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Physical Quantities and their Units

Fundamental Units

Physical Quantity	Symbol	Units	Symbol	Dimension
Length(Distance)	l(d)	meter	m	L
Mass	m	kilogram	kg	M
Electric charge	Q	coulomb	C	C
Temperature	T	kelvin	K	K
Amount of substance	n	mole	mol	mol
Luminous intensity	I	candela	cd	cd

Derived Units

Physical Quantity	Quantity Symbol	Units	Unit Symbol	Dimension
acceleration	a	meter per second squared	m/s ²	LT ⁻²
area	A	square meter	m ²	L ²
capacitance	C	farad	F	CT ² /kgm ²
density	ρ	kilogram per cubic meter	Kg/m ³	ML ³
electric current	I	ampere	A	c/s
electric field intensity	E	Newton per coulomb/C	N/C	MLT ⁻² /CT ²
electric resistance	R	ohm	Ω	
emf		volt	V	ML ² /CT ²
energy	E	joule	J	ML ² /T ²
force	F	newton	N	ML ¹ /T ²
frequency	f	hertz	Hz	T ⁻¹
heat	Q	joule	J	ML ² /T ₂
illuminance	E	lux (lumen per second)	lx	cd/L ²
inductance	L	henry	H	ML ² /C ²
luminous flux	F	lumen	lm	cd
magnetic flux	∅	weber	Wb	ML ² /CT ¹
magnetic flux density	B	Tesla (weber per square meter)	T	ML ¹ /CT ¹
potential difference	V	volt	V	ML ² /CT ²
power	P	watt	W	ML ² /T ³

pressure	p	Pascal(newton per square)	Pa	M/LT²
velocity	v	meter per second	m/s	LT⁻¹
volume	V	cubic meter	m³	L³
work	W	joule	J	ML²/T²