# **Metric Conversion Guide**

### **Conversion Factors**

Metric units are used for most linear, weight, and temperature measurements, as well as for thread descriptions.

Inch x 25.40 = Millimeters Length Millimeters x 0.03937 = Inches

Feet x 0.3048 = Meters Meters x 3.281 = Feet Miles x 1.609 = Kilometers Kilometers x 0.6214 = Miles

 $Ohms/Kilometer \times 0.3048 = Ohms/1000 ft.$ Ohms/1000 ft. x 3.2808 = Ohms/Kilometer

Sq. Inch x 6.452 = Sq. Centimeter Area

Sq. Centimeter  $\times$  0.1550 = Sq. Inch Sq. Foot x 0.0929 = Sq. Meter Sq. Meter x 10.76 = Sq. Foot Sq. Mile x = 2.590 = Sq. Kilometer Sq. Kilometer x 0.3861 = Sq. Mile  $\dot{\text{Circular Mil x 1,000,000}} = \dot{\text{Circular In.}}$ Circular Mil  $\times$  0.7854 = Sq. Mil

Volume Cu. Inch x 16.39 = Cu. Centimeter Cu. Centimeter x 0.06102 = Cu. In.

Cu. Foot x 0.02832 = Cu. Meter Cu. Meter x 35.31 = Cu. Foot

Mass Ounce x 28.35 = Gram

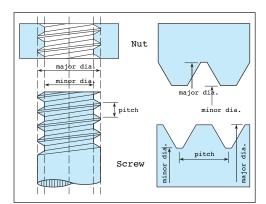
Gram x 0.03527 = Ounce Pound x 0.4536 = Kilogram Kilogram x 2.205 = Pound

#### **Metric Threads**

Most threaded components and components with mounting holes (such as AC power inlets) listed in this catalog are referred to in terms of their metric dimensions. For example, an M3 mounting hole indicates that the hole is sized for an M3 mounting screw. The metric screw will be referred to in the following format:

#### M3 X 0.50

As these drawings illustrate, M3 refers to a major diameter of 3mm. The pitch or distance between threads is 0.50mm.



AWG to Metric Wire Sizes Conversion Chart						
AWG	Equivalent in mm <sup>2</sup>					
20	0.519					
18	0.824					
17	1.04					
16	1.31					
15	1.65					
14	2.08					
13	2.63					
12	3.31					
11	4.17					
10	5.26					
9	6.63					
8	8.37					
7	10.6					
6	13.3					
5	16.8					
4	21.2					
3	26.7					
2	33.6					
1	42.4					

Metric Prefixes							
Tera	10 <sup>12</sup>	T					
Giga	10 <sup>9</sup>	G					
Mega	10 <sup>6</sup>	М					
Kilo	10³	k					
Hecto	10 <sup>2</sup>	h					
Deca	10¹	da					
Deci	10 <sup>-1</sup>	d					
Centi	10 <sup>-2</sup>	С					
Milli	10 <sup>-3</sup>	m					
Micro	10 <sup>-6</sup>	μ					
Nano	10 <sup>-9</sup>	n					
Pico	10-12	р					

## **Temperature Conversion (Fahrenheit to Celsius)**

°F °C	°F °C	°F °C	°F °C	°F °C	°F °C	°F °C	°F °C
- 40 40.00	15 9.44	50 10.00	85 29.44	120 48.89	155 68.33	190 87.78	325162.78
- 38 38.89	16 8.89	51 10.56	86 30.00	121 49.44	156 68.88	191 88.33	330165.56
- 36 37.78	17 8.33	52 11.11	87 30.56	122 50.00	157 69.44	192 88.88	335168.33
- 34 36.67	18 7.78	53 11.67	88 31.11	123 50.55	158 70.00	193 89.44	340171.11
- 32 35.56	19 7.22	54 12.22	89 31.67	124 51.11	159 70.55	194 90.00	345173.89
- 30 34.44	20 6.67	55 12.78	90 32.22	125 51.67	160 71.11	195 90.55	350176.67
- 28 33.33	21 6.11	56 13.33	91 32.78	126 52.22	161 71.66	196 91.11	355179.44
- 26 32.22	22 5.56	57 13.89	92 33.33	127 52.77	162 72.22	197 91.66	360182.22
- 24 31.11	23 5.00	58 14.44	93 33.89	128 53.33	163 72.77	198 92.22	365185.00
- 22 30.00	24 4.44	59 15.00	94 34.44	129 53.88	164 73.33	199 92.77	370187.78
- 20 28.89	25 3.89	60 15.56	95 35.00	130 54.44	165 73.89	200 93.33	375190.55
- 18 27.78	26 3.33	61 16.11	96 35.56	131 55.00	166 74.44	205 96.11	380193.33
- 16 26.67	27 2.78	62 16.67	97 36.11	132 55.55	167 75.00	210 98.89	385196.11
- 14 25.56	28 2.22	63 17.22	98 36.67	133 56.11	168 75.55	215101.67	390198.89
- 12 24.44	29 1.67	64 17.78	99 37.22	134 56.66	169 76.11	220104.44	395201.67
- 10 23.33	30 1.11	65 18.33	100 37.78	135 57.22	170 76.67	225107.22	400204.44
- 8 22.22	31 0.56	66 18.89	101 38.33	136 57.77	171 77.22	230110.00	405207.22
- 6 21.11	32 0.00	67 19.44	102 38.88	137 58.33	172 77.77	235112.78	410210.00
- 4 20.00	33 0.56	68 20.00	103 39.44	138 58.88	173 78.33	240115.56	415212.78
- 2 18.89	34 1.11	69 20.56	104 40.00	139 59.44	174 78.88	245118.33	420215.56
0 17.78	35 1.67	70 21.11	105 40.55	140 60.00	175 79.44	250121.11	425218.33
1 17.22	36 2.22	71 21.67	106 41.11	141 60.55	176 80.00	255123.89	430221.11
2 16.67	37 2.78	72 22.22	107 41.66	142 61.11	177 80.55	260126.67	435223.89
3 16.11	38 3.33	73 22.78	108 42.22	143 61.66	178 81.11	265129.44	440226.67
4 15.56	39 3.89	74 23.33	109 42.77	144 62.22	179 81.66	270132.22	445229.44
5 15.00	40 4.44	75 23.89	110 43.33	145 62.78	180 82.22	275135.00	450232.22 455235.00
6 14.44	41 5.00	76 24.44	111 43.88	146 63.33	181 82.77	280137.78	460237.78
7 13.89	42 5.56	77 25.00	112 44.44	147 63.88	182 83.33	285140.55	465240.55
8 13.33	43 6.11	78 25.56	113 45.00	148 64.44	183 83.88	290143.33	470243.33
9 12.78 10 12.22	44 6.67 45 7.22	79 26.11 80 26.67	114 45.55 115 46.11	149 65.00 150 65.56	184 84.44 185 85.00	295146.11 300148.89	475246.11
							475246.11
11 11.67	46 7.78	81 27.72 82 27.78	116 46.66 117 47.22	151 66.11 152 66.66	186 85.55 187 86.11	305151.67 310154.44	485251.67
12 11.11 13 10.56	47 8.33	82 27.78	117 47.22	152 66.66		310154.44	490254.44
14 10.56	48 8.89	84 28.89		153 67.22	188 86.66		490254.44
14 10.00	49 9.44	84 28.89	119 48.33	104 07.77	189 87.22	320160.00	450201.22



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