

Fundamental Units

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There are four fundamental units used to measure mass, length, time, and current. The table below shows these four units as defined in the System International (SI) units.

To learn more about the Fundamental Units, their historical context and definitions go to : <http://physics.nist.gov/cuu/Units/current.html>

Quantity	Unit	Abbreviation
mass	kilogram	kg
length	meter	m
time	second	s
current	ampere	A

Derived Units

Quantity	Unit	Abbreviation	Base Units
force	newton	N	kgm/s^2
energy & work	joule	J	kgm^2/s^2
power	watt	W	kgm^2/s^3
pressure	pascal	Pa	$\text{kg}/(\text{ms}^2)$
frequency	hertz	Hz	1/s
electric charge	coulomb	C	As

electric potential	volt	V	$\text{kgm}^2/(\text{As}^3)$
electric resistance	ohm	Ω	$\text{kgm}^2/(\text{A}^2\text{s}^3)$
capacitance	farad	F	$\text{A}^2\text{s}^4/(\text{kgm}^2)$
magnetic field	tesla	T	$\text{kg}/(\text{As}^2)$
magnetic flux	weber	Wb	$\text{kgm}^2/(\text{As}^2)$
inductance	henry	H	$\text{kgm}^2/(\text{s}^2\text{A}^2)$

SI Prefixes

Factor	Name	Symbol	Factor	Name	Symbol
10^{24}	yotta	Y	10^{-1}	deci	d
10^{21}	zetta	Z	10^{-2}	centi	c
10^{18}	exa	E	10^{-3}	milli	m
10^{15}	peta	P	10^{-6}	micro	μ
10^{12}	tera	T	10^{-9}	nano	n
10^9	giga	G	10^{-12}	pico	p
10^6	mega	M	10^{-15}	femto	f
10^3	kilo	k	10^{-18}	atto	a
10^2	hecto	h	10^{-21}	zepto	z
10^1	deka	da	10^{-24}	yocto	y
