57	0.25	0.62	0.59	0.32	0.68
95	0.46	0.48	0.20	0.52	0.51	0.28	0.58	0.42	0.175	0.45	0.44	0.25	0.50	0.47	0.31	0.57
120	0.36	0.39	0.195	0.43	0.42	0.28	0.50	0.33	0.170	0.37	0.36	0.24	0.43	0.40	0.30	0.50
150	0.29	0.31	0.190	0.37	0.34	0.27	0.44	0.27	0.165	0.32	0.30	0.24	0.38	0.34	0.30	0.45
185	0.23	0.26	0.190	0.32	0.29	0.27	0.39	0.22	0.160	0.27	0.25	0.23	0.34	0.29	0.29	0.41
240	0.180	0.20	0.180	0.27	0.23	0.26	0.35	0.175	0.160	0.23	0.20	0.23	0.30	0.24	0.28	0.37
300	0.145	0.160	0.180	0.24	0.190	0.26	0.32	0.140	0.155	0.21	0.165	0.22	0.28	0.20	0.28	0.34
400	0.105	0.140	0.175	0.22	0.180	0.24	0.30	0.120	0.130	0.195	0.160	0.21	0.26	0.21	0.25	0.32
500	0.086	0.120	0.170	0.21	0.165	0.23	0.29	0.105	0.145	0.180	0.145	0.20	0.25	0.190	0.24	0.30
630	0.068	0.105	0.165	0.195	0.150	0.22	0.27	0.091	0.145	0.170	0.135	0.195	0.23	0.175	0.22	0.28
800	0.053	0.095	0.160	0.185	0.145	0.21	0.25	0.082	0.140	0.160	0.125	0.180	0.22	0.170	0.195	0.26
1000	0.042	0.091	0.155	0.180	0.140	0.190	0.24	0.079	0.135	0.155	0.125	0.165	0.21	0.165	0.170	0.24

NOTE: * Spacing's larger than one cable diameter will result in a larger voltage drop.

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