



**TABLE 4H1A - Single-core 70 °C thermoplastic insulated cables, non-armoured, with or without sheath
(ALUMINIUM CONDUCTORS)**

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

CURRENT-CARRYING CAPACITY (amperes):

Conductor cross-sectional area	Reference Method A (enclosed in conduit in thermally insulating wall etc.)		Reference Method B (enclosed in conduit on a wall or in trunking etc.)		Reference Method C (clipped direct)		Reference Method F (in free air on a perforated cable tray, horizontal or vertical)				
							Touching			Spaced by one diameter	
	2 cables, single-phase AC or DC	3 or 4 cables, three-phase AC	2 cables, single-phase AC or DC	3 or 4 cables, three-phase AC	2 cables, single-phase AC or DC flat and touching	3 or 4 cables, three-phase AC flat and touching or trefoil	2 cables, single-phase AC or DC flat	3 cables, three-phase AC flat	3 cables, three-phase AC trefoil	2 cables, single-phase AC or DC or 3 cables three-phase AC flat	
										Horizontal	Vertical
1	2	3	4	5	6	7	8	9	10	11	12
(mm ²)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
50	93	(A)	118	(A)	125	110	149	133	128	169	152
70	118	84	150	104	160	140	192	173	166	217	196
95	142	107	181	133	195	170	235	212	203	265	241
120	164	129	210	161	226	197	273	247	237	308	282
150	189	149	234	186	261	227	316	287	274	356	327
185	215	170	266	204	298	259	363	330	316	407	376
240	252	194	312	230	352	305	430	392	375	482	447
300	289	227	358	269	406	351	497	455	434	557	519
380		261	413	306	511	472	543	502	507	625	584
480			477	352	591	546	629	582	590	726	680
600			545	405	679	626	722	669	680	837	787
740				462	771	709	820	761	776	956	902
960		-			900	823	953	886	907	1125	1066
1200					1022	926	1073	999	1026	1293	1229

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TABLE 4H1B

Conductor operating temperature: 70 °C
 VOLTAGE DROP (per ampere per metre):

Conductor cross-sectional area	2 cables, DC	2 cables, single-phase AC									3 or 4 cables, three-phase AC											
		Reference Methods A & B (enclosed in conduit or trunking)			Reference Methods C & F (clipped direct, on tray or in free air)						Reference Methods A & B (enclosed in conduit or trunking)			Reference Methods C & F (clipped direct, on tray or in free air)								
					Cables touching			Cables spaced*						Cables touching, Trefoil			Cables touching, Flat			Cables spaced*, Flat		
1	2	3			4			5			6			7			8			9		
(mm ²)	(mV/A/m)	(mV/A/m)			(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	R	X	Z	R	X	Z
50	1.55	1.60	0.30	1.60	1.55	0.190	1.55	1.55	0.28	1.55	1.35	0.26	1.40	1.35	0.165	1.35	1.35	0.24	1.35	1.35	0.32	1.40
70	1.05	1.10	0.30	1.15	1.05	0.185	1.05	1.05	0.27	1.10	0.94	0.26	0.97	0.91	0.160	0.92	0.91	0.24	0.94	0.91	0.31	0.96
95	0.77	0.81	0.29	0.86	0.77	0.185	0.79	0.77	0.27	0.82	0.70	0.25	0.74	0.67	0.160	0.69	0.67	0.23	0.71	0.67	0.31	0.74
120	0.61	0.64	0.29	0.70	0.61	0.180	0.64	0.61	0.27	0.67	0.55	0.25	0.61	0.53	0.155	0.55	0.53	0.23	0.58	0.53	0.31	0.61
150	0.49	0.51	0.28	0.59	0.49	0.175	0.52	0.49	0.26	0.55	0.45	0.24	0.51	0.42	0.155	0.45	0.42	0.23	0.48	0.42	0.30	0.52
185	0.39	0.42	0.28	0.50	0.40	0.175	0.43	0.39	0.26	0.47	0.36	0.24	0.44	0.34	0.150	0.37	0.34	0.23	0.41	0.34	0.30	0.46
240	0.30	0.32	0.27	0.42	0.30	0.170	0.35	0.30	0.26	0.40	0.28	0.24	0.37	0.26	0.150	0.30	0.26	0.22	0.35	0.26	0.30	0.40
300	0.24	0.26	0.27	0.37	0.24	0.170	0.30	0.24	0.26	0.35	0.23	0.23	0.32	0.21	0.145	0.26	0.21	0.22	0.31	0.21	0.30	0.36
380	0.190	0.22	0.27	0.35	0.195	0.165	0.26	0.195	0.25	0.32	0.190	0.23	0.30	0.170	0.145	0.22	0.170	0.22	0.28	0.170	0.29	0.34
480	0.150	0.18	0.26	0.32	0.155	0.165	0.23	0.155	0.25	0.29	0.155	0.23	0.27	0.140	0.140	0.195	0.140	0.22	0.26	0.135	0.29	0.32
600	0.120	0.150	0.26	0.30	0.130	0.160	0.21	0.125	0.25	0.28	0.125	0.22	0.26	0.110	0.140	0.180	0.110	0.22	0.24	0.110	0.29	0.31
740	0.099				0.105	0.160	0.190	0.100	0.25	0.27				0.094	0.135	0.165	0.094	0.21	0.23	0.089	0.29	0.30
960	0.075				0.086	0.155	0.180	0.082	0.24	0.26				0.077	0.135	0.155	0.077	0.21	0.22	0.071	0.29	0.29
1200	0.060				0.014	0.151	0.110	0.068	0.24	0.25				0.066	0.135	0.150	0.066	0.21	0.22	0.059	0.28	0.29

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

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