

Package ‘convertr’

October 13, 2016

Type Package

Title Convert Between Units

Version 0.1

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Description Provides conversion functionality between a broad range of scientific, historical, and industrial unit types.

Depends R (>= 3.1.0)

Imports shiny(>= 0.13.2), miniUI(>= 0.1.1), DT(>= 0.1), rstudioapi(>= 0.5)

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LazyData TRUE

BugReports <https://github.com/GShotwell/convertr/issues>

Suggests testthat

RoxygenNote 5.0.1

NeedsCompilation no

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conversion_table	<i>Conversion factors for various units</i>
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Description

This table provides the conversion factors for `convert`. The conversion factor is broken into four components: A, B, C, and D. Units are converted from the origin unit (X) to the respective SI base unit (BU) using the following formula:

$$BU = (A + B * X) / (C + D * X)$$

The data originates from the [POSC Units of Measure Dictionary v2.2](#) and [Wikipedia](#)

Usage

`conversion_table`

Format

A data frame with 1511 rows and 11 variables:

- `name`: Name of the origin unit
- `quantity_type`: Description of what the unit is used to measure
- `catalog_name`: Origin of unit specification
- `catalog_symbol`: Symbol for the unit
- `rp66_symbol`: Recommended Practice 66 unit
- `base_unit`: Equivalent System Internationale (SI) base unit
- `a`: Conversion factor
- `b`: Conversion factor
- `c`: Conversion factor
- `d`: Conversion factor
- `multi_unit`: Can the unit be converted to other units?

convert	<i>Convert from one unit type to another</i>
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Description

Converts numeric vectors from one unit to another. Approximately 1500 units are available. [convert_gadget](#) can help you build valid `convert()` expressions and [explore_units](#) provides an interface for exploring the [conversion_table](#) which underlies the computation.

Usage

```
convert(vector, origin, target)
```

Arguments

vector	A numeric vector to be converted
origin	The catalog symbol of the current unit.
target	The catalog symbol of unit you want to convert to.

Value

A numeric vector

Examples

```
convert(1:20, "kg", "g")
convert(1:20, "galUK/min.ft2", "kft/s")
## Not run:
convert(1:20, "kg", "km2")

## End(Not run)
```

convertr	<i>convertr</i>
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Description

`convertr` allows you to convert numeric vectors between various unit types.

convert_gadget	<i>Launch interactive conversion gadget</i>
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Description

It's often difficult to remember the symbol for the units you want to convert. This gadget shows which units can be converted to one another, and provides an example calculation on a sample vector. On exit you can either return a valid `convert()` call or a converted numeric vector.

Usage

```
convert_gadget(vector, return_value = FALSE)
```

Arguments

vector	A numeric vector to convert. You can change the vector within the app.
return_value	By default the gadget generates a <code>convert()</code> call, if <code>return_value</code> is set to <code>TRUE</code> it will instead generate a converted vector.

Value

Insert output text into editor.

Examples

```
## Not run:
convert_gadget()
convert_gadget(mtcars$mpg)

## End(Not run)
```

explore_units	<i>Explore conversion table</i>
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Description

A shiny application that lets you take a look at the [conversion_table](#) dataframe.

Usage

```
explore_units()
```

Value

Launches a Shiny app

Examples

```
## Not run:  
explot_units()  
## End(Not run)
```

`get_conversion_table` *Return the conversion table*

Description

A convenience function to return [conversion_table](#)

Usage

```
get_conversion_table()
```

Value

Conversion table dataframe

Examples

```
a <- get_conversion_table()
```

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