# Quantities, symbols, units and abbreviations

The following units (shown **in bold** in the table) are SI base quantities: metre, kilogram, second, kelvin, ampere, mole. All other units are SI derived units or SI accepted units.

Some quantities are used only in calculations at higher tier – these are marked (higher tier).

| **Physical quantity** | **Common symbol(s)**  (use of these symbols is optional) | **SI unit / accepted unit** | **Unit abbreviation** |
| --- | --- | --- | --- |
| length | *d* – perpendicular distance from the line of action of a force to the pivot  *h* – height raised above ground level or height (of a column of liquid) (higher tier)  *l* – length (e.g. of a conductor) (higher tier)  *s* – displacement (or distance travelled); displacement of a force along its direction of action  *x* – extension (e.g. of a spring)  *l* (lambda) – wavelength | **metre** | m |
| mass | *m* | **kilogram** | kg |
| time | *t* | **second** | s |
| temperature | *T* – for kelvin temperature | **kelvin** | K |
| current | *I* | **ampere** | A |
| amount of substance | *n* | **mole** | mol |
| area | *A* | square metre | m2 |
| volume | *V* | cubic metre, litre, cubic decimetre | m3, l, dm3 |
| density | *r (rho)* | kilogram per cubic metre | kg / m3 |
| temperature | *q* (theta) – for Celsius temperature  D*q* (theta) – for change in Celsius temperature | degree Celsius | °C |
| pressure | *p* | pascal | Pa |
| specific heat capacity | *c* | joule per kilogram degree Celsius | J / kg °C |
| specific latent heat | *l* | joule per kilogram | J / kg |
| speed | *v* – (final) speed or velocity  *u* – initial speed or velocity | metre per second | m / s |
| force | *F* – forces generally  *W* – weight or gravitational force | newton | N |
| gravitational field strength | *g* | newton per kilogram | N / kg |
| acceleration | *a* | metre per square second | m / s2 |
| frequency | *f* | hertz | Hz |
| energy | *E* – energy transferred  D*E* – change in (thermal) energy  *W* – work done | joule | J |
| power | *P* | watt | W |
| electric charge | *Q* | coulomb | C |
| electric potential difference | *V* | volt | V |
| electric resistance | *R* | ohm | W |
| magnetic flux density (higher tier) | *B* | tesla | T |
| moment | *M* | newton metre | N m |
| momentum  (higher tier) | *p* – momentum  D*p* – change in momentum | kilogram metre per second | kg m / s |
| periodic time | *T* | second | s |
| spring constant | *k* | newton per metre | N / m |
| number of turns (higher tier) | *N*p – number of turns on primary coil  *N*s – number of turns on secondary coil | unitless | |
| efficiency |  | unitless | |

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