

Bare Copper Wire, Stranded (Metric, IEC, JIS, CNS, DIN)

Wire Size mm ²	Stranding/ Wire Diameter no./mm	Cross Section mm ²	Cable Diameter mm	DC Resistance Ω/km @ 20°C	Tensile Strength kgf
10	7/1.4	10.78	4.2	< 1.6490	> 452
16	7/1.7	15.89	5.1	1.1500	662
25	7/2.1	24.94	6.4	0.7538	1,035
30	7/2.3	29.09	6.9	0.6180	1,170
35	7/2.5	35.19	7.6	0.5319	1,460
50	19/1.8	49.97	9.0	0.3805	1,970
70	19/2.1	70.27	10.5	0.2795	2,908
95	19/2.5	93.26	12.5	0.1972	3,870
120	19/2.8	120.36	14.2	0.1572	4,986
150	37/2.3	147.11	16.0	0.1259	6,105
185	37/2.5	184.54	17.7	0.1020	7,665
240	37/2.8	232.73	19.8	0.0656	9,658
300	37/3.2	299.43	22.5	0.0518	12,426
400	61/2.9	402.90	26.1	0.0450	15,900
500	61/3.2	490.60	28.8	0.0370	19,300

Bare Copper Wire, Stranded (AWG, American Wire Gauge)

Wire Code	Cross Section MCM	Cross Section mm ²	No. of Strands	Cable Diameter mm	DC Resistance Ω /km @ 20°C	Tensile Strength kgf
10	10.38	5.261	7	2.95	3.478	223
9	13.09	6.632	7	3.30	2.757	280
8	16.51	8.368	7	3.70	2.186	352
7	20.82	10.55	7	4.20	1.734	443
6	26.25	13.30	7	4.70	1.375	557
5	33.10	16.77	7	5.25	1.090	699
4	41.74	21.15	7	5.90	0.8648	879
3	52.63	26.67	7	6.60	0.6857	1,104
2	66.37	33.63	7	7.40	0.5440	1,381
1	83.69	42.41	19	8.45	0.4311	1,769
1/0	105.5	53.48	19	9.45	0.3419	2,223
2/0	133.1	67.42	19	10.6	0.2712	2,790
3/0	167.8	85.03	19	11.9	0.2151	3,492
4/0	211.6	107.2	19	13.4	0.1706	4,362
250 MCM		126.6	37	14.6	0.1443	5,244
300 MCM		152.0	37	16.0	0.1203	6,291
350 MCM		175.4	37	17.3	0.1031	7,285
400 MCM		202.7	37	18.5	0.09002	8,310
500 MCM		253.4	37	20.7	0.07218	10,210
750 MCM		380.0	61	25.4	0.04818	15,460
1000 MCM		506.7	61	29.3	0.03609	20,430
1250 MCM		633.4	91	32.7	0.02887	25,530
1500 MCM		760.0	91	35.9	0.02406	30,640
1750 MCM		886.4	127	38.8	0.02062	35,740
2000 MCM		1,014	127	41.5	0.01805	40,850

Note: MCM =1,000cm;1cm=0.0005067mm²,or 1mm²=1973.5cm/2 MCM

Bare Copper Wire, Solid (AWG, American Wire Gauge)

Wire Code	Cross Section MCM	Cross Section mm ²	Cable Diameter mm	D DC Resistance Ω/km @ 20°C	Tensile Strength kgf
14	4.107	2.081	1.63	8.615	96.8
13	5.178	2.624	1.83	6.834	122
12	6.530	3.309	2.05	5.420	153
11	8.234	4.172	2.31	4.298	192
10	10.38	5.261	2.95	3.409	240
9	13.09	6.632	3.30	2.703	300
8	16.51	8.368	3.70	2.143	375
7	20.82	10.55	4.20	1.700	467
6	26.25	13.30	4.70	1.348	581
5	33.10	16.77	5.25	1.069	722
4	41.74	21.15	5.90	0.8478	894
3	52.63	26.67	6.60	0.6722	1,110
2	66.37	33.63	7.40	0.5331	1,360
1	83.69	42.41	8.45	0.4229	1,670
1/0	105.5	53.48	9.45	0.3317	2,050
2/0	133.1	67.42	10.6	0.2632	2,500
3/0	167.8	85.03	11.9	0.2087	3,050

Standard Reinforcement Bar (Rebar) Sizes

Rebar Code	Diameter mm	Diameter inch	Circumference cm	D Cross Section mm ²	Equivalent * Copper Wire mm ²
10	9.53	0.375	3.0	71.33	5.706
13	12.7	0.500	4.0	126.7	10.14
16	15.9	0.625	5.0	198.6	15.89
19	19.1	0.759	6.0	286.5	22.92
22	22.2	0.875	7.0	387.0	30.96
25	25.4	1.000	8.0	506.7	40.54
29	28.7	1.128	9.0	646.9	51.75
32	32.2	1.270	10.1	814.3	65.14
36	35.8	1.410	11.3	1007	80.56
39	39.4	1.551	12.4	1219	97.52
43	43.0	1.693	13.5	1452	116.2
50	50.2	1.976	15.8	1979	158.3
57	57.3	2.257	18.0	2579	206.3

*Note: Steel has 8% conductivity of copper.(Copper=100%,Steel=8%)