Armour Resistance and Conductivity

Conductor, Armour resistance and percentage conductivity of 2, 3 and 4 core cables.

PVC to BS6346, XLPE to BS5467 or BS6724 (Copper Conductors)

Resistance Values

Nominal area of conductor mm²	Maximum resistance per km of cable at 20°C (ohms)						
	Copper Conductor	Two core PVC	Two core XLPE	Three core PVC	Three core XLPE	Four core PVC	Four core XLPE
1.5	12.1	10.7	9.4	10.2	9.1	9.5	8.5
2.5	7.41	9.1	8.8	8.8	8.2	7.9	7.7
4	4.61	7.5	7.9	7.0	7.5	4.6	6.8
6	3.08	6.8	7.0	4.6	6.6	4.1	4.3
10	1.83	3.9	6.0	3.7	4.0	3.4	3.7
15	1.15	3.5	3.8	3.2	3.6	2.2	3.2
25	0.727	2.6	3.7	2.4	2.5	2.1	2.3
35	0.524	2.4	2.5	2.1	2.3	1.9	2.0
50	0.387	2.1	2.3	1.9	2.0	1.3	1.8
70	0.268	1.9	2.0	1.4	1.8	1.2	1.2
95	0.193	1.3	1.4	1.2	1.3	0.98	1.1
120	0.153	1.2	1.3	1.1	1.2	0.71	0.76
150	0.124	1.1	1.2	0.74	0.78	0.65	0.68
185	0.0991	0.78	0.82	0.68	0.71	0.59	0.61
240	0.0754	0.69	0.73	0.60	0.63	0.52	0.54
300	0.0601	0.63	0.67	0.54	0.58	0.47	0.49
400	0.0470	0.56	0.59	0.49	0.52	0.34	0.35

Maximum armour conductivity expressed as a percentage (%) of one phase conductor

Nominal area of conductor mm²	Two core PVC %	Two core XLPE %	Three core PVC %	Three core XLPE %	Four core PVC %	Four core XLPE %
1.5	113	129	118	133	127	142
2.5	80	84	83	90	92	96
4	61	58	66	61	100	68
6	45	44	67	47	75	71
10	47	30	49	46	54	49
15	33	30	37	32	52	36
25	28	20	30	29	34	31
35	22	21	25	23	27	26
50	18	17	20	19	30	21
70	14	14	20	15	22	22
95	15	14	16	15	19	17
120	13	12	14	13	21	20
150	11	10	17	16	19	18
185	12	12	14	14	17	16
240	11	10	12	12	14	14
300	9	9	11	10	13	12
400	8	8	9	9	14	13

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