

## SWA 1kV multicore 90°C cables

The following tables are extract from the IEE Wiring Regulations, 17<sup>th</sup> Edition – Multicore Armoured Thermoplastic Insulated Cables with Copper Conductors at 90°C (tables 4E4A & 4E4B), such as XLPE/SWA/PVC to BS5467 & XLPE/SWA/LSZH to BS6724.

The figures shown are to be considered as guiding values only.

For lower conductor temperatures see SWA 1kV multicore 70°C current ratings.

### Current Carrying Capacity in Ampere (Amps)

Based on an operating temperature at conductor of 90°C, an ambient air temperature of 30°C and an ambient ground temperature of 20°C.

For 2 core cables it is presumed to be single-phase AC or DC, for 3 or 4 cables it is presumed to be 3-phase AC.

Conductor Area (mm <sup>2</sup> )	C) One cable clipped direct.		D) One cable in ducts or in ground.		E) One cable in free air or on a perforated cable tray.	
	2 core	3 or 4 core	2 core	3 or 4 core	2 core	3 or 4 core
1.5	27	23	25	21	29	25
2.5	36	31	33	28	39	33
4.0	49	42	43	36	52	44
6.0	62	53	53	44	66	56
10	85	73	71	58	90	78
16	110	94	91	75	115	99
25	146	124	116	96	152	131
35	180	154	139	115	188	162
50	219	187	164	135	228	197
70	279	238	203	167	291	251
95	338	289	239	197	354	304
120	392	335	271	223	410	353
150	451	386	306	251	472	406
185	515	441	343	281	539	463
240	607	520	395	324	636	546
300	698	599	446	365	732	628
400	757	673	-	-	847	728

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Voltage Drop (mV, per ampere, per metre)							
Conductor operating temperature 90°C							
Conductor Area (mm <sup>2</sup> )	2 core D.C.	Two-core cable single phase A.C.			Three or four-core cable three-phase A.C.		
1.5	31	31			27		
2.5	19	19			16		
4.0	12	12			10		
6.0	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	1.9	1.6	0.140	1.65
35	1.35	1.35	0.155	1.35	1.15	0.135	1.15
50	0.98	0.99	0.155	1.0	0.88	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	0.16	0.140	0.21	0.140	0.120	0.185
400	0.120	0.13	0.140	0.19	0.115	0.120	0.165

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