



Units and Conversion table

QUANTITY	SYMBOL	MKSA	CGS _{em}	Conversion (CGS _{em} /MKSA)
Capacity	C	farad (F)	ab F	10 ⁹
Electrical charge	Q	coulomb (C)	ab C	10
Conductivity	σ	siemens/meter (S/m)	ab S/m	10 ⁹
Vacuum dielectric constant	ε ₀	F/m	ab F/m	10 ¹¹ /4π
Energy	E, W	joule (J)	erg	10 ⁻⁷
Magnetic flux	Φ	weber (Wb)	maxwell (Mx)	10 ⁻⁸
Inductance (auto-mutual)	L, M	henry (H)	cm (of inductance)	10 ⁻⁹
Magnetic induction	B	tesla (T)	gauss (G)	10 ⁻⁴
Current intensity	I	ampere (A)	ab A	10
Electrical field	E	V/m	ab V/m	10 ⁻⁶
Magnetic field	H	A/m	oersted (Oe)	10 ³ /4π
Magnetic moment	m	Wb·m	ab Wb·m	4π·10 ⁻¹⁰
Magnetisation	M	A/m	gauss (G)	10 ³
Vacuum magnetic permeability	μ ₀	H/m	nondimensional	4π·10 ⁻⁷
Magnetic polarisation	J, I	tesla (T)	gauss (G)	4π·10 ⁻⁴
Power	P	watt (W)	erg/s	10 ⁻⁷
Energy product ⁽¹⁾	BHmax	kJ/m ³	MG·Oe	10 ² /4π
Magnetomotive force	f.m.m.	A (also Asp)	gilbert (Gb)	10/4π
Resistance	R	ohm (Ω)	ab Ω	10 ⁻⁹
Resistivity	ρ	Ω·m	ab Ω·m	10 ⁻¹¹

⁽¹⁾ Unit of energy product is considered the one normally used in magnetism, multiple of fundamental units.

