Conductor Resistance

Extracted from DIN VDE 0295, IEC 60228 and HD 383.
Maximum resistance of bunched conductors @ 20°C.

Cross Section (mm^2)	Copper Conductor Plain Wires (Ω/km)		Copper Conductor Tinned Wires (Ω/km)	
	Stranding Class 1 and 2	Stranding Class 5 and 6	Stranding Class 1 and 2	Stranding Class 5 and 6
0.05	-	380	-	392
0.08	-	237	-	244
0.11	-	170	-	175
0.12	-	150	-	155
0.14	-	134	-	138
0.22	-	96	-	99
0.25	-	76	-	79
0.34	-	53	-	56
0.50	36.0	39	36.7	40.1
0.75	24.5	26	24.8	26.7
1.0	18.1	19.5	18.2	20.0
1.5	12.1	13.3	12.2	13.7
2.5	7.41	7.98	7.56	8.21
4	4.61	4.95	4.70	5.09
6	3.08	3.30	3.11	3.39
10	1.83	1.91	1.84	1.95
16	1.15	1.21	1.16	1.24
25	0.727	0.780	0.734	0.795
35	0.524	0.554	0.529	0.565
50	0.387	0.386	0.391	0.393
70	0.268	0.272	0.270	0.277
95	0.193	0.206	0.195	0.210
120	0.153	0.161	0.154	0.164
150	0.124	0.129	0.126	0.132
185	0.0991	0.106	0.100	0.108
240	0.0754	0.0801	0.0762	0.0817
300	0.0601	0.0641	0.0607	0.0654
400	0.0470	0.0486	0.0475	0.0495
500	0.0366	0.0384	0.0369	0.0391
630	0.0283	0.0287	0.0289	0.0292
500			680	820

The values are extracted from DIN VDE 0295 (equivalent with IEC 60228 and HD 383), according to cross-sections and conductor classes to give the maximum resistance value of bunched conductors at 20°C.