Physics symbols for VARIABLES and their UNITS of measure

These symbols for VARIABLES (which are used in equations) are…	…measured in these SI UNITS …	…and sometimes these other units of measure.
d = distance **Δx** "delta x" = **displacement** Δh = change in height λ "lambda" = wavelength	meter (m)	1000 millimeters (mm) = 1 m 100 centimeters (cm) = 1 m 1 kilometer (km) = 1000 m 1 angstrom (Å) = 10^{-10} m 1 nanometer (nm) = 10^{-9} m
A = area	square meter (m^2)	1 hectare (ha) = 10000 m^2
V = volume	cubic meter (m^3)	1 liter (l or L) = 1/1000 m^3 1000 milliliter (ml) = 1 L
t = time Δt = time interval *T* = period	second (s)	1 year (y) = 365.25 d 1 day (d) = 24 h 1 hour (h) = 60 min 1 minute (min) = 60 s
f [or ν "nu"] = frequency	hertz (Hz)	1 Hz = 1/s
v = **velocity**	meter per second (m/s)	
a = **acceleration**	meter per second squared (m/s^2)	
m = mass	kilogram (kg)	
ρ "rho" = density	kilogram per cubic meter (kg/m^3)	
p = **momentum**	kilogram meter per second (kg·m/s)	
F = **force**	newton (N)	1 N = 1 kg·m/s^2
E = energy KE = kinetic energy PE = potential energy W = work Q = heat	joule (J)	1 J = 1 N·m = 1 kg·m^2/s^2 1 calorie (cal) = 4.186 J 1 Calorie = 1000 cal = 1 kilocalorie 1 British thermal unit (Btu) = 1055 J
P = power	watt (W)	1 W = 1 J/s = 1 ampere volt (AV)
MA = mechanical advantage	no units; MA = W_{output} / W_{input}	
T = temperature	kelvin (K)	K - 273.2 = ºC [Celsius] 9/5 ºC + 32 = ºF [Fahrenheit]
c = specific heat	joule per kilogram kelvin (J/kg·K)	1 J/kg·ºC = 1 J/kg·K
q = charge of particle	coulomb (C)	
V = voltage (potential difference)	volt (V)	1 V = 1 J/C
I = current	ampere [or amp] (A)	1 A = 1 C/s
R = resistance	ohm (Ω)	
E = **electric field**	newton per coulomb (N/C)	1 N/C = 1 V/m
C = capacitance	farad (F)	1 F = 1 C/V
B = magnetic field	tesla (T)	1 T = 1 N/A·m = 1 N/C·V

Constants

c = speed of light in a vacuum	*c* = 3 x 10^8 meters per second (m/s)
G = universal gravitational constant	G = 6.67 x 10^{-11} newton meters squared per kilogram squared ($N·m^2/kg^2$)
g = acceleration due to gravity: Earth	g = 9.8 meters per second squared (m/s^2)
k = coulomb constant	k = 9 x 10^9 newton meters squared per coulomb squared ($N·m^2/C^2$)

Vector quantities have two characteristics; both magnitude and direction.

When handwritten, vectors are represented by drawing a line or arrow above the symbol.

For example: $\vec{a}$ = 2.3 m/s^2 [north] or $\vec{F}$ = 23 N [down]

Scalar quantities have only magnitude.