# Package 'ideamdb'

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**Type** Package

**Title** Easy Manipulation of IDEAM's Climatological Data

**Version** 0.0.9

**Description** Time series plain text conversion and data visualization. It allows to transform IDEAM (Instituto de Hidrologia, Meteorologia y Estudios Ambientales) daily series from plain text to CSV files or data frames in R. Additionally, it is possible to obtain exploratory graphs from times series. IDEAM's data is freely delivered under formal request through the official web page <http://www.ideam.gov.co/solicitud-de-informacion>.

**License** GPL (>= 2)

**Depends** R (>= 2.10)

**Encoding** UTF-8

**LazyData** true

**RoxygenNote** 6.1.1

**Imports** stringr, tidyr, dplyr, ggplot2, utils, graphics

**Suggests** knitr, rmarkdown

**VignetteBuilder** knitr

**NeedsCompilation** no

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**Repository** CRAN

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## Contents

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`Example_IDEAM` *A dataset with fictitious values of no real IDEAM's Stations. The text file keeps IDEAM's text format.*

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## Description

A dataset with fictitious values of no real IDEAM's Stations. The text file keeps IDEAM's text format.

## Usage

```
data(Example_IDEAM)
```

## Format

text file

## Source

It is a self-made file. Original data could be freely required through IDEAM's web page. http://www.ideam.gov.co/solicitud-de-informacion

## Examples

```
data(Example_IDEAM)
```

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`IdeamLong` *Create a day by day IDEAM's data serie*

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## Description

Create a data frame with one value by row. The df is available to export as a CSV file

## Usage

```
IdeamLong(file, write = FALSE, outfile = "MatrizIdeamLarga")
```

## Arguments

| | |
|---|---|
| `file` | IDEAM file path or file name if it is on the working directory |
| `write` | If True a CSV file is returned to the working directory, otherwise only a data frame is shown |
| `outfile` | Outfile name that will be saved on the working directory |

## Value

dataframe or a CSV file

## Examples

```
# Retreive example dataset
Example_IDEAM <- system.file("extdata", "Example_IDEAM", package = "ideamdb")
# Create a temporal file
example.ideam.long <- tempfile()
write.csv(IdeamLong(Example_IDEAM), file = example.ideam.long)
read.csv(example.ideam.long)
```

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# IdeamWide *Create a matrix with IDEAM's data*

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## Description

Create a data frame that it is available to export as a CSV file

## Usage

```
IdeamWide(file, write = FALSE, outfile = "MatrizIdeamAncha")
```

## Arguments

| | |
|---|---|
| file | IDEAM file path or file name if it is on the working directory |
| write | If True a CSV file is returned to the working directory, otherwise only a data frame is shown |
| outfile | Outfile name that will be saved on the working directory |

## Value

a data frame or a CSV file

## Examples

```
# Retreive example dataset
Example_IDEAM <- system.file("extdata", "Example_IDEAM", package = "ideamdb")
# Create a temporal file
example.ideam.wide <- tempfile()
write.csv(IdeamWide(Example_IDEAM), file = example.ideam.wide)
read.csv(example.ideam.wide)
```

`TimeSeries` *Graphical exploratory charts*

## Description

Create a time series chart and a boxplot of every data sample

## Usage

```
TimeSeries(file, station = "all", variable = "all")
```

## Arguments

| | |
|---|---|
| `file` | IDEAM file path or file name if it is on the working directory |
| `station` | a single station name or type "all" or "todas" to plot everything |
| `variable` | a single variable name or type "all" or "todas" to plot everything only a data frame is shown |

## Value

time series plot and boxplot for every variable data and station

## Examples

```
Example_IDEAM <- system.file("extdata", "Example_IDEAM", package = "ideamdb")
TimeSeries(Example_IDEAM, station = "LUCERO")
# Print time series chart and boxplots for all variables
# collected in an specific station
```

# Index