Conversion Factors

Multiply	By	To Obtain
Acres	43, 560	Square feet
Acres	1.562×10^{-3}	Square miles
Acre - feet	43,560	Cubic feet
Amperes per square centimeter	6.452	Amperes per square inch
Amperes per square inch	0.1550	Amperes per square centimeter
Ampere - turns	1.257	Gilberts
Ampere - turns per centimeter	2.540	Ampere-turns per inch
Ampere - turns per inch	0.3937	Ampere turns per centimeter
Atmospheres	76.0	Centimeters of mercury
Atmospheres	29.92	Inches of mercury
Atmospheres	33.90	Feet of water
Atmospheres	14.70	Pounds per square inch
British thermal units	0.2520	Kilogram-calories
British thermal units	778.2	Foot-pounds
British thermal units	3.931×10^{-4}	Horsepower-hours
British thermal units	2.930×10^{-4}	Kilowatthours
Centimeters	0.3937	Inches
Circular mils	5.067×10^{-6}	Square centimeters
Circular mils	7.853×10^{-7}	Square inches
Circular mils	0.7854	Square mils
Degree (angle)	0.01745	Radians
Dynes	2.248×10^{-6}	Pounds
Ergs	7.378×10^{-8}	Foot-pounds
Farads	10^{6}	Microfarads
Foot-pounds	1.285×10^{-5}	British thermal units
Foot-pounds	5.050×10^{-7}	Horsepower-hours
Foot-pounds	0.1383	Kilogram-meters
Foot-pounds	3.766×10^{-7}	Kilowatthours
Gallons per minute	2.228×10^{-3}	Cubic feet per second
Gallons of water at 62 F	8.345	Pounds
Gausses	6.452	Lines per square inch
Gilberts	0.7958	Ampere-turns
Henrys	10^{3}	Millihenrys
Horsepower	42.44	Btu per minute
Horsepower	33,000	Foot-pounds per minute
Horsepower	1.014	Horsepower (metric)
Horsepower	10.68	Kilogram-calories per minute
Horsepower	0.7457	Kilowatts
Horsepower (boiler)	33,475	Btu per hour
Horsepower - hours	2544	British thermal units
Horsepower - hours	1.98×10^{6}	Foot - pounds
Inches	2.540	Centimeters

Inches of mercury	1.133	Feet of water
Inches of mercury	0.4912	Pounds per square inch
Inches of water	25.40	Kilograms per square meter
Inches of water	0.5781	Ounces per square inch
Inches of water	0.0361	Pounds per square inch
Joules	9.480×10^{-4}	British thermalunits
Joules	0.7377	Foot-pounds
Kilograms	2.205	Pounds
Kilogram - calories	3.968	British thermal units
Kilolines	10^3	Maxwells
Kilometres	3,281	Feet
Kilometre	0.6214	Miles
Kilowatts	56.88	Btu per minute
Kilowatts	737.8	Foot-pounds per second
Kilowatts	1.341	Horsepower
Kilowatthours	3,413	British thermal units
Kilowatthours	2.656×10^6	Foot-pounds
$\log_e N$ or $\ln N$	0.4343	$\log_{10} N$
$\log_{10} N$	2.303	$\log_e N$ or $\ln N$
Lumens per square foot	1	Foot - candles
Maxwells	10^{-3}	Kilolines
Megalines	10^6	Maxwells
Megohms	10^6	Ohms
Meters	39.37	Inches
Meter-kilograms	7.233	Pound - feet
Microfarads	10^{-6}	Farads
Microhms	10^{-6}	Ohms
Microhms per centimeter cube	0.3937	Microhms per inch cube
Microhms per centimeter cube	6.015	Ohms per mil foot
Miles	5,280	Feet
Miles	1.609	Kilometers
Ohms	10^{-6}	Megohms
Ohms	10^6	Microhms
Ohms per mil foot	0.1662	Microhms per centimeter cube
Ohms per mil foot	0.06524	Microhms per inch cube
Radians	57.30	Degrees
Square centimetres	1.973×10^5	Circular mils
Square feet	2.296×10^{-5}	Acres
Square feet	0.09290	Square meters
Square inches	1.273×10^6	Circular mils
Square inches	6.452	Square centimeters
Square kilometres	0.3861	Square miles

Square meters	10.76	Square feet
Square miles	640	Acres
Square miles	2.590	Square kilometers
Square millimeters	1.973×10^3	Circular mils
Square mils	1.273	Circular mils
Temperature (C+273)	1	Absolute temperature C
Temperature (C+17.8)	1.8	Temperature F
Temperature (F+460)	1	Absolute temperature F
Temperature (F - 32)	5/9	Temperature C
Tons (long)	2240	Pounds
Tons (metric)	2205	Pounds
Tons (short)	2000	Pounds

Letter Symbols used in Electrical Formulae

Quantity	Symbol	Illustrative Unit
Admittance	Y	Mho
Angular phase displacement	(θ, φ) (theta, phi)	Radian
Capacitance	C	Farad
Charge, or quantity of electricity	Q	Coulomb
Conductance	G	Mho
Current	I	Ampere
Dielectric constant	ε (epsilon)	Farad per inch
Efficiency	η (eta)	
Electromotive force	E	Volt
Energy	W	Joule
Flux density	B	Lines per square inch
Frequency	*f*	Cycle per second
Frequency, angular velocity	ω (omega)	Radian per second
Frequency, rotational	n	Revolution per second
Impedance	Z	Ohm
Inductance	L	Henry
Magnetic flux	(φ, ϕ) (Phi, phi)	Line
Magnetizing force	H	Ampere - turn per inch
Magnetomotive force	M	Ampere - turn
Number of conductors or turns	N	
Number of poles	P	
Permeability	$\propto$ (mu)	Line per ampere - turn per inch
Permeance	(ρ)	Line per ampere - turn
Power	P	Watt
Reactance, Capacitive	X_c	Ohm
Reactance, inductive	* X_L	Ohm