

Form

Main conversion factors for units of measure

Units	Conversion factor	Units	Conversion factor
Length (conversion in metres)			
ångström (Å)	1.10 ⁻¹⁰	mile	1.609344.10 ³
light year	9.46073.10 ¹⁵	nautical mile	1.852.10 ³
fermi (fm)	1.10 ⁻¹⁵	pica	4.2175.10 ³
foot (ft)	3.048.10 ⁻¹	point [US]	3.515.10 ⁻⁴
inch (in)	2.54.10 ⁻²	rod	5.0292.10 ⁰
micron (µ)	1.10 ⁻⁶	sigma (σ)	1.10 ⁻¹²
mil	2.54.10 ⁻⁵	yard [yd]	9.144.10 ⁻¹
Surface area (conversion in metres)			
centiare (ca)	1.10 ⁰	circular mil	5.067075.10 ⁻¹⁰
are (a)	1.10 ²	rood	1.01171.10 ³
hectare (ha)	1.10 ⁴	acre	4.04686.10 ³
Volume (conversion in cubic metres)			
barrel [US]	1.58987.10 ⁻¹	gill [UK]	1.42065.10 ⁻⁴
board foot	2.36.10 ⁻³	gill [US] (gi)	1.18294.10 ⁻⁴
bushel [UK]	3.63687.10 ⁻²	liquid pint [US] (liq pt)	4.73176.10 ⁻⁴
bushel [US] (bu)	3.52391.10 ⁻²	liquid quart [US] (liq qt)	9.46352.10 ⁻⁴
dry barrel [US] (bbl)	1.15627.10 ⁻¹	litre (l)	1.10 ⁻³
dry pint [US] (dry pt)	5.50610.10 ⁻⁴	minim [UK] (min)	5.91939.10 ⁻⁸
dry quart [US] (dry qt)	1.10122.10 ⁻³	minim [US] (min)	6.16115.10 ⁻⁸
fluid ounce [UK] (fl oz)	2.84130.10 ⁻⁵	peck [UK]	9.0922.10 ⁻³
fluid ounce [US] (fl oz)	2.95735.10 ⁻⁵	peck [US]	8.809768.10 ⁻³
gallon [UK] (gal)	4.54609.10 ⁻³	quart [UK] (qt)	1.13652.10 ⁻³
gallon [US] (gal)	3.78541.10 ⁻³		
Planar angle (conversion in radians)			
degree (°)	1.745329.10 ⁻²	minute (')	2.908882.10 ⁻⁴
grade (gr)	1.570796.10 ⁻²	second (")	4.848137.10 ⁻⁶
Time (conversion in seconds)			
hour (h)	3.6.10 ³	minute (min)	6.10 ¹
day (d)	8.64.10 ⁴		
Mass (conversion in kilogrammes)			
cental	4.53592.10 ¹	ton (ton)	1.016047.10 ³
long ton [US]	1.016047.10 ³	tonne (t)	1.10 ³
ounce (oz)	2.834952.10 ⁻²	troy ounce	3.11035.10 ⁻²
pound (lb)	4.535924.10 ⁻¹	troy pound	3.73242.10 ⁻¹
quintal (q)	1.10 ²	atomic mass (u)	1.66054.10 ⁻²⁷
short ton (sh tn)	9.07185.10 ²		
Speed (conversion in metres per second)			
knot	5.14444.10 ⁻⁴		
Force (conversion in Newtons)			
dyne (dyn)	1.10 ⁻⁵	pound-force (lbf)	4.44822.10 ⁰
kilogram-force (kgf)	9.80665.10 ⁰	poundal (pdl)	1.38255.10 ⁻¹
pond (p)	9.80665.10 ⁻³		
Energy transferred, work (conversion in joules)			
british thermal unit (Btu)	1.055056.10 ³	kilogramme (kgm)	9.80665.10 ⁰
calorie I.T. (cal I.T.)	4.1868.10 ⁰	therm	1.055056.10 ⁸
calorie 15°C (cal 15)	4.1855.10 ⁰	thermie (th)	4.1855.10 ⁶
electronvolt (eV)	1.60218.10 ⁻¹⁹	thermochemical calorie (calth)	4.1840.10 ⁰
frigorie (fg)	-4.1855.10 ³	watthour (Wh)	3.6.10 ³
Power (conversion in watts)			
horsepower (hp)	7.35499.10 ²	var (var)	1.10 ⁰
horsepower [UK] (hph)	7.4570.10 ²		
Stress and pressure (conversion in Pascals)			
normal atmosphere (atm)	1.01325.10 ⁵	inch of mercury (inHg)	3.38639.10 ³
technical atmosphere (at)	9.80665.10 ⁴	millimetre of water (mmH ₂ O)	9.80665.10 ⁰
bar (bar)	1.10 ⁵	millimetre of mercury (mmHg)	1.333224.10 ²
foot of water (ftH ₂ O)	2.98907.10 ³	pound-force per square inch (psi)	6.894757.10 ³
inch of water (inH ₂ O)	2.49089.10 ²	torr (Torr)	1.333224.10 ²
Magnetomotive force (conversion in amperes)			
gilbert (Gb)	7.9577.10 ⁻¹		
Quantity of electricity, electric charge (conversion in coulombs)			
ampere-hour (Ah)	3.6.10 ³	franklin (Fr)	3.33564.10 ⁻¹⁰
faraday (F)	9.64870.10 ⁴		
Radioactivity (conversion in bequerels)			
curie (Ci)	03/07/2010 ¹⁰		
Exposure (conversion in coulombs per kilogramme)			
röntgen (R)	2.58 x 10 ⁻⁴		

Temperature conversion factors

Tc: temperature in degrees Celsius
Tk: temperature in degrees Kelvin
Tf: temperature in degrees Fahrenheit

$$T_c = T_k - 273.15$$

$$T_c = 5/9 * (T_f - 32)$$

$$T_f = 1.8 * T_k - 459.67$$

$$T_f = 9/5 * T_c + 32$$

Table of correspondences between American (AWG) and metric (mm²) cross-sections

AWG: American Wire Gauge. MCM: thousands of circular mils

Cross-sections			Diameter	
AWG	MCM	mm ²	mm	inch
-	750	380	-	-
-	700	355	-	-
-	600	304	-	-
-	500	253	-	-
-	400	203	-	-
-	350	177	-	-
-	300	152	-	-
-	250	127	-	-
4/0	212	107	11.7	0.4600
3/0	168	85.0	10.4	0.4096
2/0	133	67.5	9.27	0.3648
1/0	105	53.4	8.25	0.3249
1	83.7	42.4	7.35	0.2893
2	66.4	33.6	6.54	0.2576
3	52.6	26.7	5.83	0.2294
4	41.7	21.2	5.19	0.2043
5	33.1	16.8	4.62	0.1819
6	26.2	13.3	4.11	0.1620
7	20.8	10.6	3.67	0.1443
8	16.5	8.35	3.26	0.1285
9	13.1	6.62	2.91	0.1144
10	10.4	5.27	2.59	0.1019
11	8.23	4.15	2.30	0.0907
12	6.53	3.31	2.05	0.0808
13	5.18	2.63	1.83	0.0720
14	4.11	2.08	1.63	0.0641
15	3.26	1.65	1.45	0.0571
16	2.58	1.31	1.29	0.0508
17	2.05	1.04	1.15	0.04526
18	1.62	0.823	1.024	0.04030
19	1.29	0.653	0.912	0.03589
20	1.02	0.512	0.812	0.03196
21	0.810	0.412	0.723	0.02846
22	0.642	0.325	0.644	0.02535
23	0.509	0.259	0.573	0.02257
24	0.404	0.205	0.511	0.02010
25	0.320	0.163	0.455	0.01790
26	0.254	0.128	0.405	0.01594
27	0.201	0.102	0.361	0.01420
28	0.160	0.0804	0.321	0.01264
29	0.126	0.0646	0.286	0.01126
30	0.100	0.0503	0.255	0.01003
31	0.080	0.0400	0.227	0.00893
32	0.063	0.0320	0.202	0.00795
33	0.050	0.0252	0.180	0.00708
34	0.039	0.0200	0.160	0.00630
35	0.031	0.0161	0.143	0.00561
36	0.025	0.0123	0.127	0.00500
37	0.019	0.0100	0.113	0.00445
38	0.015	0.00795	0.101	0.00397
39	0.012	0.00632	0.0897	0.00353
40	0.0096	0.00490	0.0789	0.00310

Other conversion factors metric system / Anglo-Saxon system

millimetres	x	0.03937	=	inches
millimetres	x	39.37	=	mils
metres	x	39.37	=	inches
metres	x	3.280	=	feet
inches	x	25.40	=	millimetres
feet	x	0.3048	=	metres
mils	x	0.0254	=	millimetres
kilograms	x	2.205	=	pounds
pounds	x	0.4536	=	kilograms
Ω / km	x	0.3048	=	Ω / 1000 feet
Ω / 1000 feet	x	3.281	=	Ω / km
pounds / 1000 feet	x	1.488	=	kg / km
square inches	x	645.2	=	square millimetres
square millimetres	x	1.273	=	square inches
square millimetres	x	1.273	=	circular mils
square mils	x	1.273	=	circular mils
circular mm	x	1550	=	circular mils
circular mm	x	0.7854	=	square millimetres

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