



TABLE 4G1A-Mineral insulated cables thermoplastic covered or bare and exposed to touch (COPPER CONDUCTORS AND SHEATH)

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

CURRENT-CARRYING CAPACITY (amperes):

Conductor cross-sectional area	Reference Method C (clipped direct)			Reference Methods E, F and G (in free air or on a perforated cable tray etc, horizontal or vertical)				
	Single-phase AC or DC	Three-phase AC		Single-phase AC or DC	Three-phase AC			
	2 single-core cables touching or 1 two-core cable	3 single-core cables in trefoil or 1 three-core or four-core cable	3 single-core cables flat and touching, horizontal or vertical	2 single-core cables touching or 1 two-core cable	3 single-core cables in trefoil or 1 three-core or four-core cable	3 single-core cables flat and touching	3 single-core cables flat and spaced by one cable diameter	
							vertical	horizontal
1	2	3	4	5	6	7	8	9
(mm ²)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
Light duty 500V								
1	18.5	15	17	19.5	16.5	18	20	23
1.5	23	19	21	25	21	23	26	29
2.5	31	26	29	33	28	31	34	39
4	40	35	38	44	37	41	45	51
Heavy duty 750V								
1	19.5	16	18	21	17.5	20	22	25
1.5	25	21	23	26	22	26	28	32
2.5	34	28	31	36	30	34	37	43
4	45	37	41	47	40	45	49	56
6	57	48	52	60	51	57	62	71
10	77	65	70	82	69	77	84	95
16	102	86	92	109	92	102	110	125
25	133	112	120	142	120	132	142	162
35	163	137	147	174	147	161	173	197
50	202	169	181	215	182	198	213	242
70	247	207	221	264	223	241	259	294
95	296	249	264	317	267	289	309	351
120	340	286	303	364	308	331	353	402
150	388	327	346	416	352	377	400	454
185	440	371	392	472	399	426	446	507
240	514	434	457	552	466	496	497	565

NOTES:

1. For single-core cables, the sheaths of the circuit are assumed to be connected together at both ends.
2. For bare cables exposed to touch, the tabulated values should be multiplied by 0.9.

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TABLE 4G1B

Sheath operating temperature 70 °C

VOLTAGE DROP (per ampere per metre):

Conductor cross-sectional area	Single-phase AC or DC						Three phase AC											
	2 single-core cables touching			1 two-core cable			1 three- or four-core cable			3 single-core cables in trefoil formation			3 single-core cables flat and touching			3 single-core cables flat and spaced by one cable diameter*		
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)		
1	42			42			36			36			36			36		
1.5	28			28			24			24			24			24		
2.5	17			17			14			14			14			14		
4	10			10			9.1			9.1			9.1			9.1		
6	7			7			6.0			6.0			6.0			6.0		
10	4.2			4.2			3.6			3.6			3.6			3.6		
16	2.6			2.6			2.3			2.3			2.3			2.3		
	R	X	Z	R	X	Z	R	X	Z	R	X	Z	R	X	Z	R	X	Z
25	1.65	0.200	1.65	1.65	0.145	1.65	1.45	0.125	1.45	1.45	0.170	1.45	1.45	0.25	1.45	1.45	0.32	1.50
35	1.20	0.195	1.20	-	-	-	-	-	-	1.05	0.165	1.05	1.05	0.24	1.10	1.05	0.31	1.10
50	0.89	0.185	0.91	-	-	-	-	-	-	0.78	0.160	0.80	0.79	0.24	0.83	0.82	0.31	0.87
70	0.62	0.180	0.64	-	-	-	-	-	-	0.54	0.155	0.56	0.55	0.23	0.60	0.58	0.30	0.65
95	0.46	0.175	0.49	-	-	-	-	-	-	0.40	0.150	0.43	0.41	0.22	0.47	0.44	0.29	0.53
120	0.37	0.170	0.41	-	-	-	-	-	-	0.32	0.150	0.36	0.33	0.22	0.40	0.36	0.28	0.46
150	0.30	0.170	0.34	-	-	-	-	-	-	0.26	0.145	0.30	0.29	0.21	0.36	0.32	0.27	0.42
185	0.25	0.165	0.29	-	-	-	-	-	-	0.21	0.140	0.26	0.25	0.21	0.32	0.28	0.26	0.39
240	0.190	0.160	0.25	-	-	-	-	-	-	0.165	0.140	0.22	0.21	0.20	0.29	0.26	0.25	0.36

NOTE: * Spacings larger than one cable diameter will result in a larger voltage drop.

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