

III General Information

Table 8: Conductor Comparisons AWG - Metric

Comparison of plain annealed copper conductors acc. to ICEA S-61-402 and IEC 60228

Conductor Size		No. of wires ²⁾	Electrical Resistance ³⁾	
AWG or kcmil	Metric ¹⁾ (mm ²)		IEC ⁴⁾ (Ω/km)	ICEA ⁵⁾ (Ω/km)
16	1.31	7	-	13.98
-	1.5	7	12.1	-
15	1.65	7	-	11.04
14	2.08	7	-	8.80
-	2.5	7	7.41	-
13	2.63	7	-	6.96
12	3.31	7	-	5.55
-	4	7	4.61	-
11	4.17	7	-	4.38
10	5.261	7	-	3.48
-	6	7	3.08	-
9	6.631	7	-	2.760
8	8.367	7	-	2.181
-	10	7	1.83	-
7	10.55	7	-	1.736
6	13.30	7	-	1.375
-	16	7	1.15	-
5	16.77	7	-	1.087
4	21.15	7	-	0.863
-	25	7	0.727	-
3	26.67	7	-	0.686
2	33.62	7	-	0.542
-	35	7	0.524	-
1	42.41	19	-	0.432
-	50	19	0.387	-
1/0	53.49	19	-	0.341
2/0	67.43	19	-	0.2710
-	70	19	0.268	-
3/0	85.01	19	-	0.2148
-	95	19	0.193	-
4/0	107.2	19	-	0.1706
-	120	37	0.153	-
250	127	37	-	0.1442
-	150	37	0.124	-
300	152	37	-	0.1204
350	177	37	-	0.1030
-	185	37	0.0991	-
400	203	37	-	0.0900
450	228	37	-	0.0803
-	240	61	0.0754	-
500	253	37	-	0.0723
550	279	61	-	0.0656
-	300	61	0.0601	-
600	304	61	-	0.0602
650	329	61	-	0.0555
700	355	61	-	0.0515
750	380	61	-	0.0482
-	400	61	0.0470	-
800	405	61	-	0.0452
900	456	61	-	0.0401
-	500	61	0.0366	-
1000	507	61	-	0.0361
1100	557	91	-	0.0328
1200	608	91	-	0.0301
-	630	91	0.0283	-
1250	633	91	-	0.0289
1300	659	91	-	0.0278
1400	709	91	-	0.0258
1500	760	91	-	0.0241
-	800	91	0.0221	-
1600	811	127	-	0.0225
1700	861	127	-	0.0212
1750	887	127	-	0.0206
1800	912	127	-	0.0200
1900	963	127	-	0.0190
-	1000	91	0.0176	-

1) Sizes acc. to IEC 60228 printed in bold letters

2) Minimum numbers of wires for the corresponding cross-section acc. to IEC 60228

3) The value for the electrical resistance is given for 20 °C (68.0 °F)

4) The value for the electrical resistance acc. to IEC is for the finished cable and cores in layers

5) The value for the electrical resistance acc. to ICEA S-61-402 is calculated for "one layer of conductors"

Table 9: Cable Abbreviations

Abbreviations used by KERPEN for power and control cables	
Y	Insulation or sheath of polyvinyl chloride PVC
2X	Insulation of cross-linked polyethylene XLPE
H	Sheath of zero halogen flame retardant compound LSZH(Low Smoke Zero Halogen)
R	Armour of galvanized round steel wires
B	Armour of galvanized steel tapes - double layer
Q	Armour of galvanized steel wire braid
K	Lead sheath
-fl	Cable with reduced flame propagation

CABLE PROGRAMME

- ◆ INSTRUMENTATION AND CONTROL CABLES



- ◆ THERMOCOUPLE EXTENSION AND COMPENSATING CABLES



- ◆ POWER CABLES
(LOW AND MEDIUM VOLTAGE)



- ◆ TELECOMMUNICATION CABLES



- ◆ DATA AND BUS CABLES
COPPER AND FIBRE OPTIC



- ◆ MINING CABLES



- ◆ CABLES FOR SPECIAL APPLICATIONS



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