

Metric Conversions

Superior Essex uses the U.S. customary system of weights and measures as well as the metric equivalents. If you need help calculating these figures, please consult the conversion charts below.

INTO METRIC CONVERSIONS			
	If You Know	Multiply By	To Get
Length	milli-inch (mil)	25.40	microns (µm)
	inches (in)	25.40	millimeters (mm)
	inches (in)	2.54	centimeters (cm)
	feet (ft)	30.48	centimeters (cm)
	yards (yd)	0.91	meters (m)
	miles (mi)	1.61	kilometers (km)
Area	sq. inches (in ²)	6.45	sq. centimeters (cm ²)
	sq. feet (ft ²)	0.09	sq. meters (m ²)
	sq. yards (yd ²)	0.84	sq. meters (m ²)
	sq. miles (mi ²)	2.59	sq. kilometers (km ²)
	acres	0.40	hectares (ha)
Mass (Weight)	ounces (oz)	28.35	grams (g)
	pounds (lb)	0.45	kilograms (kg)
	short tons	0.91	tons (t)
Temperature	Fahrenheit (°F)	Subtract 32, then multiply by 0.56	Celsius (°C)
Mass per Length	pounds per 1,000 feet (lbs/kft)	1.49	kilograms per kilometers (kg/km)
Force	pounds force (lbf)	4.45	newtons (N)
	foot-pounds (ft-lb)	1.36	newtons-meters (N-m)
	pounds force per inches (lbf/in)	1.75	newtons per centimeters (N/cm)
	pounds per sq. inches (PSI)	6.89	kiloPascals (kPa)

OUT OF METRIC CONVERSIONS			
	If You Know	Multiply By	To Get
Length	microns (µm)	0.04	milli-inch (mil)
	millimeters (mm)	0.04	inches (in)
	centimeters (cm)	0.39	inches (in)
	meters (m)	3.28	feet (ft)
	meters (m)	1.09	yards (yd)
	kilometers (km)	3,280.84	feet (ft)
	kilometers (km)	0.62	miles (mi)
Area	sq. centimeters (cm ²)	0.16	sq. inches (in ²)
	sq. meters (m ²)	1.20	sq. yards (yd ²)
	sq. kilometers (km ²)	0.39	sq. miles (mi ²)
	hectares (ha)	2.47	acres
Weight	grams (g)	0.04	ounces (oz)
	kilograms (kg)	2.20	pounds (lb)
	tons (t)	1.10	short tons
Temperature	Celsius (°C)	Multiply by 1.80, then add 32	Fahrenheit (°F)
Weight per Unit Length	kilograms per kilometers (kg/km)	0.67	pounds per 1,000 feet (lbs/kft)
Force	newtons (N)	0.22	pounds force (lbf)
	newtons-meters (N-m)	0.74	foot-pounds (ft-lb)
	newtons per centimeters (N/cm)	0.57	pounds force per inches (lbf/in)
	kiloPascals (kPa)	0.15	pounds per sq. inches (PSI)

American Wire Gauge Sizes

The table below shows various data including both the resistance of the various wire gauges and the resistance (Ω) per unit length. The diameter information in the table applies to solid wires. Stranded wires are calculated by determining the equivalent cross sectional copper area. The table below assumes DC, or AC frequencies equal to or less than 60 Hz, and does not take skin effect into account.

AMERICAN WIRE GAUGE (AWG) SIZES				
AWG	Diameter		Copper Resistance*	
	in	mm	(Ω/km)	(Ω/kft)
0000 (4/0)	0.4600	11.684	0.1608	0.04901
000 (3/0)	0.4096	10.404	0.2028	0.06180
00 (2/0)	0.3648	9.266	0.2557	0.07793
0 (1/0)	0.3249	8.252	0.3224	0.09827
1	0.2893	7.348	0.4066	0.1239
2	0.2576	6.544	0.5127	0.1563
3	0.2294	5.827	0.6465	0.1970
4	0.2043	5.189	0.8152	0.2485
5	0.1819	4.621	1.028	0.3133
6	0.1620	4.115	1.296	0.3951
7	0.1443	3.665	1.634	0.4982
8	0.1285	3.264	2.061	0.6282
9	0.1144	2.906	2.599	0.7921
10	0.1019	2.588	3.277	0.9989
11	0.0907	2.305	4.132	1.260
12	0.0808	2.053	5.211	1.588
13	0.0720	1.828	6.571	2.003
14	0.0641	1.628	8.286	2.525
15	0.0571	1.450	10.45	3.184
16	0.0508	1.291	13.17	4.016
17	0.0453	1.150	16.61	5.064
18	0.0403	1.024	20.95	6.385
19	0.0359	0.912	26.42	8.051
20	0.0320	0.812	33.31	10.15
21	0.0285	0.723	42.00	12.80
22	0.0253	0.644	52.96	16.14
23	0.0226	0.573	66.79	20.36
24	0.0201	0.511	84.22	25.67
25	0.0179	0.455	106.2	32.37
26	0.0159	0.405	133.9	40.81
27	0.0142	0.361	168.9	51.47
28	0.0126	0.321	212.9	64.90

*Figure for solid copper wire at 68°F, computed based on 100% IACS conductivity of 58.0 MS/m.