The physunits package[*]

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1 Introduction

This package consists of several macros that are shorthand for a variety of physical units that are commonly used in introductory level physics and astronomy classes.

At present, this package provides some similar units to those in siunitx, but is uses slightly different macro names for each. This package also provides a number of non-SI units (e.g. erg, cm, BTU).

2 Prerequisites / Dependencies

2.1 General

This package requires the physunits package.

2.2 Generating Documentation

The hyperref package are required to generate the documentation (this file) for this package.

[*] This document corresponds to physunits v1.0.4, dated 2020/03/26.

3 Acknowledgements

The author would like to thank Brian Dunn for catching bugs in the temperature units and kcal, leading to changes in v1.0.4.

4 Bug Reporting

Please report bugs or issues in this package using github, at `https://github.com/astrobit/physunits/issues`.

5 Naming Convention

most macros consist of just the commonly used letter or unit, e.g. \m for meters. In cases where the simple form of the unit conflicts with an existing LaTeX macro, then the full word is used, starting with a upper-case letter, e.g. \Coulomb.

One notable exception to the above naming convention is the use of \gm for grams, instead of \g or \Gram.

6 Base and Prefixes

Most units are in the base unit only, but some very commonly used prefixes are available as part of the macro, e.g. \kg for kilogram, \cm for centimeter. For base units, each macro accepts one option that can be used to specify the prefix, for example \m[n] will result in nm. The macros enforce math mode, so \m[\micro] will result in μm.

7 Macro Usage

7.1 Special Macros

`\units@separator` `\units@separator` is a special macro used to set the spacing between a quantity and the associated units.

`\micro` `\micro` is a special macro that can be used for the prefix μ (micro-). Internally it just uses \mu.

7.2 Electricity & Magnetism

`\V` `\V` is a macro for Volts (V). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Volt` `\Volt` is a macro for Volts (V). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Coulomb` `\Coulomb` is a macro for Coulombs (C). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\esu` `\esu` is a macro for electrostatic units (esu), the units of charge in Gaussian cgs.

`\Ohm` `\Ohm` is a macro for Ohms (Ω). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Amp` `\Amp` is a macro for Amperes (A). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Farad` `\Farad` is a macro for Farads (F). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Tesla` `\Tesla` is a macro for Teslas (T). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Gauss` `\Gauss` is a macro for Gauss (G), the units for magnetic field strength in Gaussian cgs. This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Henry` `\Henry` is a macro for Henrys (H). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

7.3 Energy

`\eV` `\eV` is a macro for electron Volts (eV). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\keV` `\keV` is a macro for kilo-electron Volts (keV).

`\MeV` `\MeV` is a macro for mega-electron Volts (MeV).

`\J` `\J` is a macro for Joules (J). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Joule` `\Joule` is a macro for Joules (J). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\erg` `\erg` is a macro for ergs (erg), the unit of energy in cgs.

`\kcal` `\kcal` is a macro for kilo-calories (kcal).

`\Cal` `\Cal` is a macro for kilo=calories (Cal).

`\calorie` `\calorie` is a macro for calories (cal). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\BTU` `\BTU` is a macro for British Thermal Units (BTU).

`\tnt` `\tnt` is a macro for tons of TNT.

7.4 Power

`\Watt` `\Watt` is a macro for Watts (W). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\hpi` `\hpi` is a macro for Imperial Horsepower (hp(I)).

`\hpi` `\hpi` is a macro for Metric Horsepower (hp(M)).

`\hp` `\hp` is a macro for Horsepower (hp).

7.5 Distance

`\meter` `\meter` is a macro for meters (m). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\m` `\m` is a macro for meters (m). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\km` `\km` is a macro for kilometers (km).

`\au` `\au` is a macro for astronmical units (au).

`\pc` `\pc` is a macro for parsecs (pc). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\ly` `\ly` is a macro for light-years (ly). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\cm` `\cm` is a macro for centimeters (cm).

`\nm` `\nm` is a macro for nanometers (nm).

`\ft` `\ft` is a macro for feet (ft).

`\inch` `\inch` is a macro for inches (in).

`\mi` `\mi` is a macro for miles (mi).

7.6 Time

`\s` `\s` is a macro for seconds (s). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Sec` `\Sec` is a macro for seconds (s). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Min` `\Min` is a macro for minutes (m).

`\h` `\h` is a macro for hours (h).

`\y` `\y` is a macro for years (y). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Day` `\Day` is a macro for days (d).

7.7 Mass

`\gm` `\gm` is a macro for grams (g). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\kg` `\kg` is a macro for kilograms (kg).

`\lb` `\lb` is a macro for pounds (weight) (lb).

`\amu` `\amu` is a macro for atomic mass units (amu).

7.8 Force

`\N` `\N` is a macro for Newtons (N). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Newton` `\Newton` is a macro for Newtons (N). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\dyne` `\dyne` is a macro for dynes (dyn). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\lbf` `\lbf` is a macro for pounds of force (lbf).

7.9 Velocity

`\kmps` `\kmps` is a macro for kilometers per second ($\mathrm{km\,s^{-1}}$).

`\kmph` `\kmph` is a macro for kilometers per hour ($\mathrm{km\,h^{-1}}$).

`\mps` `\mps` is a macro for meters per second ($\mathrm{m\,s^{-1}}$). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\miph` `\miph` is a macro for miles per hour ($\mathrm{mi\,h^{-1}}$).

`\kts` `\kts` is a macro for knots (kts)., i.e. nautical miles per hour

7.10 Acceleration

`\mpss` `\mpss` is a macro for acceleration in meters per second squared ($\mathrm{m\,s^{-2}}$). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\gacc` `\gacc` is a macro for acceleration due to gravity (g).

`\ftpss` `\ftpss` is a macro for acceleration in feet per second squared ($\mathrm{ft\,s^{-2}}$).

7.11 Temperature

`\K` `\K` is a macro for Kelvin (K). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Kelvin` `\Kelvin` is a macro for Kelvin (K). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Celcius` `\Celcius` is a macro for degrees Celcius (°C).

`\Rankine` `\Rankine` is a macro for degrees Rankine (°R).

`\Fahrenheit` `\Fahrenheit` is a macro for degrees Fahrenheit (°F).

7.12 Angular Velocity

`\rpm` `\rpm` is a macro for revolutions per minute (rev min^{-1}).

7.13 Frequency

`\Hz` `\Hz` is a macro for Hertz (Hz). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

7.14 Pressure

`\barP` `\barP` is a macro for bar (bar). (The use of barP instead of just bar is due the LaTeX command \bar.) This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\atm` `\atm` is a macro for atmosphere (atm).

`\Pa` `\Pa` is a macro for Pascals (Pa). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\mmHg` `\mmHg` is a macro for millimeters of mercury (mmHg).

`\inHg` `\inHg` is a macro for inches of mercury (inHg).

`\lbsi` `\lbsi` is a macro for pounds per square inch (psi). (Note that \psi is a latex command for the greek letter ψ).

`\lbsf` `\lbsf` is a macro for pounds per square foot (psf).

`\Ba` `\Ba` is a macro for Barre (Ba). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Torr` `\Torr` is a macro for Torr (Torr). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

7.15 Other

`\mol` `\mol` is a macro for moles (mol).

8 Implementation

8.1 Special

\units@separator

\units@separator is a special macro used to set the spacing between a quantity and the associated units.

```
\DeclareRobustCommand{\units@separator}{\,}
```

\micro

\micro is a special macro used to typeset the symbol \mu. It is compatable with the \micro in siunitx.

```
\ifx\micro\undefined
\DeclareRobustCommand{\micro}{\ensuremath{%
\mu}}
\fi
```

8.2 Electricity & Magnetism

\V

\V is a macro for Volts (V). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\V}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1V}}}
```

\Volt

\Volt is a macro for Volts (V). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\Volt}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1V}}}
```

\Coulomb

\Coulomb is a macro for Coulombs (C). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\Coulomb}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1C}}}
```

\esu

\esu is a macro for electrostatic units (esu).

```
\DeclareRobustCommand{\esu}{\ensuremath{%
\expandafter\units@separator\mathrm{esu}}}
```

\Ohm `\Ohm` is a macro for Ohms (Ω). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\Ohm}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1\Omega}}}
```

\Amp `\Amp` is a macro for Amperes (A). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\Amp}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1A}}}
```

\Farad `\Farad` is a macro for Farads (F). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\Farad}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1F}}}
```

\Tesla `\Tesla` is a macro for Teslas (T). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\Tesla}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1T}}}
```

\Gauss `\Gauss` is a macro for Gauss (G). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\Gauss}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1G}}}
```

\Henry `\Henry` is a macro for Henrys (H). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\Henry}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1H}}}
```

8.3 Energy

\eV `\eV` is a macro for electron Volts (eV). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\eV}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1eV}}}
```

`\keV`

`\keV` is a macro for kilo-electron Volts (keV).

```
\DeclareRobustCommand{\keV}{\ensuremath{%
\expandafter\units@separator\mathrm{keV}}}
```

`\MeV`

`\MeV` is a macro for mega-electron Volts (MeV).

```
\DeclareRobustCommand{\MeV}{\ensuremath{%
\expandafter\units@separator\mathrm{MeV}}}
```

`\J`

`\J` is a macro for Joules (J). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\J}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1J}}}
```

`\Joule`

`\Joule` is a macro for Joules (J). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\Joule}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1J}}}
```

`\erg`

`\erg` is a macro for ergs (erg).

```
\DeclareRobustCommand{\erg}{\ensuremath{%
\expandafter\units@separator\mathrm{erg}}}
```

`\kcal`

`\kcal` is a macro for kilo-calories (kcal).

```
\DeclareRobustCommand{\kcal}{\ensuremath{%
\expandafter\units@separator\mathrm{kcal}}}
```

`\Cal`

`\Cal` is a macro for kilo=calories (Cal).

```
\DeclareRobustCommand{\Cal}{\ensuremath{%
\expandafter\units@separator\mathrm{Cal}}}
```

`\calorie` `\calorie` is a macro for calories (cal). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\calorie}[1][ ]{%
\ensuremath{%
\expandafter\units@separator\mathrm{#1cal}}}
```

`\BTU` `\BTU` is a macro for British Thermal Units (BTU).

```
\DeclareRobustCommand{\BTU}{\ensuremath{%
\expandafter\units@separator\mathrm{BTU}}}
```

`\tnt` `\tnt` is a macro for tons of TNT).

```
\DeclareRobustCommand{\tnt}{\ensuremath{%
\expandafter\units@separator\mathrm{ton%
\expandafter\units@separator of%
\expandafter\units@separator TNT}}}
```

8.4 Power

`\Watt` `\Watt` is a macro for Watts (W). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\Watt}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1W}}}
```

`\hpi` `\hpi` is a macro for Imperial Horsepower (hp(I)).

```
\DeclareRobustCommand{\hpi}{\ensuremath{%
\expandafter\units@separator\mathrm{hp(I)}}}
```

`\hpi` `\hpi` is a macro for Metric Horsepower (hp(M)).

```
\DeclareRobustCommand{\hpm}{\ensuremath{%
\expandafter\units@separator\mathrm{hp(M)}}}
```

`\hp` `\hp` is a macro for Horsepower (hp).

```
\DeclareRobustCommand{\hp}{\ensuremath{%
\expandafter\units@separator\mathrm{hp}}}
```

8.5 Distance

\meter

\meter is a macro for meters (m). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\meter}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1m}}}
```

\m

\m is a macro for meters (m). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\m}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1m}}}
```

\km

\km is a macro for kilometers (km).

```
\DeclareRobustCommand{\km}{\ensuremath{%
\expandafter\units@separator\mathrm{km}}}
```

\au

\au is a macro for astronmical units (au).

```
\DeclareRobustCommand{\au}{\ensuremath{%
\expandafter\units@separator\mathrm{au}}}
```

\pc

\pc is a macro for parsecs (pc). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\pc}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1pc}}}
```

\ly

\ly is a macro for light-years (ly). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\ly}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1ly}}}
```

\cm

\cm is a macro for centimeters (cm).

```
\DeclareRobustCommand{\cm}{\ensuremath{%
\expandafter\units@separator\mathrm{cm}}}
```

\nm

\nm is a macro for nanometers (nm).

```
\DeclareRobustCommand{\nm}{\ensuremath{%
\expandafter\units@separator\mathrm{nm}}}
```

\ft

\ft is a macro for feet (ft).

```
\DeclareRobustCommand{\ft}{\ensuremath{%
\expandafter\units@separator\mathrm{ft}}}
```

\inch

\inch is a macro for inches (in).

```
\DeclareRobustCommand{\inch}{\ensuremath{%
\expandafter\units@separator\mathrm{in}}}
```

\mi

\mi is a macro for miles (mi).

```
\DeclareRobustCommand{\mi}{\ensuremath{%
\expandafter\units@separator\mathrm{mi}}}
```

8.6 Time

\s

\s is a macro for seconds (s). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\s}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1s}}}
```

\Sec

\Sec is a macro for seconds (s). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\Sec}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1s}}}
```

\Min

\Min is a macro for minutes (m).

```
\DeclareRobustCommand{\Min}{\ensuremath{%
\expandafter\units@separator\mathrm{min}}}
```

\h

\h is a macro for hours (h).

```
\DeclareRobustCommand{\h}{\ensuremath{%
\expandafter\units@separator\mathrm{h}}}
```

\y \y is a macro for years (y). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\y}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1y}}}
```

\Day \Day is a macro for days (d).

```
\DeclareRobustCommand{\Day}{\ensuremath{%
\expandafter\units@separator\mathrm{d}}}
```

8.7 Mass

\gm \gm is a macro for grams (g). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```

\DeclareRobustCommand{\gm}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1g}}}
```

\kg \kg is a macro for kilograms (kg).

```
\DeclareRobustCommand{\kg}{\ensuremath{%
\expandafter\units@separator\mathrm{kg}}}
```

\lb \lb is a macro for pounds (weight) (lb).

```
\DeclareRobustCommand{\lb}{\ensuremath{%
\expandafter\units@separator\mathrm{lb}}}
```

\amu \amu is a macro for atomic mass units (amu).

```
\DeclareRobustCommand{\amu}{\ensuremath{%
\expandafter\units@separator\mathrm{amu}}}
```

8.8 Force

\N — \N is a macro for Newtons (N). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\N}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1N}}}
```

\Newton — \Newton is a macro for Newtons (N). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\Newton}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1N}}}
```

\dyne — \dyne is a macro for dynes (dyn). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\dyne}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1dyn}}}
```

\lbf — \lbf is a macro for pounds of force (lbf).

```
\DeclareRobustCommand{\lbf}{\ensuremath{%
\expandafter\units@separator\mathrm{lbf}}}
```

8.9 Velocity

\kmps — \kmps is a macro for kilometers per second ($\,\mathrm{km\,s^{-1}}$).

```
\DeclareRobustCommand{\kmps}{\ensuremath{%
\expandafter\units@separator\mathrm{km}%
\expandafter\units@separator\mathrm{s}^{-1}}}
```

\kmph — \kmph is a macro for kilometers per hour ($\,\mathrm{km\,h^{-1}}$).

```
\DeclareRobustCommand{\kmph}{\ensuremath{%
\expandafter\units@separator\mathrm{km}%
\expandafter\units@separator\mathrm{h}^{-1}}}
```

\mps — \mps is a macro for meters per second ($\,\mathrm{m\,s^{-1}}$). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\mps}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1m}%
\expandafter\units@separator\mathrm{s}^{-1}}}
```

`\miph` `\miph` is a macro for miles per hour ($\mathrm{mi\,h}^{-1}$).

```
\DeclareRobustCommand{\miph}{\ensuremath{%
\expandafter\units@separator\mathrm{mi}%
\expandafter\units@separator\mathrm{h}^{-1}}}
```

`\kts` `\kts` is a macro for knots (kts).

```
\DeclareRobustCommand{\kts}{\ensuremath{%
\expandafter\units@separator\mathrm{kts}}}
```

8.10 Acceleration

`\mpss` `\mpss` is a macro for acceleration in meters per second squared ($\mathrm{m\,s}^{-2}$). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```

\DeclareRobustCommand{\mpss}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1m}%
\expandafter\units@separator\mathrm{s}^{-2}}}
```

`\gacc` `\gacc` is a macro for acceleration due to gravity (g).

```
\DeclareRobustCommand{\gacc}{\ensuremath{%
\expandafter\units@separator\mathrm{g}}}
```

`\ftpss` `\ftpss` is a macro for acceleration in feet per second squared ($\mathrm{ft\,s}^{-2}$).

```
\DeclareRobustCommand{\ftpss}{\ensuremath{%
\expandafter\units@separator\mathrm{ft}%
\expandafter\units@separator\mathrm{s}^{-2}}}
```

8.11 Temperature

`\K` `\K` is a macro for Kelvin (K). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\K}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1K}}}
```

\Kelvin — `\Kelvin` is a macro for Kelvin (K). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\Kelvin}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1K}}}
```

\Celcius — `\Celcius` is a macro for degrees Celcius (°C).

```
\DeclareRobustCommand{\Celcius}{\ensuremath{\expandafter\units@separator{}%
^\circ\mathrm{C}}}
```

\Rankine — `\Rankine` is a macro for degrees Rankine (°R).

```
\DeclareRobustCommand{\Rankine}{\ensuremath{%
\expandafter\units@separator{}^\circ\mathrm{R}}}
```

\Fahrenheit — `\Fahrenheit` is a macro for degrees Fahrenheit (°F).

```
\DeclareRobustCommand{\Fahrenheit}{\ensuremath{%
\expandafter\units@separator{}^\circ\mathrm{F}}}
```

8.12 Angular Velocity

\rpm — `\rpm` is a macro for revolutions per minute (rev min^{-1}).

```

\DeclareRobustCommand{\rpm}{\ensuremath{%
\expandafter\units@separator\mathrm{rev}%
\expandafter\units@separator\Min^{-1}}}
```

8.13 Frequency

\Hz — `\Hz` is a macro for Hertz (Hz). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```

\DeclareRobustCommand{\Hz}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1Hz}}}
```

8.14 Pressure

\barP

\barP is a macro for bar (bar). (The use of barP instead of just bar is due the LaTeX command \bar.) This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\barP}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1bar}}}
```

\atm

\atm is a macro for atmosphere (atm).

```
\DeclareRobustCommand{\atm}{\ensuremath{%
\expandafter\units@separator\mathrm{atm}}}
```

\Pa

\Pa is a macro for Pascals (Pa). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\Pa}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1Pa}}}
```

\mmHg

\mmHg is a macro for millimeters of mercury (mmHg).

```
\DeclareRobustCommand{\mmHg}{\ensuremath{%
\expandafter\units@separator\mathrm{mmHg}}}
```

\inHg

\inHg is a macro for inches of mercury (inHg).

```
\DeclareRobustCommand{\inHg}{\ensuremath{%
\expandafter\units@separator\mathrm{inHg}}}
```

\lbsi

\lbsi is a macro for pounds per square inch (psi). (Note that \psi is a latex command for the greek letter ψ).

```
\DeclareRobustCommand{\lbsi}{\ensuremath{%
\expandafter\units@separator\mathrm{psi}}}
```

\lbsf

\lbsf is a macro for pounds per square foot (psf).

```
\DeclareRobustCommand{\lbsf}{\ensuremath{%
\expandafter\units@separator\mathrm{psf}}}
```

\Ba

\Ba is a macro for Barre (Ba). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\Ba}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1Ba}}}
```

\Torr

\Torr is a macro for Torr (Torr). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
\DeclareRobustCommand{\Torr}[1][ ]{\ensuremath{%
\expandafter\units@separator\mathrm{#1Torr}}}
```

8.15 Other

\mol

\mol is a macro for moles (mol).

```
\DeclareRobustCommand{\mol}{\ensuremath{%
\expandafter\units@separator\mathrm{mol}}}
```

Change History

v1.0
General: Initial version 1

v1.0.1
General: Clean up formatting, fix index 1

v1.0.2
General: External changes in makefile 1

v1.0.3
General: External changes in makefile 1

v1.0.4
\Celcius: had ° outside of ensuremath, causing problems for text mode. It is also more common to typeset the ° with the unit instead of the number. Corrects both of these issues . 17

\Fahrenheit: had ° outside of ensuremath, causing problems for text mode. It is also more common to typeset the ° with the unit instead of the number. Corrects both of these issues . 17

\Rankine: had ° outside of ensuremath, causing problems for text mode. It is also more common to typeset the ° with the unit instead of the number. Corrects both of these issues . 17

\kcal: kcal appeared to take a prefix, but the prefix was ignored; removed the prefix. . . 10

\micro: Corrected version number and date in documentation . . . 8

General: Added section for acknowledgements. 2
Added section for bug reporting. 2
Added section for dependencies. 1
Corrected version number and date in documentation 1

Index

Numbers written in italic refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in roman refer to the code lines where the entry is used.

A

Acceleration . . . . *(*6
- Feet per Second squared *6*
- Gravity *6*
- Meters per Second squared *6*

`\Amp` 16
`\amu` 100
Angular Velocity . *(*7, *)*7
- RPM *7*

`\atm` 152
`\au` 65

B

`\Ba` 164
`\barP` 150
`\BTU` 45

C

`\Cal` 40
`\calorie` 42
`\Celcius` 137
`\circ` 138, 140, 142
`\cm` 71
`\Coulomb` 10

D

`\Day` 91
Distance . . . . *)*4, 5
- Astronomical Unit . *4*
- Imperial
  - Feet *5*
  - Inch *5*
  - Mile *5*
- Light Years *4*
- Meter *4*
  - Centimeter *4*
  - Kilometer *4*
  - Nanometer *4*
- Parsec *4*

`\dyne` 106

E

Electricity & Magnetism . . . . *(*3, *)*3
- Amperes *3*
- Coulomb *3*
- esu *3*
- Farad *3*
- Gauss *3*
- Henry *3*
- Ohm *3*
- Tesla *3*
- Volts *3*

Energy . . . . *(*3, *)*4
- BTU *4*
- Calories *4*
- calories *4*
- erg *4*
- eV *3*
- Joules *3*
- kcal *4*
- TNT *4*

`\erg` 36
`\esu` 12
`\eV` 26

F

`\Fahrenheit` 141
`\Farad` 18
`\fi` 5
Force . . . . *(*5, *)*6
- Dyne *5*
- Newton *5*
- Pounds *6*

Frequency . . . . . . *(*7, *)*7
- Hertz *7*

`\ft` 75
`\ftpss` 130

G

`\gacc` 128
`\Gauss` 22
`\gm` 93

H

`\h` 87
`\Henry` 24
`\hp` 57
`\hpi` 53, 55
`\hpm` 55
`\Hz` 147

I

`\ifx` 2
`\inch` 77
`\inHg` 158

J

`\J` 32
`\Joule` 34

K

`\K` 133
`\kcal` 38
`\Kelvin` 135
`\keV` 28
`\kg` 96
`\km` 63
`\kmph` 113
`\kmps` 110
`\kts` 122

L

`\lb` 98
`\lbf` 108
`\lbsf` 162
`\lbsi` 160
`\ly` 69

M

`\m` 61
Mass . . . . *(*5, *)*5
- AMU *5*
- Dalton *5*
- Gram
  - Kilograms *5*
- Grams *5*

- Pounds . . . *5*

- \meter . . . 59
- \MeV . . . 30
- \mi . . . 79
- \micro . . . 2
- \Min . . . 85, 146
- \miph . . . 119
- \mmHg . . . 156
- \mol . . . 168
- mole . . . (7
- \mps . . . 116
- \mpss . . . 124
- \mu . . . 4

N

- \N . . . 102
- \Newton . . . 104
- \nm . . . 73

O

- \Ohm . . . 14
- \Omega . . . 15
- Other . . . (7,)7
  - mole . . . (7

P

- \Pa . . . 154
- \pc . . . 67
- Power . . . (4,)4
  - Horsepower . . . *4*
    - Imperial . . . *4*
    - Metric . . . *4*
  - Watts . . . *4*
- Pressure . . . (7,)7
  - atmosphere . . . *7*
  - bar . . . *7*
  - Barre . . . *7*
  - in Hg . . . *7*
  - mm Hg . . . *7*
  - Pascal . . . *7*
  - Pound per square foot . . . *7*
  - Pound per square inch . . . *7*
  - psf . . . *7*
  - psi . . . *7*
  - Torr . . . *7*

R

- \Rankine . . . 139
- \rpm . . . 143

S

- \s . . . 81
- \Sec . . . 83

T

- Temperature . . . (6,)6
  - Celcius . . . *6*
  - Fahrenheit . . . *6*
  - Kelvin . . . *6*
  - Rankine . . . *6*
- \Tesla . . . 20
- Time . . . (5,)5
  - Days . . . *5*
  - Hours . . . *5*
  - Minutes . . . *5*
  - Seconds . . . *5*
  - Years . . . *5*
- \tnt . . . 47
- \Torr . . . 166

U

- \undefined . . . 2
- \units@separator . . . 1

V

- \V . . . 6
- Velocity . . . (6,)6
  - Kilometers per Hour . . . *6*
  - Kilometers per Second . . . *6*
  - Knots . . . *6*
  - Meters per Second . *6*
  - Miles per Hour . . . *6*
  - Nautical Miles per Hour . . . *6*
- \Volt . . . 8

W

- \Watt . . . 51

Y

- \y . . . 89