# Package 'metsyn'

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**Type** Package

**Title** Interface with the Meteo France Synop Data API

**Version** 0.1.2

**Date** 2018-11-01

**Description** Provides an interface with the Meteo France Synop data API (see <https://donneespubliques.meteofrance.fr/?fond=produit&id_produit=90&id_rubrique=32> for more information).
The Meteo France Synop data are made of meteorological data recorded every three hours on 62 French meteorological stations.

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**LazyData** TRUE

**Depends** R (>= 3.1.3)

**Imports** foreach, readr, stringr, tibble, utils

**URL** https://github.com/paulponcet/metsyn

**BugReports** https://github.com/paulponcet/metsyn/issues

**RoxygenNote** 6.1.0

**NeedsCompilation** no

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**Repository** CRAN

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## Contents

## download_daily_synop *Download Meteo France Synop Data*

### Description

The functions download_daily_synop and download_monthly_synop enable to download Meteo France Synop Data described here.

### Usage

```
download_daily_synop(path = ".", date, ...)

download_monthly_synop(path = ".", date, ...)
```

### Arguments

| | |
|---|---|
| path | character. Data once downloaded are saved in the folder file.path(path, "data-raw"). |
| date | character. For download_daily_synop, a date in the form "YYYYMMDDHH". For download_monthly_synop, a date in the form "YYYYMM". |
| ... | Additional parameters to be passed to download.file. |

### See Also

make_metsyn.

## make_metdes *Creation of the 'metdes' dataset, made of descriptive information on the 'metsyn' dataset*

### Description

The function make_metdes creates the metdes dataset, which contains descriptive information on the metsyn dataset.

The dataset contains the following columns:

- Short_Name: short name of the variable, in French;
- Long_name_French: name of the variable, in French;
- Long_Name_English: currently not provided yet;
- Type: type of the variable (one of character, numeric, integer);
- Unit: physical unit of the variable.

## Usage

```
make_metdes(path = ".", save_it = FALSE)
```

## Arguments

| | |
|---|---|
| path | character. Data once created are saved in the folder `file.path(path, "data")`. |
| save_it | logical. If `TRUE`, the result is saved as an `.RData` file in the folder `file.path(path, "data")`. |

## Value

Returns invisibly the tibble created, with 5 columns and 59 rows.

## Note

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## Source

Meteo France, see here.

## See Also

`metsyn` for the dataset containing Meteo France Synop data; `metsta` for the dataset on the meteorological stations involved.

## Examples

```
## Not run:
make_metdes(save_it = TRUE)

## End(Not run)
```

---

`make_metsta` *Creation of the 'metsta' dataset made of Meteo France Synop meteorogical stations*

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## Description

The function `make_metsta` creates the `metsta` dataset from the file `postesSynop.csv` downloaded here. `make_metsta` looks for this file in the `file.path(path, "data-raw")` folder.

This dataset contains the following columns:

- `Id`: WMO meteorological station id;
- `Name`: name of the meteorological station;
- `Latitude`, `Longitude`, `Altitude`: coordinates of the meteorological station.

## Usage

```
make_metsta(path = ".", save_it = FALSE)
```

## Arguments

| | |
|---|---|
| `path` | character. Data once created are saved in the folder `file.path(path, "data")`. |
| `save_it` | logical. If `TRUE`, the result is saved as an `.RData` file in the folder `file.path(path, "data")`. |

## Value

Returns invisibly the tibble created, with 5 columns and 62 rows.

## Note

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## Source

Meteo France, see here.

## See Also

`metsyn` for the dataset containing Meteo France Synop data; `metdes` for the dataset which gives some descriptive information on `metsyn`.

## Examples

```
## Not run:
dir.create("data-raw", showWarnings = FALSE)
make_metsta(save_it = TRUE)

## End(Not run)
```

make_metsyn *Creation of the 'metsyn' dataset made of Meteo France Synop data*

## Description

The function make_metsyn creates the metsyn dataset from the files downloaded with download_monthly_synop. make_metsyn looks for these files in the file.path(path, "data-raw") folder.

This dataset is made of meteorological data recorded every three hours on 62 French meteorological stations.

The columns contained in this dataset are described by the metdes dataset.

## Usage

```
make_metsyn(path = ".", save_it = FALSE)
```

## Arguments

| | |
|---|---|
| path | character. Data once created are saved in the folder file.path(path, "data"). |
| save_it | logical. If TRUE, the result is saved as an .RData file in the folder file.path(path, "data"). |

## Value

Returns invisibly the tibble created, with 59 columns.

## Note

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## Source

Meteo France, see here.

## See Also

download_monthly_synop; metdes for the dataset which gives some descriptive information on metsyn; metsta for the dataset on the meteorological stations involved.

## Examples

```
## Not run:
dir.create("data-raw", showWarnings = FALSE)
for (y in 1996:2016) {
  for (m in 1:12) {
    m <- if (m < 10) paste0(0, m) else m
    download_monthly_synop(date = paste0(y, m),
                           mode = "wb")
  }
}
make_metsyn(save_it = TRUE)

## End(Not run)
```

# Index